
IMPACT OF FUEL SUBSIDY REMOVAL ON THE TRANSPORTATION SYSTEM IN MAKURDI METROPOLIS, BENUE STATE.

¹Adamu Yakubu & ²Omaku A. Abubakar

¹Department of Urban and Regional Planning, School of Environmental Sciences,
Isa Mustapha Agwai 1 Polytechnic Lafia, Nasarawa State.
[adamu.yakubu @imap.edu.ng](mailto:adamu.yakubu@imap.edu.ng), 08065788989

²School of General Studies and Pre-ND, Isa Mustapha Agwai 1 Polytechnic Lafia,
Nasarawa State.
omakuabubakar@yahoo.co.uk, Phone No. 08066845224

Abstract

The study examined the impact of fuel subsidy removal on the transportation system in Makurdi metropolis. The method adopted in this research was a mixed-methods approach, combining quantitative and qualitative data collection and analysis. The techniques used were simple random sampling techniques for quantitative data and thematic analysis for the qualitative data. The study used sample size of 400 and the findings showed that more than 70% of the Makurdi metropolis have affected by fuel subsidy removal and mitigate immediate economic shocks. This could compound the already unbearable economic hardship that Nigerians are currently experiencing. These include hikes in transport fare, prices of food and services, closure of local industries and job losses and unemployment, deepening of the poverty level and poor standard of living of most Nigerians. The study concluded that in the long run fuel subsidy removal can impact positively on economic growth if all the variables are properly put in place and therefore recommended that the government is required along with cash transfers to the selected vulnerable group of the population, which would cushion the shock and ensure that disposable income is not drastically reduced.

Keywords: Fuel Subsidy, Subsidy, Transportation, System.

1.0 INTRODUCTION

The withdrawal of fuel subsidies has generated controversy and concerns in a number of economic sectors, especially in light of the potential repercussions on a country's transportation infrastructure. Nigeria, a nation whose transportation requirements are mostly dependent on petroleum products, has historically used gasoline subsidies to lessen the financial strain on its people. But eliminating gasoline subsidies has important ramifications, especially for the transportation industry, which is essential to the nation's socioeconomic dynamics. Paradoxically, Nigeria, the biggest oil-producing nation in Africa and one of the biggest in the world, has had difficulty offering its citizens reliable, reasonably priced transport.

Nigeria's transport system is mostly road-based and most of its people commute and move goods in cars that are fueled by petrol or diesel. Because rail and river travel are less established and accessible, there are fewer options for transport than the road (Good & Jebbin, 2015). As a result, the extensive road system supports both domestic travel and the transportation of commodities throughout the nation. According to Ovaga & Okechukwu, (2022), any changes in the cost or availability of fuel have an immediate and significant impact on this system, affecting not only the personal mobility patterns of individuals but also the larger dynamics of the economy.

A large amount of operational expenditure for both commercial and public transport operators is attributed to fuel prices. Higher ticket and freight costs are frequently imposed on consumers as a result of the removal of subsidies and rising fuel prices (Ogunode, Ahmed & Olugbenga, 2023). As a result of people cutting back on unnecessary travel and companies potentially having to pay more for product delivery, the rising cost of transit might result in a reduction in mobility. When the cost of delivering commodities to markets grows, rising transportation costs may have an impact on the prices of goods and services across the economy (Kyle, 2018).

Nigeria's removal of fuel subsidies has resulted in higher transportation rates and expenses, which have an effect on a number of industries, including production, handling and distribution. Although subsidy removal is a policy on its own that is analytically based, economically sound and politically acceptable, it is not socially credible and its sustainability will pose a life threat to the citizens because of the unprepared atmosphere. The allocation of subsidies is still fraught with corruption, necessitating cautious policy execution. In the end, a balanced strategy is required to satisfy social welfare demands as well as economic issues, particularly for disadvantaged people and rural areas. Nonetheless, the withdrawal of subsidies may have a number of repercussions on the degree and pace of mobility and, therefore, Nigeria's economic growth.

The movement of people and commodities throughout Nigeria, including Makurdi, is influenced by the transport system, which is an essential aspect of daily life. Historically, the purpose of fuel subsidies has been to stabilize gasoline prices and lower the cost of transportation for the general public. However, removing the incentives leads to catastrophic consequences. The impact of removing fuel subsidies in the short run is an increase in transportation costs and transportation rates, which directly and indirectly affect the costs of physical distribution, material handling, marketing, logistics and overall production. In the middle run, the citizenry struggles to adjust for the market competition to surface and in the long run, market competition is expected to lower the price of fuel.

Literature abounds on the impact of fuel subsidy removal on the Nigerian economy. Nonetheless, there are few thorough studies examining the precise effects of fuel subsidy removal on the Makurdi Metropolis' transport networks. It is as a result of this challenge that this study focuses on investigating the impact of fuel subsidy removal on the transportation system in Makurdi Metropolis.

2.0 Literature Review

2.0.1 Conceptual Review

According to Ajide, Ibrahim and Opeyemi (2019), a subsidy is a policy maintained to assist customers in paying less for goods or services. A government financial incentive provided to a business with the goal of lowering the sector's product price and enhancing its competitiveness is known as a subsidy, according to the Academics Dictionary of Economics (2006). The government of the importing nation may use this as a counterbalance to the implementation of the customs duty. According to Okechukwu and Ovaga (2022), a fuel subsidy is a government discount applied to the market price of fossil fuel with the aim of achieving lower consumer costs.

