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An Empirical Analysis of the Immediate Socio-Economic Impact of Fuel Subsidy Removal on Households' Living Standard in Adamawa State-Nigeria

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Abstract

The removal of fuel subsidies has led to a looming crisis of fuel scarcity, generating widespread fear and anxiety among millions of Nigerian citizens about the potential impact on their daily lives. Thus, this study examines an empirical analysis of the socio-economic impact of fuel subsidy removal on households' living standard in Adamawa State-Nigeria. The study covered six (6) local government areas (LGAs) in three (3) Senatorial Zones: Southern Senatorial Zone (Numan and Demsa), Central Senatorial Zone (Yola North and Yola South) and Northern Senatorial Zone (Mubi North and Mubi South), the objective of the study is to evaluate the immediate socioeconomic consequences of fuel subsidy removal on households in Adamawa State. Four hundred (400) respondents were interviewed, the demographic age of the respondents between 35-44 years revealed that 54.50% were active population. The households total monthly income before fuel subsidy removal fall between the range of N100,001-N150,000 of (27.25%) with mean and standard deviation of N124,900 (N68,417,413) and households total monthly income after fuel subsidy removal fall between the range of N100,001-150,000 of (28.25%) with mean and standard deviation (N121,662 (N70,703.047). The source of income of the respondents varies and the business with highest respondents 293 (73.25%), the level of household monthly expenditure after fuel subsidy removal most of the respondents are of the opinion of moderate. Survey data were collected and analysed using descriptive statistics. The study was anchored on the income and substitution effects theory. Based on the findings of the study, the following recommendations were made; first, policymakers should implement tailored social support programs, considering factors such as gender, marital status, and education, to assist vulnerable groups facing economic hardships. Second, measures should be taken to enhance access to essential services, such as healthcare and education, addressing concerns about affordability and availability. Lastly, income support and economic diversification initiatives are recommended to mitigate the immediate economic impact on households and encourage resilience in the aftermath of subsidy removal.

Keywords: *Fuel Subsidy Removal, Socioeconomic characteristics, Households, Living Standard, Analysis*

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1.0 Introduction

Subsidies have long been a favoured tool for governments to direct economic benefits towards the broader population. These subsidies can take various forms, such as discounts on commodity prices, consumption vouchers, tax reductions, and even direct financial assistance. In essence, subsidies represent a common economic policy aimed at ensuring that essential goods and services become more accessible to low-income individuals, thereby enhancing their quality of life and fostering business development. The success of such policies is often reflected in the overall economic activities within a country. For example, in Nigeria, fuel subsidies were introduced in 1973, as documented by Eyiuche (2012), with the primary goal of making petroleum products readily available and affordable to the general public. This measure was also intended to ensure that a significant portion of the population could directly benefit from the country's abundant natural resources. It is important to note that international oil prices have exhibited a history of fluctuations, as highlighted by McCulloch et al. (2021).

However, the pricing of this product is marked by its inherent volatility and unpredictability. In 2016, it stood at approximately $50 per barrel, surged to $64.46 in 2019, and had previously reached $120 in 2014, a factor that also had an impact on the pump price, as noted by Nwachukwu et al. (2013). Another significant objective of fuel subsidies is to stabilize fuel prices when they experience sudden increases. However, the advantages of fuel subsidies in Nigeria were short-lived, as the government discontinued this support in 2016, as outlined by McCulloch et al. (2021). The government argued that the funds allocated for subsidizing the import of refined petroleum into the country were substantial, and that subsidized fuel was not being sold within the nation but was either being falsely claimed or re-exported to neighbouring countries. Additionally, the government asserted that the funds allocated for fuel subsidies had not benefited the citizens but had instead fallen into the hands of an illicit cartel, according to Nwachukwu et al. (2013).

The authorities also asserted that their policy had given rise to various issues, including the smuggling of petroleum products out of the country, fuel diversion, hoarding, and over-invoicing by petroleum marketers. Furthermore, they contended that fuel subsidies had diminished the revenue that could have been directed towards infrastructure development, agriculture, and the restoration of deteriorating refineries, as highlighted by Nwachukwu et al. (2013). From the perspective of the general population, the removal of fuel subsidies would seemingly deprive them of the benefits derived from the country's abundant oil resources. This, in turn, would have adverse effects on their livelihoods, leading to increased production costs that would subsequently result in higher prices for goods and services, as stated by Opayemi, A. (2015).

The policy of removing fuel subsidies has been a recurring issue in Nigeria over several years. Subsidies were previously discontinued in 1980 and 2000, during which the cost of fuel increased, and commodity prices also experienced an almost 50% rise. In many instances when subsidies are removed or oil pump prices are increased, it is the low-income population, in particular, that bears the brunt, resulting in a decline in their living standards. In response to the removal of fuel subsidies in 2016, the government introduced the Social Intervention Programme (SIP) with the intention of addressing the challenges that typically arise from such subsidy removal, as documented by Soile et al. (2015).

The primary objective of the SIP is to counteract the repercussions of fuel subsidy removal and expedite economic growth by channelling investments into crucial infrastructure projects

and essential social services, including education, healthcare, job creation, and vocational training. Despite this well-intentioned initiative, there has been no discernible improvement in people's living conditions. The prices of goods and services remain notably high, potentially stemming from the removal of fuel subsidies, as observed by Soile et al. (2015).

Nigeria is not the only country experiencing this trend. For instance, in Cameroon in 2014, fuel prices surged by 14% after the removal of fuel subsidies, but they were later reinstated due to the threat of a strike by transport workers. A similar situation unfolded in Guinea, Ghana, and Chad, where the removal of fuel subsidies led to increased gasoline prices, subsequently driving up transportation costs. Moreover, many small and medium-scale enterprises (SMEs) saw their overhead expenses rise as they relied on fuel-powered generators. These developments culminated in adverse effects on the living conditions of people in these nations, as noted by Soile et al. (2015).