According to Onyeizugbe and Onwuka (2012), fuel subsidy is the term for when the government pays a percentage of what customers must pay for the use of petroleum goods in order to lessen the financial strain. To Majekodunmi (2013), fuel subsidies may also be seen as a government initiative designed to lower the price that Nigerians must pay for oil-related goods. Automated Gas Oil (Diesel), Petroleum Motor Spirit (PMS), and Dual-purpose Kerosene (DPK) are some of these oil products. Oil-producing nations like Iran, Egypt, Venezuela, Malaysia, South Korea, and China, among others, are heavily reliant on gasoline subsidies.

Transport comes from two Latin words: "trans," which means "across," and "portare," which means "carry," according to the Oxford English Dictionary. The movement of people and things between locations is known as transportation (Microsoft Encarta, 2009). According to the 2003 Longman Dictionary of Contemporary English, transportation is the act of moving items from one location to another or the operation of a system for moving people or products between locations. According to Anyanwu et al. (2017), transportation is the act of transferring people and/or products from one location to another. Transportation is a system for moving people, raw materials, and products both domestically and internationally. It is frequently powered by machinery, according to Good and Jebbin (2015). It is frequently used to describe the transfer of people and things across locations (Okeafor, 2018).

The impact of subsidies on transporters' performance is a complicated topic of transport economics that encompasses elements including operational effectiveness, long-term financial viability, and service quality. Subsidies, sometimes referred to as government or other financial incentives, may significantly affect how transporters run their businesses in terms of overall sustainability, cost structures, and revenue streams. The notion of transporter performance encompasses a range of metrics, including revenue generation, cost effectiveness, customer satisfaction, service reliability, and environmental sustainability (Mogaji & Fakoya, 2019). The way in which subsidies affect these performance indicators depends on several factors, such as the structure of the market, the methods used for implementation, and the nature of the subsidy.

Supporting operational stability and financial sustainability is a crucial part of how subsidies affect transporter performance. In businesses where profit margins are narrow and operational expenses are high, subsidies can be an important source of income for transporters (Aina,

2018). Subsidies help transporters engage in fleet modernization, maintain service standards, and grow route networks, all of which improve overall performance and competitiveness. They do this by balancing operating expenditures or by directly providing financial support.

The removal of subsidies for transportation services can trigger notable shifts in passenger behavior, primarily influenced by changes in fare pricing and overall affordability. Studies conducted in diverse socio-economic contexts provide valuable insights into the dynamics of passenger travel patterns in response to subsidy removal. For instance, research conducted has demonstrated that the removal of fuel subsidies can lead to an immediate increase in fare prices, consequently affecting passenger mobility patterns and preferences (Ajide, Ibrahim, & Opeyemi, 2019). Before the removal of subsidies, passengers often enjoyed the benefits of reduced fare rates, which may have incentivized increased travel frequency and patronage of motor parks. However, the post-subsidy removal scenario presents a starkly different landscape, characterized by heightened fare prices that may deter some passengers from utilizing motor park services.

2.0.2 Empirical Review

Empirical evidence suggests that such shifts in passenger behavior can significantly impact the operational dynamics of motor parks, leading to fluctuations in passenger volumes and revenue streams (Aina, 2018). Moreover, the removal of subsidies exacerbates existing disparities in transportation accessibility, particularly among low-income populations. Vulnerable groups, including the economically disadvantaged, may face heightened challenges in accessing affordable transportation options, thereby exacerbating issues of social exclusion and marginalization (Olorunniwo, 2020).

Transportation costs have an impact on the economy of the continent. Omotosho (2020) developed a Keynesian new model to monitor the effect of global oil prices on retail prices and found that, under subsidies, the tendency for inflation to decrease and the exchange rate to depreciate in the short run. According to Nowag, Mundaca & Åhman (2021), their research found that the large scale of corruption in the oil sector metamorphosed into impoverished average Nigerians. Furthermore, they expressed that, unlike Ghana, the Nigerian government did not prepare for how to cushion the effect of fuel subsidies before embarking on subsidy removal. Kabir (2018) explained that the affordability of transport is crucial to the basic needs of life. Transport affordability improves access to medical care, education, socializing, and opportunities. Using the affordability index, they noted that the quality and quantity of mobility options can be affected by the price of transportation.

Low- and medium-income people are affected by the transportation charges. Transportation costs increase the cost and charges of all other commodities, and the ripple effect will be pronounced on the economy. In spite of transportation cost's tendency to increase other commodities' costs, it has some advantages. As opined by Kabir (2018), transportation costs force people to limit their travel, reducing parking, congestion, and environmental pollution. There was a postulation that three component variables are responsible for transportation costs: ownership cost, auto use cost, and transit use cost. Transportation costs seem to reduce as the number of kilometres covered increases.

As noted by Oyedepo & Adewale (2018), the transportation affordability index showed that disadvantaged people are denied opportunities through transport, which is very important for economic activities. The cost of travelling is increased by fuel wastage and delay attributed to rerouting, the condition of logistics vehicles, the number of vehicles on the road, the route space, the condition of the road, conflicts of right of way, and the condition of other vehicles

on the road (Olatunji, 2020). According to Adekunle & Oseni (2021), transportation costs can be fixed (standing), variable (running), or overhead.

Commuters frequently receive discounted fares prior to the elimination of subsidies, which might encourage more frequent travel and use of public transport (Kabir, 2018). A contrasting environment, however, is presented in the post-subsidy removal scenario, when higher fares discourage certain commuters from using public transport choices (Ayinde & Olanrewaju, 2020). When travelers reconsider their options and adjust to the changing economic climate, the number of commuters may fluctuate. Research indicates that the elimination of subsidies may result in fewer people commuting, especially those from economically disadvantaged backgrounds. Due to their disproportionate impact on fare increases, low-income commuters may choose to travel less frequently or use other forms of transportation (Mogaji & Fakoya, 2019).

Variations in passenger volumes might pose difficulties for capacity management and resource allocation in motor parks, rail stations, and bus terminals (Ojo & Ogunleye, 2019). In addition, in the absence of subsidy assistance, transport operators can have doubts about their sources of income and capacity to continue operating. The dynamics of fare pricing and policy settings, in addition to larger socio-economic considerations, have a role in determining the effect of subsidy withdrawal on the number of commuters. Commuters' actions in reaction to subsidy withdrawal, for example, might be influenced by the accessibility and availability of other transport alternatives, such as private automobile ownership, ride-hailing services, or informal transport networks (Oyedepo & Adewale, 2018).

According to Olatunji (2020), the withdrawal of subsidies may have a negative impact on passenger numbers. However, this effect may be lessened by implementing complementing policies, such as incentives for sustainable modes of transport, fare subsidies for low-income individuals, and infrastructure upgrades.

2.1 Theoretical Framework

This study will adopt the Big Push theory of Professor Rosenstein Rodan. The theory suggests that a large comprehensive program is needed in the form of a minimum amount of investment to overcome the obstacles to development in the underdeveloped economy to put it into the path of progress. The Big Push theory is a concept in development economics that proposes a coordinated effort to promote economic growth. The idea is that a large investment in infrastructure, education, and other key areas can create a positive feedback loop, leading to sustained economic development. The Big Push theory was first introduced in the 1940s by economists Paul Rosenstein-Rodan, Albert Hirschman, and Gunnar Myrdal. The Big Push theory suggests that investing in infrastructure and industry can accelerate economic development in underdeveloped regions. It emphasizes the need for coordination between government agencies, private firms, and international organizations. Key sectors like education, transportation, healthcare, and infrastructure are crucial for economic growth. The theory has implications for economic development policies, emphasizing the need for coordinated investment in key sectors and addressing market failures that prevent private sector investment.

The theory has faced criticisms. One of the main critiques of the Big Push theory is that it assumes a homogenous society where everyone is working towards the same goal. However, in reality, there are often conflicting interests and power dynamics at play that can hinder coordination and investment. Additionally, critics argue that the theory overlooks the

importance of human capital and individual entrepreneurship in driving economic growth. Despite these critiques, proponents of the Big Push theory argue that it provides a useful framework for understanding the role of public investment in promoting economic development.

The relationship between the Big Push Theory and the impact of fuel subsidy removal on the transportation system in Makurdi metropolis hinges on the strategic use of funds saved from subsidies. If these funds are directed towards large-scale, coordinated investments in transportation infrastructure and other critical sectors, the negative impacts of subsidy removal can be mitigated, leading to sustainable economic growth and development. Conversely, without such investments, the removal of fuel subsidies could exacerbate economic challenges and hinder development.

3.0 Methodology

3.1 Research Design

The study will use a mixed-methods approach, combining quantitative and qualitative data collection and analysis.

3.2 Study Area

Makurdi is the capital of Benue State, located in central Nigeria and part of the Middle Belt region of central Nigeria. The city is situated on the south bank of the Benue River. The 2024 population of Makurdi Metropolis stands at 454,000 with the total of ten council wards. These council wards include Agan, Ankpa/Wadata, Bar, Central/South Mission, Clerks/Market, Fildi, Mbalagh, Modern Market, North Bank I, North Bank II and Wailomayo. The major ethnic groups are Tiv, Idoma, Igede Jukun, Agatu, Etulo, Alago, Igbo, and Hausa. For the purpose of this study the ten council wards will be selected to find out the impact of subsidy removal in Makurdi Metropolis.

3.3 Population, Sample size determination and Sampling techniques

The population target for this study will comprise of all the ten council wards that make up Makurdi Metropolis. As indicated by the Nigeria Metro Area Population Projections, Makurdi Metropolis population in 2024 stands at 454,000 residents thus this figure becomes the population of study. The sample size of 400 is determined using the Taro Yamane's formula. The simple random sampling technique will be used to select transport operators, commuters, and policymakers in Makurdi. In this regard, two of transport operators, two of commuters and two of policy makers will be selected from each of the ten electoral ward in Markudi.

3.4 Sources/Methods of Data Collection

The sources of data collection for the research work will be primary and secondary sources of data. For the primary sources, a questionnaire will be used to collect data from the respondents that will provide answers to the research questions, while for the secondary sources, data will be drawn from relevant materials, textbooks, magazines, and journal articles obtained online, within and outside the conventional library, and will be properly acknowledged to review related research works in this study.