The economic challenges resulting from fuel subsidy removal appear to be particularly acute in the northern region of Nigeria, where the standard of living is notably challenging. This region exhibits the highest prevalence of poverty, with approximately 76.8% of its population living in poverty, as reported by the National Bureau of Statistics in 2015. Surprisingly, quality-of-life assurance professionals and stakeholders have yet to focus their attention on and consider the potential impact of fuel subsidy removal on the well-being of the populace in this state.

The removal of fuel subsidies in Nigeria, particularly in Adamawa State, influences the standard of living through various transmission mechanisms. Transportation costs, impacted by fuel price changes, directly affect commuting expenses for households heavily reliant on private vehicles or public transportation. This reduction in disposable income hampers access to essential goods and services. Additionally, the removal contributes to inflationary pressures, eroding purchasing power and disproportionately affecting low and middle-income households. Disrupted household budgets may lead to adjustments in spending areas, potentially impacting access to education and healthcare. Employment and labor market dynamics are also influenced, with heightened fuel costs potentially leading to reduced job opportunities or layoffs, causing income uncertainty and financial stress. Furthermore, concerns about food insecurity, poverty, and income inequality arise, as the removal may increase food prices and compromise the well-being of vulnerable households. While prior analyses have primarily been macro-level, focusing on Adamawa State as a case study offers a more nuanced understanding, especially considering its lower economic status and potential intensification of basic living costs. The broad objective of this research is to assess the Socioeconomic Impact of Fuel Subsidy Removal on Households' Living Standards in Adamawa State, Nigeria. Other specific objective include: Assessing the Immediate Economic Effects: This objective involves evaluating the immediate socioeconomic consequences of fuel subsidy removal on households in Adamawa State. It aims to measure changes in household income, expenditure, and access to essential goods and services following the removal of fuel subsidies in Nigeria-Adamawa State.

2.0 Literature Review

2.1.1 Subsidy and Fuel Subsidy

A subsidy is a form of economic assistance or financial support provided by a government in order to facilitate a desirable activity. Its purpose is to ensure that prices remain low, preserve the income of critical or strategic product producers, sustain employment levels, or promote investment to alleviate unemployment. It can be tentatively defined as any government

initiative that potentially enables firms to augment their profits beyond what they would have achieved in the absence of such initiatives (El-said, 2006). A subsidy can also be regarded as a form of aid or support granted to businesses, economic sectors, or producers. The primary objective of all subsidies is to decrease the market price of a particular item below its production cost. The majority of subsidies are implemented by the government to assist producers or are allocated as subventions within an industry to prevent its decline or, simply, to incentivize the hiring of more labor (as is the case with wage subsidies). Examples of subsidies include those designed to stimulate exports, subsidies on certain food items to control the cost of living, particularly in urban areas, and subsidies aimed at promoting the expansion of agricultural production and achieving self-sufficiency in food production (Ajayi, 2008).

2.1.2 Fuel Subsidy Removal in Nigeria

The Nigerian economy has been subsidized in various manners over an extended period of time. These subsidies encompass fuel, education, electricity, and foreign exchange, among others. The implementation of fuel subsidies commenced in the 1970s and became institutionalized in 1977 with the enactment of the Price Control Act, which prohibited the sale of certain products, such as petrol, above the regulated price. While the underlying concept of subsidies is commendable, their administration in Nigeria has been marred by serious allegations of corruption and mismanagement. On a different note, the history of fuel subsidies in Nigeria traces back to April 1992, when the Ibrahim Babangida government raised the price of one liter of fuel from 15.3 kobo to 20 kobo. This increase was repeated on multiple occasions, including on March 31, 1986 (from 20 kobo to 39.5 kobo), April 10, 1988 (from 39.5 kobo to 42 kobo), and January 1, 1989 (from 42 kobo to 60 kobo). Although the regime claimed that the price increase was applicable solely to private vehicles, the price remained at 42 kobo for commercial vehicles, according to Mr. Oyegoke Adeola of the Mace News. Subsequently, on December 19, 1989, a uniform price of 60 kobo was established. On March 6, 1991, the price of one liter of fuel rose from 60 kobo to 70 kobo, and this remained the price when Babangida stepped aside in August 1993. Chief Ernest Shonekan further increased the price to N5 on November 8, 1993, but widespread protests ensued, leading to Abacha assuming power. The incoming Abacha regime then reduced the increment to N3.25 on November 22, 1993. However, on October 2nd, 1994, the Abacha junta raised the price of fuel to N15 from N3.25. Yet, due to massive street protests, the regime subsequently decreased the increment to N11 on October 4, 1994. This price persisted until Abacha's passing, and the Abdulsalami Abubakar caretaker regime increased it from N11 to N25 on December 20, 1998. Following days of sustained protests, the regime was compelled to reduce the increment to N20 on January 6, 1999. When Obasanjo assumed the presidency, fuel subsidy became the cornerstone of its economic policy. Shortly after taking office, the regime raised the price to N30 on June 1, 2000. However, protests and widespread rejection of this increase forced a reduction to N25 on June 8, 2000, and further down to N22 on June 13, 2000. The regime once again increased the price to N26 on January 1, 2002, and then to N40 on June 23, 2003. By the time Obasanjo left office in May 2009, the price had risen to N70, but the incoming Yar'Adua regime reduced it to N65 following general protests against the new pricing structure.

In the month of January in the year 2012, President Goodluck Jonathan made the decision to raise the price of petrol at the pump from N65 to N141. However, due to the strong opposition from the labor union, he was compelled to lower it to N97 per liter. In another instance, in January 2015, the federal government of Nigeria reduced the pump price of

Premium Motor Spirit (PMS), commonly known as petrol, from N97 to N87 per liter as a result of the decline in crude oil price in the global market. Finally, on the 11th of May, 2016, President Muhammadu Buhari made an announcement that the Federal Government would cease paying any subsidy on oil, leading to an increase in the price from N87 to N145. Following the deregulation of diesel thirteen years earlier, the subsidy on kerosene was also removed in 2016. However, it is the subsidy on Petroleum Motor Spirit (PMS) that has posed the greatest challenge to the economic managers of Nigeria. Every year, a significant portion of the national income is allocated to funding the subsidy scheme. The astronomical growth in the amount of subsidy can be attributed to various factors such as the price of crude oil in the international market, the disputed volume of PMS consumed, and the devaluation of the Naira. Given the importance of the funds dedicated to supporting the subsidy regime, it is imperative to closely examine this scheme. According to Garba (2023), the history of subsidy removal on petrol in Nigeria has been characterized by a series of policy changes, attempts, and controversies. It is evident that the Nigerian government has implemented and reversed subsidy removal on multiple occasions throughout the years. For instance, in 1988, the government introduced a subsidy on petroleum products in order to achieve stability.