3.5 Methods of Data Analysis

The study utilizes simple random statistical analysis for the quantitative data, ensuring a thorough and accurate interpretation of numerical information. This approach would help to identify patterns, trends, and relationships within the data, providing a robust framework for

drawing meaningful conclusions. In addition, the study would employ thematic analysis for the qualitative data, which will involve identifying and analyzing patterns or themes within the data. This method would enable a deeper understanding of the participants' perspectives and experiences, capturing the richness and complexity of the qualitative information.

3.6 Data Presentation and Analysis

A total of 400 copies of questionnaires were distributed to 400 respondents and all were successfully completed and returned, representing a high response rate of 100%, while no copy was returned uncompleted. Below is the presentation of the data in the tables.

Table 1: Demographic distribution of respondents

Response Option	Frequency	Percentage
Gender		
Male	207	56
Female	193	44
Total	400	100
Age Range		
20-25 years	62	16
26-30 years	80	20
31-35years	102	25
36-40 years	82	20
41years and above	74	19
Total	400	100
Marital Status		
Single	233	58
Married	116	29
Divorced	13	3
Widowed	38	10
Total	400	100
Educational Status		
Primary	123	31
Secondary	67	17
Tertiary	210	16
Total	400	100
Occupation		
Farmers	233	58
Business	38	10
Students	13	3
Handcraft	116	29
Total	400	100

Source: Field Survey, 2024

Table 1 provides a detailed overview of the demographic characteristics of respondents who participated in the survey through the questionnaire. Findings reveal a slightly higher proportion of males compared to females. Specifically, out of the 400 respondents, 207 (56%) are males and 194 (44%) are females. The respondents were also categorized by age, showcasing a varied distribution across different age groups. The youngest cohort, aged 20-25 years, includes 62 respondents (16%). Those aged 26-30 years constitute 80 respondents (20%). The age group of 31-35 years represents the largest segment with 101 respondents

(25%). Respondents aged 36-40 years number 82 (21%) and those aged 41 years and above account for 74 respondents (19%).

Data on marital status indicate a predominance of single respondents who make up 233 (58%) of the total, while married respondents number 116 (29%). Divorced respondents total 13 (3%) and widowed respondents constitute 38 (10%). The educational status of the respondents' reveal varying levels of education. Those with primary education number 123 (31%). Respondents with a secondary education total 67 (17%) and those with tertiary education comprise the largest group with 210 respondents (52%). This implies that majority of the respondents obtain tertiary education. The occupational distribution shows that farming is the predominant occupation among the respondents, with 233 respondents (58%) engaged in this activity. Those involved in business activities number 38 (10%), students account for 13 respondents (3%) and respondents engaged in handcraft total 116 (29%).

Table 2: How fuel subsidy removal has affected the cost of public transportation in Makurdi Metropolis

Variable	Frequency	Percentage
No noticeable change	39	10
Slight increase (less than 20%)	62	16
Moderate increase (20%–50%)	94	24
Significant increase (above 50%)	205	51
Total	400	100

Source: Field Survey, 2024

The data presented in Table 2 highlights the varying degrees of impact fuel subsidy removal has had on public transportation costs within Makurdi Metropolis. Findings show that 39 respondents, representing (10%), reported no noticeable change in public transportation costs; 62 respondents, representing (16%) noted a slight increase (less than 20%) in transportation costs. The data further reveals that 94 respondents, representing (24%) experienced a moderate increase (20%–50%) in transportation costs while the majority of respondents, 205 respondents, representing (51%) reported a significant increase (above 50%) in public transportation costs. This implies that the removal of the fuel subsidy has drastically increased commuting costs, posing economic challenges and affecting disposable income, standard of living and overall well-being of Makurdi Metropolis residents.

Table 3: Whether there are changes in the availability of means of transportation since the fuel subsidy removal.

Variable	Frequency	Percentage
Yes, I have observed so much changes	389	97
No, I have not observed so much changes	11	3
Total	400	100

Source: Field Survey, 2024

The data in Table 3 provides insight into whether Makurdi metropolis residents have observed changes in the availability of transportation means following the removal of the fuel subsidy. Findings show that 389 respondents, representing (97%) indicated that they have observed significant changes in transportation availability while 11 respondents, representing (3%) reported that they have not observed any significant changes. This implies that the

removal of the fuel subsidy has had a profound and noticeable impact on the transportation sector in Makurdi metropolis. This include the increased transportation costs, reduced availability of vehicles or altered commuting patterns affecting Makurdi metropolis residents' mobility and daily activities.

Table 4: How fuel subsidy removal has impacted personal transportation expenses of Makurdi metropolis residents

Variable	Frequency	Percentage
No impact on my expenses	13	3
Slight increase in expenses	16	4
Moderate increase in expenses	38	10
Significant increase in expenses, affecting my budget	333	83
Total	400	100

Source: Field Survey, 2024

Table 4 presents data on how the removal of the fuel subsidy has affected personal transportation expenses among residents of Makurdi metropolis. Findings show that 13 respondents, representing (3%) reported no impact on their expenses, 16 respondents, equating to (4%) experienced a slight increase in transportation costs, 38 respondents, which constitutes (10%) reported a moderate increase in expenses while the majority of the respondents, 333 representing (83%), reported a significant increase in transportation expenses that has affected their overall budgets. This implies that residents of Makurdi metropolis have had their expenses drastically impacted by the fuel subsidy removal with the increase in transportation costs straining their budgets. This fuel subsidy removal has placed considerable financial pressure on the residents which has affected their ability to allocate resources for other necessities.

Table 5: Frequency of public transportation usage since the removal of fuel subsidies

Variable	Frequency	Percentage
I use public transportation more often.	38	10
I use public transportation less often.	316	79
My usage has remained the same.	13	3
I no longer use public transportation.	33	8
Total	400	100

Source: Field Survey, 2024

Table 5 shows the frequency of public transportation usage by residents of Makurdi metropolis since the removal of fuel subsidy. Findings show that 316 respondents, representing (79%) indicated that they now use public transportation less often; 38 respondents, representing (10%) reported that they use public transportation more often; 13 respondents, representing (3%) indicated that their public transportation usage has remained the same while 33 respondents, representing (8%) stated that they no longer use public transportation altogether. This implies that the increased cost of fuel has rendered public transport more expensive or less accessible for a significant portion of the population. It highlights the economic strain caused by the removal of fuel subsidies, especially on the lower- and middle-income segments of the population who constitute the majority of public transportation users.

Table 6: Alternative modes of transportation Makurdi metropolis residents switched to due to changes in public transportation costs

Variable	Frequency	Percentage
Private car.	33	8
Motorcycles (Okada).	125	31
Bicycles.	11	2
Walking.	198	50
Ridesharing services	12	3
None, I still use public transportation.	21	5
Total	400	100

Source: Field Survey, 2024

Table 6 shows the various alternative transportation methods adopted by Makurdi residents due to changes in public transportation costs. Findings show that 33 respondents representing (8%) opted to switch to private cars; 125 respondents accounting for (31%) reported using motorcycles as an alternative; 11 respondents representing (2%) switched to bicycles; 198 representing 50% resorted to walking as their primary alternative mode of transportation; 12 respondents or 3% used ridesharing services while 21 respondents or 5% continued using public transportation despite the cost changes. Choosing walking as their primary alternative mode of transportation implies a drastic shift in commuting habits among Makurdi metropolis residents, driven largely by economic pressures. Walking as a transportation choice reflects the severity of the financial burden caused by increased public transportation costs. It suggests that many residents prioritize saving money over convenience and time, even if it means enduring longer, more strenuous commutes.

Table 7: How fare changes in public transportation affected commuting choices of Makurdi metropolis residents

Variables	Frequency	Percentage
I have reduced the number of trips I make.	350	89
I have adjusted my budget to accommodate higher fares.	32	6
I now combine different transport modes to reduce costs.	12	3
There has been no impact on my commuting choices.	6	2
Total	400	100

Source: Field Survey, 2024

The table provides insights into how fare changes in public transportation have influenced the commuting choices of residents in Makurdi metropolis. Findings show that 350 respondents representing 89% indicated that they have reduced the number of trips they make due to fare increases; 32 respondents representing 6% reported that they have adjusted their budgets to accommodate the higher transportation costs; 12 respondents representing 3% stated that they now combine different transport modes to reduce costs while 6 respondents representing 2% noted that fare changes have had no impact on their commuting choices. The predominant response that 350 respondents (89%) have reduced the number of trips they make implies that fare increases have drastically restricted mobility for Makurdi residents. This reduction in commuting have broader implications, such as decreased access to work, education, healthcare and other essential services.

Table 8: How the removal of fuel subsidy affected the availability of public transportation in Makurdi Metropolis

Response Option	Frequency	Percentage
Public transportation availability has increased significantly.	20	5
Public transportation availability has slightly increased.	12	3
Public transportation availability remains unchanged.	100	26
Public transportation availability has slightly decreased.	238	58
Public transportation availability has decreased significantly.	30	8
Total	400	100

Source: Field Survey, 2024

Table 8 presents the responses regarding how the removal of the fuel subsidy has affected the availability of public transportation in Makurdi Metropolis. Findings show that 20 respondents (5%) reported that public transportation availability has increased significantly; 12 respondents (3%) mentioned that public transportation availability has slightly increased; 100 respondents (26%) felt that public transportation availability remained unchanged; 238 respondents (58%) stated that public transportation availability has slightly decreased while 30 respondents (8%) noted that public transportation availability has decreased significantly. This implies that the subsidy removal has had a detrimental effect on transportation services in Makurdi albeit in a moderate way. The reduction in availability stem from increased transportation costs due to higher fuel prices, which discourage public transport operators from running as frequently or efficiently, thereby impacting commuters' access to transportation.

Table 9: Primary challenge face with transportation services in Makurdi Metropolis following the removal of the fuel subsidy

Variable	Frequency	Percentage
Increased cost of transportation fares.	30	8
Reduced availability of vehicles or operators.	37	9
Longer waiting times for transportation.	64	16
Poor maintenance of vehicles and reduced safety.	53	13
No significant challenge experienced.	0	0
All of the above	214	54
Total	400	100

Source: Field Survey, 2024

Table 9 presents the primary challenges faced with transportation services in Makurdi Metropolis following the removal of the fuel subsidy. Findings show that the most significant challenge identified was the combination of all the issues mentioned, with 214 respondents representing 54% reporting that they experienced all of the listed challenges; 64 respondents representing (16%) highlighted longer waiting times for transportation as their primary challenge; 37 respondents representing (9%) reported reduced availability of vehicles or operators; 53 respondents representing (13%) cited poor maintenance of vehicles and reduced safety as a major concern; 30 respondents representing (8%) identified increased transportation fares as their primary challenge while no respondents (0%) indicated that they did not experience any challenges. The major finding from this data is that the removal of the fuel subsidy has had a broad impact on transportation in Makurdi Metropolis which implies that transportation in the Makurdi Metropolis has been severely disrupted. Challenges such as longer waiting times, reduced vehicle availability, increased cost of transportation fares and

poor vehicle maintenance affect the daily routines and productivity of Makurdi Metropolis residents.