2.1.3 Rationale behind Fuel Subsidy Removal

Every action is driven by underlying forces, and proactive government policies are no exception. Thus, the decision to remove fuel subsidies is grounded in a multitude of reasons that the government deems crucial for stimulating economic growth and development. One such reason is the potential for redirecting the substantial funds previously allocated to subsidies towards the much-needed enhancement of infrastructure, particularly in sectors such as healthcare, education, and transportation. By implementing this measure, every citizen of the nation stands to benefit. Additionally, the deregulation of the downstream oil sector is expected to attract private sector investments, particularly foreign direct investments. Historically, investors have been hesitant to engage with this sector due to concerns about the ability to recover their investments under government-controlled pricing. Consequently, foreign direct investments in the sector would generate employment opportunities for the significant number of unemployed individuals in Nigeria, while also contributing to government revenue through taxation and levies. Another outcome of fuel subsidy removal would be the increased availability of foreign exchange at the Central Bank of Nigeria. This steady influx of foreign exchange would facilitate the establishment of a unified foreign exchange rate regime, thereby promoting stability in the foreign exchange market and eliminating the existence of a black market. Moreover, such accessibility to foreign exchange would facilitate the importation of goods and machinery. Overall, the removal of fuel subsidies serves multiple purposes, ranging from rectifying market distortions to maximizing the benefits of crude oil price increases in the international market, thereby mitigating revenue losses for the Nigerian government (Umeji & Eleanyi, 2021).

The elimination of fuel subsidies is also expected to address distortions in the market. Specifically, it would effectively curtail the smuggling of petroleum products to neighboring countries. Due to the higher prices of petroleum products in these neighboring nations, fuel that is intended for domestic use in Nigeria is clandestinely transported across borders and sold at inflated prices, resulting in scarcity within the country. The former Governor of the Central Bank of Nigeria and former Emir of Kano, Sanusi Lamido Sanusi, highlighted the benefits of fuel subsidy removal by emphasizing that Nigeria is the only oil-exporting nation that fails to reap the rewards of rising crude oil prices in the global market. This discrepancy arises from Nigeria's practice of fixing the prices of refined products that it does not produce.

Consequently, any gains from the elevated price of crude oil are offset by the increased costs of imported refined products. As the price of crude oil escalates, so does the price of refined products. Consequently, the removal of fuel subsidies would effectively eliminate these revenue losses for the Nigerian government (Onwuamaeze & Ekeghe, 2021).

2.1.4 Theoretical Framework

2.1.5 Income and Substitution Effects Theory

The notion of Income and Substitution Effects is frequently associated with the scholarly contributions of Sir John Hicks. In 1934, Hicks, a distinguished economist from Britain, formulated the Hicksian decomposition of the price effect, which effectively disentangled it into two distinct components: the Income Effect and the Substitution Effect. The theory of Income and Substitution Effects offers a valuable framework for comprehensively comprehending the ramifications of eliminating fuel subsidies on households in Adamawa State, Nigeria. With the escalation in fuel prices resulting from the removal of subsidies, the Income Effect becomes salient, illustrating how the decrease in real income directly impacts the purchasing power of households. This effect is particularly pronounced as a greater proportion of the household budget is allocated to meeting the augmented costs of fuel. Concurrently, the Substitution Effect sheds light on the dynamic adaptations in consumption patterns that households may undertake in response to altered relative prices. Confronted with elevated transportation expenses, households may seek out alternatives for goods and services or explore more fuel-efficient options. The theory offers a nuanced analysis of how households, spanning different income brackets, may encounter varying degrees of vulnerability. For example, lower-income households may confront more significant challenges in upholding their previous standard of living. This comprehension of Income and Substitution Effects is pivotal not only for assessing the immediate impact on households but also for informing policymakers about potential hardships and guiding the formulation of targeted interventions to mitigate adverse socio-economic consequences.

2.1.6 Empirical Review

As the issue of fuel subsidy removal has received serious attention over the years, this section reviews previous studies that have attempted to investigate this issue. Osagie (2012) conducted a comprehensive study investigating the effects of removing fuel subsidies on the socio-economic development of Nigeria from 1980 to 2012 and assessed both the short-term and long-term impacts of fuel subsidy removal on the country's socio-economic development. It was uncovered that the removal of fuel subsidies did not have an immediate short-term impact on the well-being of Nigerians. Similarly, Nkagu (2012) conducted a study focusing on the impact of fuel subsidy removal on the Nigerian economy, with a particular emphasis on key sectors such as health, transportation, education, and the power sector. The findings revealed a substantial impact in health (37.7%), transportation (82%), education (33%), and the power sector (56%), while a relatively lower impact on agriculture (21%) and infrastructure and basic amenities (16.4%).

On the other hand, Olawale (2013) explored the challenges posed by subsidy removal in Nigeria's petroleum industry. This study examined various price increase regimes for petroleum products, subsidy payments, and their effectiveness in stimulating investments in the sector. The research concluded that subsidy removal did not effectively stimulate investment, leading to recommendations for alternative courses of action. Bashir (2014) contributed to the discourse on the economic implications of fuel subsidy removal in Nigeria.