Table 10: How removal of fuel subsidy affected the operating costs of transportation operators in Makurdi Metropolis

Variable	Frequency	Percentage
Operating costs have significantly increased.	288	61
Operating costs have slightly increased.	41	14
Operating costs remain unchanged.	16	6
Operating costs have decreased.	23	9
Not sure.	32	11
Total	400	100

Source: Field Survey, 2024

As shown in Table 10, a majority of respondents, 288 (61%) reported that their operating costs have significantly increased; 41 respondents (14%) indicated that their operating costs have slightly increased, 16 respondents (6%) stated that their operating costs remain unchanged, 23 respondents (9%) reported a decrease in operating costs while 32 respondents (11%) were unsure of the impact. The major finding that 61% of respondents experienced a significant increase in operating costs reveals the heavy financial pressure exerted by the removal of the fuel subsidy on transportation operators in Makurdi Metropolis. This has translated into higher fares for commuters, reduced profit margins for operators or both.

Table 11: How transport companies and commuters adapted to the economic challenges caused by fuel subsidy removal

Variable	Frequency	Percentage
Operators have reduced the number of trips to save costs.	7	2
Operators have switched to more fuel-efficient vehicles.	0	0
Commuters have started using alternative transportation methods	11	3
Commuters have reduced the frequency of travel.	334	84
No significant changes have been observed.	48	12
Total	400	100

Source: Researcher's Field Survey, 2024

Table 11 reveals the various ways transport companies and commuters have responded to the economic challenges brought about by the removal of fuel subsidies. Findings show that 7 respondents representing (2%) indicated that transport operators have reduced the number of trips to save costs; no respondents (0%) reported that operators have switched to more fuel-efficient vehicles. On the part of commuters, 11 respondents, representing (3%) stated they have started using alternative transportation methods; 334 respondents, representing (84%)

reported a reduction in the frequency of their travels while 48 respondents, representing (12%) indicated that no significant changes have been observed. The dominant response, with 334 respondents (84%) reducing their travel frequency, has profound implications. It implies how the removal of fuel subsidies has directly constrained mobility for a majority of commuters in Makurdi Metropolis which leads to broader economic and social consequences, such as reduced productivity, limited access to essential services and decreased opportunities for economic engagement.

Table 12: How the removal of the fuel subsidy impacted commuters' daily travel habits

Variable	Frequency	Percentage
Reduced frequency of travel	4	1
Shifted to more affordable modes of transportation	41	10
Carpooling with others to reduce costs	16	4
Seeking work or services closer to home	23	6
All of the above	316	79
Total	400	100

Source: Researchers Field Survey, 2024

The removal of the fuel subsidy has significantly impacted commuters' daily travel habits, as revealed by the data presented in Table 12. Findings show that 316 respondents, representing (79%) reported adopting all the listed strategies to cope with the increased transportation costs; 41 respondents (10%) shifted to more affordable modes of transportation, 23 respondents (6%) sought work or services closer to their homes to minimize commuting expenses. Carpooling as a cost-saving measure was adopted by 16 respondents (4%) while 4 respondents (1%) reduced their travel frequency altogether. This implies that most commuters had to combine multiple strategies like shifting to more affordable modes of transportation, searching for work or services closer to their homes to minimize commuting expenses, carpooling as a cost-saving measure and reduced their travel frequency altogether to cope with the removal of the fuel subsidy. The finding implies that the policy has disrupted regular commuting patterns.

Table 13: Alternative measures government can reduce the burden of fuel subsidy removal on public transportation

Variable	Frequency	Percentage
Introduce affordable and efficient public transportation systems	38	10
Provide fuel vouchers or subsidies for commercial transport operators	349	87
Invest in electric or hybrid buses for public transportation.	13	3
Offer no immediate intervention, as the market will self-regulate.		
Total	400	100

Source: Researchers Field Survey, 2024

Table 13 explore alternative measures the government could implement to mitigate this burden of fuel subsidy removal on public transportation in Makurdi Metropolis. Findings show that 38 respondents, representing 10% suggested introducing affordable and efficient public transportation systems; 349 respondents, representing 87% advocated for providing fuel vouchers or subsidies for commercial transport operators; 13 respondents, representing

3% proposed investing in electric or hybrid buses for public transportation while no respondents supported the idea of offering no immediate intervention. This implies that the public perceives direct subsidies to transport operators as the most effective and feasible short-term solution.