The study presented arguments both for and against this policy, highlighting growing resistance among the population. It identified corruption, defective record-keeping, insufficient supply, smuggling, and inefficiency as prominent characteristics of the sector. Furthermore, Ocheni (2015) explored the impact of fuel price increases on the Nigerian economy, assessing whether these impacts were positive or negative. The study used a survey research design, targeting civil servants, market participants, and private sector employees involved in petrol and gas affairs. Findings indicated a significant relationship between recent fuel price increases and economic growth in Nigeria, highlighting the negative effects on purchasing power and food security.

Lastly, Abang (2016) focused on enlightening the public regarding the impact of fuel subsidy removal in Nigeria, utilizing a linear function approach to analyse its effects on the value of the Nigerian Naira and local production. The study relied on data from various periods of fuel price hikes in Nigeria, utilizing a mathematical model and graph to estimate the Naira's value. Abang's research revealed adverse effects on the standard of living, particularly as fuel is crucial for transporting major Nigerian commodities. The study recommended implementing policies that support industrialization and foster a business environment promoting technological competitiveness and economic growth.

Methodology

3.1 Research Design:

This study employed quantitative survey approach. This design is chosen to capture a comprehensive understanding of the impact of fuel subsidy removal on households, allowing for the exploration of individual experiences alongside broader trends and patterns.

3.1.1 Sampling Strategy

To achieve a representative sample for this study, this study employed a stratified cluster sampling strategy. The stratification will be based on the three senatorial districts in Adamawa State. Each senatorial district represents a distinct geographical area within the state, and two local government areas (LGAs) were randomly selected from each district.

3.1.2 Selection of Senatorial Districts

i. **Senatorial District 1**: This district includes the northern region of Adamawa State.

ii. **Senatorial District 2**: This district covers the central part of the state.

iii. **Senatorial District 3**: This district encompasses the southern region of Adamawa State.

3.1.3 Selection of Local Government Areas (LGAs)

i. From each senatorial district, two LGAs will be randomly selected. The selection process will ensure equal representation from various geographical areas within the district.

3.1.4 Selection of Households

i. Within each selected LGA, households will be selected using a systematic random sampling method. The sampling frame will be based on households residing in urban and rural areas, ensuring a balanced representation.

3.1.5 Sample Size

The sample size for each LGA will be determined based on the estimated number of households and the desired confidence level and margin of error.

3.1.6 Data Collection

Data were collected from the households in the selected LGAs. Data collection sites included urban, suburban and rural areas, to ensure diversity.

3.1.7 Data Analysis

Descriptive statistics, including means, standard deviations, and frequency distributions were used to summarize household characteristics and assess immediate economic effects of fuel subsidy removal in Adamawa State.

3.1.8 Ethical Considerations

This research adhered to ethical guidelines, including informed consent from all participants. Confidentiality and anonymity were maintained for all respondents.

4.0 Result and Presentation

4.1 Description of Findings

The analysis of the socio-economic characteristics of the participants was carried out using descriptive statistics. The findings were subsequently presented in Table 1 below and subsequently discussed in accordance with the initial research objectives.

The distribution of respondents in the study regarding the immediate economic consequences of fuel subsidy removal in Adamawa State offers valuable insights. A significant proportion of participants, constituting 54.50%, fall within the age range of 35-44, indicating that individuals in their mid-thirties to mid-forties, who are likely at the peak of their professional lives, might be more susceptible to changes in fuel prices. The age group of 25-34, which accounts for 21.25%, consists of individuals in the early stages of their careers and family life, suggesting a potential vulnerability to economic fluctuations. The 45-54 age group, comprising 14.75%, represents an older demographic with potentially distinct economic circumstances and a higher level of resilience. The age group of 18-24, comprising 5.50%, includes students and young professionals, thereby highlighting their economic vulnerability. Furthermore, the age group of 55 and above, representing 4%, consists of the elderly population, necessitating particular attention due to their unique economic dynamics. This comprehensive analysis based on age provides a nuanced understanding of how the elimination of fuel subsidies might impact households at different stages of life in Adamawa State.

The data exhibits a gender distribution within the investigation concerning the immediate economic consequences of fuel subsidy elimination in Adamawa State. With males comprising 58.00% of the respondents and females comprising 42.00%, the discoveries highlight the significance of taking into account gender-specific perspectives when evaluating the ramifications of subsidy elimination on households. The acknowledgment of potential disparities in roles, obligations, and vulnerabilities between households headed by males and those headed by females is of utmost importance in informing focused policy responses and interventions.

The data reveals the distribution of participants' marital status in the examination on the immediate economic consequences of the removal of fuel subsidy in Adamawa State. With a majority of 58.50% being wedded, the majority of respondents are likely to encounter shared monetary obligations within their households. Single participants account for 28.25%, and may potentially face individual economic hardships, whereas individuals who are divorced (10.50%) and individuals who are widowed (2.75%) represent smaller yet distinct segments with unique financial dynamics. The assorted composition of matrimonial statuses underscores the necessity for a comprehensive comprehension of how the elimination of fuel subsidy may influence households with varying degrees of financial interdependence in Adamawa State.

The information pertaining to the household membership status of the participants in the investigation that assesses the immediate economic repercussions of the removal of fuel subsidies in Adamawa State, a considerable majority, accounting for 79.75%, are categorized as the "Head" of the household, indicating their authoritative roles and potential impact on overall financial determinations. In contrast, 20.25% belong to the "Member" classification, denoting individuals who contribute to the household income but do not possess primary decision-making responsibilities.

The educational achievements of the participants in the research conducted to assess the immediate economic consequences of the discontinuation of fuel subsidies on households in Adamawa State, Nigeria. It is worth noting that individuals holding a "Diploma/NCE" exhibit the highest frequency at 26.75%, which signifies a significant presence of respondents with diplomas, National Certificates of Education (NCE), or equivalent qualifications. The "Secondary school" category closely follows at 27.50%, underscoring the substantial representation of individuals with a secondary school education. Additionally, 19.25% of respondents possess a background in "Vocational/technical" education, highlighting a noteworthy proportion of individuals with specialized skills and technical training. "BSc/HND/PGD" accounts for 10.50%, indicating the presence of individuals with bachelor's degrees, Higher National Diplomas (HND), or postgraduate diplomas. Furthermore, there are lower frequencies in categories such as "No formal education" (7.25%) and "Ph D/MPhil (1.00%). These groups encompass individuals without any formal education and those with advanced degrees, respectively. The diverse distribution of educational backgrounds emphasizes the significance of considering varied economic perspectives and responses to the discontinuation of fuel subsidies among individuals with different levels of educational attainment in Adamawa State.