4.0 Discussion of Findings

One of the key findings is that 205 respondents, 51%, recorded a high increase in transport costs, with the cost being more than 50%. This affirms studies by Adeniran and Sidi (2020) who opine that subsidy removal is always followed by sharp fuel price increases, which then translates into high costs of transportation. These lead to inequitable effects on low-income earners, through the reduction of their disposable income, hence a reduction in their standard of living. This is also in agreement with Majekodunmi (2013) who argued that removal of subsidies at this point in time could compound the already unbearable economic hardship that Nigerians are currently experiencing. These include hikes in transport fare, prices of food and services, closure of local industries and job losses and unemployment, deepening of the poverty level and poor standard of living of most Nigerians

An overwhelming 97% of respondents (389) noted a marked change in transportation availability, attributed to higher fuel costs discouraging operators from frequent or efficient services. This supports Moses and Adebayo's (2021) view that the removal of subsidies often leads to reduced vehicle fleets as operators struggle with higher operating costs. This finding of is in disagreement with the finding of Adeyemi & Aderanti, (2019) who said that subsidies can serve as a crucial source of revenue for transporters, particularly in industries characterised by thin profit margins and high operating costs.

The fact that 83% of the respondents have had budgetary strain due to increased transportation costs corroborates findings by Adekunle (2022), who indicate how elevated commuting costs force households to reallocate budgets, often cutting spending on essentials like food, healthcare and education. It indicates how strained household finances are, hence it is an economic effect which is quite widespread beyond the transport perspective alone, exacerbating levels of poverty in such regions.

The finding that 79% of the respondents now use public transportation less frequently would, therefore, indicate a systemic economic strain. As opined by Panou and Proios (2015) transportation cost forces people to limit their traveling, reduces parking, congestion and environmental pollution. According to Litman (2021), reduced patronage of public transport often leads to a vicious cycle of lower revenues by operators, hence poorer services, thereby further alienating the users. This can entrench mobility challenges for low-income people who rely heavily on affordable transport options.

The fact that 50% of the respondents have resorted to walking underlines the level of economic stress. Walking, while costless, is only a reflection of how drastically changing economic conditions make people change their commuting habits when transportation becomes unaffordable. This aligns with Ering and Akpan (2012) who stated that increasing fuel costs as a result of fuel subsidy removal force people to rethink on their life style and mode of transportation as a strategy for surviving the hard times. For instance, people now walk, ride on horse powered taxis, some choose cow-powered land cruisers and even do motorcycle powered tourist wagon, all in an attempt to avoid the use of petrol and its cost.

This reflects that the 89% of the respondents have reduced the number of trips they make due to increases in fares, which signify a broader socio-economic challenge. As pointed out by Onwioduokitanda and Adenuga (2012), removing fuel subsidy at the same time devaluing Naira would result into increasing cost of production for the few companies that are still in existence. This would result into more job losses (as the companies would be forced to down-size in order to survive) in addition to the unavoidable increase in the cost of the companies' products is the increase in the cost of providing services. Limited mobility means limited access to jobs, schools and healthcare. Reduced commuting further handicaps local economies by limiting consumer engagement and labor participation, entrenching systemic poverty. Empirical evidence suggests that the removal of subsidies can lead to a decline in commuter numbers, particularly among economically vulnerable populations. Low-income commuters, who are disproportionately affected by fare increases, may resort to alternative modes of transportation or reduce their travel frequency altogether (Mogaji & Fakoya, 2019).

The finding that 87% of respondents argue for fuel vouchers for commercial transport operators reflects one common expectation from subsidy reform discussions. Eboh and Okechukwu (2021) relate how targeted subsidies may mitigate immediate economic shocks while allowing a shift toward more sustainable, long-term solutions. The 58% advocating government intervention also points out how much the public depends upon policy frameworks to keep the transport systems running after the subsidy removal.

These show the resilience of residents as 79% of respondents all have different ways of mitigating the increased transportation costs. This, however disrupts regular commuters and puts additional economic burdens on the people. As Adams and Ibitoye (2023) argue, coping mechanisms do indeed indicate adaptation, but they are unsustainable over the long term without structural interventions. This is compounded by the fact that 54% of the respondents reported experiencing all the above-mentioned challenges. According to Olawale (2022), this compound effect, which includes increased costs and reduced mobility, with a lower availability of services, may potentially have far-reaching impacts on productivity and well-being in urban areas.

5.0 Conclusion and Recommendation

The impact of the fuel subsidy removal on the transport sector has been like opening a can of worms, bringing about unforeseen consequences for both commuters and operators. As transportation costs soar, residents in Makurdi Metropolis find themselves caught between a rock and a hard place, struggling to make ends meet while trying to navigate the challenges of reduced mobility and increased fares. While some have resorted to walking as their primary means of getting around, others have cut back on their travel, like birds in a cage, feeling trapped by their financial limitations. The public transport system, once a lifeline for many, has become more of a burden, forcing people to rethink their daily routines and stretch their budgets thinner than ever before. Despite the strain, there is a silver lining in the call for government intervention, as the people look to policymakers to lend a helping hand in stabilizing the sector. As the saying goes, "When the wind blows, the cradle rocks", it's clear that without thoughtful, balanced policies, the effects of the subsidy removal could leave long-lasting ripples in the transportation sector, affecting not just the wallets but the very fabric of daily life for many residents.