The distribution of employment status among the participants in the study that evaluates the immediate economic consequences of removing fuel subsidies in Adamawa State demonstrates that the majority, accounting for 59.75%, are categorized as "Unemployed," indicating a significant proportion of individuals who are not currently involved in formal employment. The group labeled as "Student" constitutes 22.75%, reflecting a notable presence of individuals who are actively pursuing education. The "Employed" category, which makes up 17.50% of the respondents, consists of individuals who are actively contributing to the labor force. An in-depth understanding of the economic impacts on these different groups is crucial in order to comprehensively evaluate the effects of fuel subsidy removal on households, particularly when considering the diverse financial circumstances associated with various employment statuses in Adamawa State.

The distribution of occupations among the participants in the research on the immediate economic consequences of the elimination of fuel subsidies in Adamawa State is significant.

Specifically, 22.00% of the respondents are categorized as "Business/Entrepreneurs," indicating the presence of individuals engaged in private business or entrepreneurship. Interestingly, the largest occupational category is "Civil Servant," which accounts for 37.00% of the participants, highlighting a substantial portion of the workforce employed in government or public service. Additionally, "Farmers" make up 41.00% of the sample, indicating a considerable involvement in agricultural activities. This diverse range of occupations emphasizes the importance of considering various economic impacts, including market conditions, salary structures, and agricultural dynamics, in order to comprehend the effects of fuel subsidy elimination on households in the region.

In the study that evaluated the immediate economic consequences of fuel subsidy elimination in Adamawa State, the respondents were categorized according to the size of their households. The most prevalent household size, constituting 32.25% of the sample, was "9-10," which indicates a significant representation of larger families. Following closely at 26.25% is the category of "7-8," suggesting a considerable presence of households with seven to eight members. The combined proportion of smaller household sizes ("5-6" and "3-4") is 24.25%, while larger household sizes ("11-12," "13-14," "15 or more") represent 17.25% of the sample. This diverse distribution emphasizes the importance of considering the diverse economic impacts of fuel subsidy elimination on households of different sizes in Adamawa State. It is crucial to take into account the specific challenges and needs associated with varying family structures.

The allocation of participants with respect to housing categories in the investigation examining the immediate economic consequences of the elimination of fuel subsidies in Adamawa State is as follows. The category denoted as "Family house" prevails, constituting 44% of the sample, thus indicating a noteworthy portion of individuals residing in housing owned by their families. Subsequently, the category labeled as "Own house" stands at 22.75%, representing individuals who possess their own dwellings, additionally, the category known as "Rented" accounts for 31.75%, indicating a substantial presence of individuals residing in accommodations that are rented. Lastly, the category referred to as "Others" comprises a small but significant presence, making up 1.5% of the sample. This category demonstrates individuals with distinctive housing arrangements. This dataset enhances our comprehension of the diverse economic impacts resulting from the removal of fuel subsidies on households in Adamawa State, taking into account the various housing situations. This understanding is crucial for the implementation of tailored policy interventions.

Table 1: Demographic Information of the Respondents

Age	**Frequency**	**Percent**
18-24	22	5.50
25-34	85	21.25
35-44	218	54.50
45-54	59	14.75
55 and above	16	4
Total	**400**	**100.00**
Gender	**Frequency**	Percent
Female	168	42.00
Male	232	58.00
Total	400	100.00
Marital Status:	**Frequency**	Percent
Divorced	42	10.50
Married	234	58.50
Single	113	28.25
Widowed	11	2.75

Total	400	100.00
Household Membership Status	**Frequency**	Percent
Head	319	79.75
Member	81	20.25
Total	400	100.00
Education	**Frequency**	Percent
BSc/HND/PGD	42	10.50
Diploma/NCE	107	26.75
MSc/MPA/MBA	11	2.75
No formal education	29	7.25
Ph.D/MPhil	4	1.00
Primary school	20	5.00
Secondary school	110	27.50
Vocational/technical	77	19.25
Total	400	100.00
Employment Status	**Frequency**	Percent
Employed	70	17.50
Student	91	22.75
Unemployed	239	59.75
Total	400	100.00
Type of Occupation	**Frequency**	Percent
Business/Entrepreneurs	88	22.00
Civil Servant	148	37.00
Farmers	164	41.00
Total	400	100.00
Household Size	**Frequency**	Percent
3-4	42	10.50
5-6	55	13.75
7-8	105	26.25
9-10	129	32.25
11-12	48	12
13-14	9	2.25
15 or more	12	3.00
Total	400	100.00
Housing Type	**Frequency**	Percent
Family house	176	44
Others	6	1.5
Own house	91	22.75
Rented	127	31.75
Total	400	100.00

Source: *Field Survey, 2024*

Table 2: Level of Households to Access Essential services After Subsidy Removal

The perceptions regarding the accessibility of healthcare services in the specific context of the investigation into the immediate economic consequences of the removal of fuel subsidies on households in Adamawa State were examined. It was found that approximately 51.75% of respondents reported that they had "Adequate" access to healthcare, indicating their satisfaction with the quality of medical facilities and the availability of preventive care. In contrast, 47.75% of participants expressed that their access to healthcare was "Inadequate," which implies their concerns about the affordability and availability of healthcare resources. A small subset of respondents, specifically 0.5%, reported that they had "No access" to healthcare, highlighting a critical group of individuals facing significant barriers in obtaining essential medical services. This data emphasizes the complex relationship between the removal of fuel subsidies and the perceptions of healthcare access, thereby providing

valuable insights into the potential economic consequences on individuals' healthcare-seeking behavior in the region.

The study examining the immediate economic consequences of fuel subsidy removal on households in Adamawa State, Nigeria, revealed that a significant 76% of participants expressed concerns about the insufficiency of access to educational services. This indicates a prevailing worry regarding the limitations in accessing educational resources, schools, and the quality of education. For this particular group, the removal of fuel subsidy may result in heightened anxieties regarding educational expenses, potential declines in educational quality, and difficulties in obtaining necessary educational resources. In contrast, 24% of participants reported satisfactory access, indicating a smaller but noteworthy subgroup who perceives their access to schools, quality education, and educational resources as adequate. The economic effects for this cohort may involve considerations of potential changes in educational expenses, the continuity of educational services, and the overall quality of education. This nuanced examination of perceptions regarding access to education provides valuable insights into the potential economic ramifications of fuel subsidy removal on educational opportunities. It also emphasizes the significance of educational accessibility in the broader evaluation of policy effects on households in Adamawa State.

The perceptions of the respondents regarding the availability of utilities were investigated in a study that examined the immediate economic consequences of the removal of fuel subsidies in Adamawa State. A majority of the respondents (56%) indicated that they had "Inadequate" access to utilities, expressing concerns about the limitations in accessing water supply, electricity, and sanitation services. In contrast, 42.5% of the respondents reported "Adequate" access, indicating their satisfaction with the utility services. A small proportion of the respondents (1.5%) reported "No access," highlighting a critical subset of the population that faces challenges in accessing essential utilities. This data emphasizes the intricate relationship between the removal of fuel subsidies and the perceptions of utility access among the respondents, providing valuable insights into the potential economic impacts on the region's basic living standards.

In the investigation on the immediate economic ramifications of fuel subsidy elimination in Adamawa State, the majority of respondents (72.5%) expressed concerns over their access to transportation services. Specifically, they reported that the access was "Inadequate," which suggests limitations in terms of public transportation and road infrastructure. On the contrary, 26.75% of the respondents reported that their access was "Adequate," indicating satisfaction with the transportation services provided. A small fraction of respondents (0.75%) reported that they had "No access" at all, highlighting a subset of individuals who face significant challenges in accessing transportation. This data highlights the intricate connection between the removal of fuel subsidies and perceptions of transportation access. Moreover, it sheds light on the potential economic repercussions on mobility and emphasizes the importance of evaluating the effects of transportation access on households in the region when formulating policies.

In the investigation concerning the immediate economic consequences of eliminating fuel subsidies in Adamawa State, a notable majority (55%) of the participants expressed their dissatisfaction with their ability to avail themselves of security and safety services, highlighting concerns about the limitations they face in accessing law enforcement, emergency services, and crime prevention measures. Conversely, 44.25% of the participants reported being content with the level of access they have, implying that they are satisfied with the security and safety services provided. A mere 0.75% of the participants reported having

no access at all, highlighting a critical subset of individuals who encounter difficulties in reaching essential security services. This data underscores the complex connection between the removal of fuel subsidies and individuals' perceptions of security access, offering valuable insights into the potential economic impacts on community safety and underscoring the significance of evaluating the effects of policies on households in the region by considering security access.

The perceptions of the respondents regarding the availability of financial services, specifically banking services, in the research conducted on the immediate economic consequences of fuel subsidy removal in Adamawa State, demonstrate that a majority of them (56.75%) expressed dissatisfaction with the level of access, thereby expressing concerns about the limitations in accessing banking services, which could potentially impact financial transactions and the accessibility of credit. In contrast, 41.75% of the respondents indicated that they had sufficient access to banking services, implying their contentment with the current state of affairs. A minimal proportion of the respondents (1.5%) reported having no access to banking services, thereby emphasizing the difficulties faced by this subgroup in obtaining essential financial services, which could potentially result in an increased reliance on informal channels and challenges in saving money. This data sheds light on the intricate relationship between the removal of fuel subsidies and the perceptions of financial access, thereby providing valuable insights into the potential economic consequences on the financial well-being of the region.

The study examines the perceptions of Internet access in relation to the immediate economic effects of fuel subsidy removal in Adamawa State. The majority of respondents (64.25%) expressed satisfaction with their Internet connectivity, categorizing it as "Adequate." Conversely, 34.25% of respondents reported facing challenges in online connectivity, labeling it as "Inadequate." This highlights the difficulties encountered in engaging in various activities online. A small fraction, comprising only 1.5% of respondents, reported having "No access" to the Internet, underscoring the struggles faced by a critical subset of individuals in essential online communication. The data presented in this study sheds light on the significance of Internet access in the digital era and offers valuable insights into potential disparities and economic ramifications of fuel subsidy removal on households in the region.

The investigation into the instant economic repercussions of fuel subsidy removal in Adamawa State reveals a predominant perception of insufficient access to postal services, with 57.25% expressing dissatisfaction, indicating constraints within conventional postal offerings. Conversely, 41.25% express contentment with the level of access, labelling it as "Adequate”, a simple 1.5% claim to have "No access," emphasizing the difficulties faced by this particular group in obtaining crucial postal communication. This data emphasizes the significance of conventional postal services and sheds light on potential obstacles and inequalities in communication approaches following the elimination of fuel subsidies in the region.

The study on the immediate economic effects of fuel subsidy removal in Adamawa State, Nigeria, highlights diverse perceptions of telecommunication services. A majority (60.75%) expressed satisfaction with "Adequate" access, suggesting positive impacts on reliable communication and participation in the digital economy. Conversely, 37.25% reported "Inadequate" access, indicating challenges in communication reliability and limited digital engagement. A small subset (2%) reported "No access," signifying potential isolation and restricted participation in the digital economy. This nuanced analysis reveals insights into the

digital divide and economic implications for households in Adamawa State following fuel subsidy removal.

Table 2:Level of Households to Access Essential services After Subsidy Removal

Access to healthcare services (Hospitals and clinics, access to medicines and medical treatment, vaccinations and preventive care)	Frequency	Percent
Adequate	207	51.75
Inadequate	191	47.75
No access	2	0.5
Total	**400**	**100.00**
Access to educational services (Schools and educational institutions, availability of quality education, access to educational resources	Frequency	Percent
Adequate	96	24
Inadequate	304	76
Total	**400**	**100.00**
Access to Utilities (Water supply, electricity supply and sanitation services)	Frequency	Percent
Adequate	170	42.5
Inadequate	224	56
No access	6	1.5
Total	**400**	**100.00**
Access to Transportation Services (Public transportation facilities, road infrastructure and maintenance and accessibility to transportation	Frequency	Percent
Adequate	107	26.75
Inadequate	290	72.5
No access	3	0.75
Total	**400**	**100.00**
Access to Security and Safety Services (Police and law enforcement, emergency services such as firefighting and ambulance, crime prevention and public safety	Frequency	Percent
Adequate	177	44.25
Inadequate	220	55
No access	3	0.75
Total	**400**	**100.00**
Access to Financial Services (Banking services)	Frequency	Percent
Adequate	167	41.75
Inadequate	227	56.75
No access	6	1.5
Total	**400**	**100.00**
Access to Communication Services: Internet access	Frequency	Percent
Adequate	257	64.25
Inadequate	137	34.25
No access	6	1.5
Total	**400**	**100.00**
Access to Communication Services: postal services	Frequency	Percent
Adequate	165	41.25
Inadequate	229	57.25
No access	6	1.5
Total	**400**	**100.00**
Access to Communication Services: telecommunication services	Frequency	Percent
Adequate	243	60.75
Inadequate	149	37.25
No access	8	2
Total	**400**	**100.00**

Source:*Field Survey, 2024*

Table 3: Household Total Monthly Income before Fuel subsidy Removal

The breakdown of respondents' household total monthly income in Adamawa State, Nigeria, prior to the fuel subsidy removal, provides a comprehensive overview of the economic landscape. A substantial number of surveyed households fall within the "100,001 - 150,000" Naira range, with the "80,001 - 100,000" Naira range following closely. These findings are crucial for understanding the economic diversity among respondents and serve as a basis for assessing the potential impacts of fuel subsidy removal on households with varying income levels. The mean household income of 124,900 Naira provides an average estimate, and the standard deviation of 68,417.413 Naira indicates the variability in reported incomes. This data is fundamental for evaluating how the removal of fuel subsidies might affect households with different income levels, offering a perspective on potential economic consequences in Adamawa State.

The study on the immediate economic effects of fuel subsidy removal in Adamawa State, Nigeria, highlights shifts in household income distribution post-subsidy removal. The "100,001 - 150,000" Naira range is predominant, representing 28.25% of respondents, indicating a significant portion of households in this income bracket. The "80,001 - 100,000" Naira range closely follows at 22.5%, while the "Below 20,000" Naira category, with 1.25%, signifies a smaller but noteworthy segment facing economic challenges. The mean household income post-removal is 121,662.5 Naira, with a standard deviation of 70,703.047 Naira, providing an average estimate and measuring income variability. This data offers a nuanced perspective on the economic consequences of fuel subsidy removal across income levels in Adamawa State, allowing for comparison with pre-removal income distribution.

The comprehensive breakdown of sources relevant to assessing the immediate economic impacts of fuel subsidy removal on households in Adamawa State, Nigeria, the predominant source, "Business," constitutes 73.25%, highlighting a significant reliance on insights from the business sector. "Agriculture/Farming/Agric Business" closely follows at 71.25%, indicating a substantial focus on understanding the effects on agricultural activities. "Employment" is the third-ranked category at 57.00%, showcasing a discernible interest in evaluating the impact on employment dynamics. Despite being less frequent, the "Other" category at 8.00% contributes diverse sources with nuanced perspectives. Overall, the data emphasizes the intricate nature of the economic effects, with a primary focus on business, agriculture, and employment.

Table 3: Household Total Monthly Income before Fuel subsidy Removal

Household income range	Frequency	Percent
Below 20,000	5	1.25
20,001 - 40,000	15	3.75
40,001 - 60,000	18	4.5
60,001 - 80,000	48	12
80,001 - 100,000	97	24.25
100,001 - 150,000	109	27.25
150,001 - 200,000	75	18.75
200,001 - 300,000	23	5.75
300,001 - 500,000	10	2.5
Total	**400**	**100.00**
Mean (SD)	**₦124,900(₦68,417.413)**	

Source: *Field Survey, 2024.*

Table 3: Household Total Monthly Income after Fuel Subsidy Removal

Household income range	Frequency	Percent
Below 20,000	5	1.25
20,001 - 40,000	22	5.5
40,001 - 60,000	25	6.25
60,001 - 80,000	49	12.25
80,001 - 100,000	90	22.5
100,001 - 150,000	113	28.25
150,001 - 200,000	62	15.5
200,001 - 300,000	23	5.75
300,001 - 500,000	11	2.75
Total	**400**	**100.00**
Mean (SD)	**₦121,662.5(₦70,703.047**	

Source:*Field Survey, 2024*

Table 4: Level of Household Monthly expenditure After Fuel Subsidy Removal

The detailed information on the monthly expenditure on food items among 400 survey participants, the majority (56.75%) falls into the "Moderate" expenditure category, indicating moderate spending habits. Meanwhile, 22% reported "High" expenditure, signifying a notable segment with elevated spending. On the lower end, 7.5% indicated "Low" expenditure, and 5% reported "Very Low" expenditure, reflecting more restrained spending patterns. Additionally, 7% reported "Very High" expenditure, highlighting a subset with notably high spending. Notably, 1.75% chose not to disclose their expenditure levels, emphasizing the importance of respecting participants' privacy. Overall, the data provides nuanced insights into the diverse patterns of monthly expenditure on food items within the surveyed population.

The data presents a comprehensive overview of the reported monthly expenditure on transportation among 400 participants. The majority (63.25%) falls into the "Moderate" expenditure category, indicating common moderate spending habits. Conversely, 22% reported a "High" expenditure, highlighting a significant segment with relatively elevated transportation spending. On the lower end, 5.5% indicated "Low" expenditure, and 2.75% reported "Very Low" expenditure, indicating a subgroup with more restrained spending. Another 5.25% reported a "Very High" level of monthly expenditure, representing a smaller but notable segment with notably high transportation spending. The data underscores diverse spending patterns within the surveyed population. Additionally, 1.25% chose not to disclose their expenditure levels ("Prefer not to say"), emphasizing the importance of respecting participants' privacy preferences regarding financial disclosure. In academic terms, these findings contribute nuanced insights into the heterogeneity of monthly transportation expenditure habits within the surveyed demographic.

The data provides a comprehensive overview of monthly expenditure on education among 400 participants. A substantial majority (54.5%) falls into the "Moderate" expenditure category, indicating balanced spending. In contrast, 24.75% reported a "High" expenditure, highlighting a segment with relatively elevated spending on education. On the lower end, 1% indicated "Low" expenditure, and 2.25% reported "Very Low" expenditure, reflecting more restrained spending. Conversely, 15.5% reported a "Very High" level of monthly expenditure on education, representing a smaller but notable segment with notably high spending. Importantly, 2% chose not to disclose their expenditure levels ("Prefer not to say"). These

findings offer degree into the diverse range of monthly expenditure patterns on education within the surveyed demographic.

The data table highlights respondents' reported monthly healthcare expenditure among 400 participants. The majority (47.25%) falls into the "Moderate" spending category, while 28.75% report "High" expenditure, indicating a significant segment with elevated healthcare spending. On the lower end, 4.75% indicate "Low" expenditure, and 2.5% report "Very Low" spending, representing a subgroup with more restrained healthcare spending habits. Additionally, 14.25% report "Very High" expenditure, signifying a smaller but notable segment with notably high spending. Importantly, 2.5% choose not to disclose their expenditure levels ("Prefer not to say"). Overall, the findings illustrate diverse monthly healthcare expenditure patterns within the surveyed population, emphasizing both commonalities and variations in financial commitments to health-related expenses. The inclusion of a "Prefer not to say" category underscores the importance of respecting participants' privacy preferences regarding financial disclosure in healthcare expenditure.

.**Table 4: Level of Household Monthly expenditure After Fuel Subsidy Removal**

Level of monthly expenditure on food items	Frequency	Percent
High	88	22
Low	30	7.5
Moderate	227	56.75
Prefer not to say	7	1.75
Very High	28	7
Very Low	20	5
Total	**400**	**100.00**
Level of monthly expenditure on transportation	Frequency	Percent
High	88	22
Low	22	5.5
Moderate	253	63.25
Prefer not to say	5	1.25
Very High	21	5.25
Very Low	11	2.75
Total	**400**	**100.00**
Level of monthly expenditure on education	Frequency	Percent
High	99	24.75
Low	4	1
Moderate	218	54.5
Prefer not to say	8	2
Very High	62	15.5
Very Low	9	2.25
Total	**400**	**100.00**
Level of monthly expenditure on healthcare	Frequency	Percent
High	115	28.75
Low	19	4.75
Moderate	189	47.25
Prefer not to say	10	2.5
Very High	57	14.25
Very Low	10	2.5
Total	**400**	**100.00**

Source:*Field Survey, 2024*

Table 5: Source of Household Income

The allocation of income origins among the participants is elucidated, illuminating the heterogeneous economic pursuits that contribute to their sustenance. Entrepreneurial endeavors emerge as the primary origin, as 73.25% of the participants indicate involvement in this domain. Following closely behind, agriculture, farming, or agric business emerges as the second most prevalent origin, with 71.25% of the participants engaged in this sector. Formal employment ranks third, as 57.00% of the participants rely on it for income. The "Other" category, encompassing diverse and unspecified origins, constitutes 8.00% of the participants. This breakdown underscores the multidimensional nature of income generation among the surveyed population, accentuating the significance of business and agriculture in conjunction with other employment opportunities. The findings underscore the necessity for a nuanced comprehension of the diverse economic panorama and the various sectors that contribute to household incomes.

Table 5: Source of Household Income

Source	Frequency	Percent	Rank
Business	293	73.25	1st
Agriculture/Farming/Agric Business	285	71.25	2nd
Employment	228	57.00	3rd
Other	32	8.00	4th

Source:*Field Survey, 2024*

5.0 Conclusion and Recommendations

The investigation into the immediate economic consequences of the elimination of fuel subsidies in Adamawa State offers an in-depth comprehension of the potential impacts across various demographic and economic dimensions. The analysis unveils vulnerability, specifically among individuals aged 35-44, who constitute a significant group in the prime of their professional lives.

An array of demographic factors, including gender, marital status, household role, education, employment, and housing, underscore the intricate circumstances and susceptibilities within the population. Additionally, the research explores perceptions concerning indispensable services, illuminating complex associations between the withdrawal of subsidies and access to healthcare, education, utilities, transportation, security, financial services, Internet, postal services, and telecommunication.

The findings highlight concerns related to affordability, availability, and quality across these services, underscoring the necessity for comprehensive policy considerations. Examining patterns of household income and expenditure elucidates economic diversity and shifts subsequent to the cessation of subsidies.

This study furnishes fundamental insights for policymakers, emphasizing the requirement for tailored interventions to tackle distinct challenges encountered by diverse demographic groups and ensure the well-being of households in Adamawa State in the aftermath of fuel subsidy removal. Hence, the following recommendations were made; Firstly, it is imperative for policymakers to enact customized social assistance initiatives, taking into account variables including gender, marital status, and educational background, to provide aid to susceptible populations grappling with financial difficulties. Secondly, considerable measures ought to be implemented in order to foster accessibility to indispensable services,

encompassing healthcare and education, thereby addressing concerns pertaining to both affordability and availability. Lastly, it is recommended to introduce income support mechanisms and ventures focused on economic diversification, with the aim of alleviating the economic repercussions on households and fostering resilience in the aftermath of the removal of subsidies.

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