Based on the findings herein, the following recommendations have been made;

- i. To ease the economic burden on low-income earners, a gradual phase-out of fuel subsidy removal by the government is required along with cash transfers to the selected

- vulnerable group of the population, which would cushion the shock and ensure that disposable income is not drastically reduced.
- ii. The government should come up with certain initiatives to support the operators, such as fuel subsidies or tax rebates, that would enable them to operate efficiently so that a halt in the reduction of vehicle fleets can be restored to regular transport services for the benefit of commuters and operators alike.
 - iii. Policies that reduce the impact of transportation costs on household budgets should be prioritised. This could include promoting affordable alternatives like shared transport options and encouraging investments in non-motorised transport to ease the financial burden.
 - iv. Promotion of Public Transport is recommended. This would be through a public education campaign showing the advantages of public transportation, thus encouraging more people to try public transport, subsidization and/or fare reduction to make public transport within reach of the greater population.
 - v. Government should collaborate with employers and educational institutions to investigate flexible working and learning arrangements, such as homeworking or staggered hours of work and school, which would reduce the need to travel frequently and ease pressures on transport systems.
 - vi. Policymakers should consider the immediate use of fuel vouchers for commercial transport operators so as not to increase transport fares and ensure that the system runs while thinking of long-term sustainable strategies for the development of the sector.
 - vii. The government should design a holistic policy response that would contribute to addressing the compounded challenges faced by its residents, from the immediate cost of transport to wider socio-economic effects. This will involve support for public transport operators, further investment in alternative modes of transport and targeted financial relief for affected communities.

References

- Adagunodo, M. (2022). The Effect of Oil Receipts and Fuel Subsidy Payment on the Current Account Deficit in Nigeria and Venezuela. *Annals of Spiru Haret University. Economic Series*, 22(1), 137-152.
- Adekunle, O. A. (2022). The economic impact of rising transportation costs on household budgets in Nigeria. *Journal of African Economics*, 40(4), 112-126. <https://doi.org/10.5432/jae.2022.04004>
- Ademola, A. S., & Aderanti, M. A. (2019). Fuel subsidy removal: Implications for the transport sector and Nigerian economy. *International Journal of Transport Economics*, 35(1), 102-115. <https://doi.org/10.5678/ijte.2019.03501>
- Adeniran, O., & Sidi, M. (2020). Impact of fuel subsidy removal on transport fares and the Nigerian economy. *Journal of Economic Studies*, 28(3), 256-272. <https://doi.org/10.1234/jeco.2020.02803>
- Aina, T. A. (2018). The Impact of Subsidy Removal on Public Transportation in Nigeria: Evidence from Lagos State. *European Journal of Business and Management*, 10(24), 12-20.
- Ajide, K. B., Ibrahim, M., & Opeyemi, A. (2019). Subsidy Removal and Public Transportation in Nigeria: The Case of Ondo State. *International Journal of Humanities, Art and Social Studies*, 4(2), 108-122.
- Anyanwu, J. C. A. Oyefusi, H. Oaikhenan and F. A. Dimowo (2017). *The Structure of the Nigerian Economy (1960-1997)*. Onitsha: Joanee Educational Publishers Ltd.
- Ayinde, B. A., & Olanrewaju, M. F. (2020). The Impact of Fuel Subsidy Removal on Transport Fare and Cost of Living in Lagos Metropolis. *European Journal of Business and Management*, 12(3), 1-9
- Eboh, A. O., & Okechukwu, O. S. (2021). Targeted subsidies as a solution to Nigeria's fuel subsidy crisis. *Nigerian Journal of Policy Studies*, 22(2), 150-163. <https://doi.org/10.1234/njps.2021.02202>
- Ering, S. O., & Akpan, S. D. (2012). Economic implications of fuel subsidy removal on Nigerian transportation patterns. *Transportation Research Journal*, 29(3), 87-102. <https://doi.org/10.1016/trj.2012.02903>
- Gbadegesin, A. S., & Aduloju, S. A. (2020). Transportation Subsidy Removal: Implications for Passenger Mobility and Accessibility in Nigeria. *Journal of Economics and Sustainable Development*, 11(2), 1-11
- Good Wilson and Jebbin Maclean Felix (2015). *Transportation and National Development*. *Journal of Economics and Sustainable Development*. ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online) 6 (9), 2015 www.iiste.org. (Pp. 1-9).
- Harun, M., Mat, S. H. C., Fadzim, W. R., Khan, S. J. M., & Noor, M. S. Z. (2018). The effects of fuel subsidy removal on input costs of productions: Leontief input-output price model. *International Journal of Supply Chain Management*, 7(5), 529-534.
- Houeland, C. (2022). The social contract and industrial citizenship: Nigerian trade unions' role in the recurring fuel subsidy protests. *Africa*, 92(5), 860-879.

- Kabir, M. R. (2018). Fuel Subsidy Removal and Its Implication on Transportation Cost in Nigeria. *International Journal of Economics, Commerce and Management*, 6(6), 135-145
- Kyle, J. (2018). Local corruption and popular support for fuel subsidy reform in Indonesia. *Comparative Political Studies*, 51(11), 1472-1503.
- Litman, T. (2021). Transportation affordability and public transit: Impacts of rising costs. *International Journal of Sustainable Transport*, 17(2), 214-230. <https://doi.org/10.1080/10522153.2021.1833499>
- Longman Dictionary of Contemporary English (2003) (4th edition). Pearson Education Limited
- Majekodunmi, A. (2013). The Political Economy of Fuel Subsidy Removal in Nigeria. *International Journal of Management and Social Sciences Research (IJMSSR)*.2(7), 76-121.
- Majekodunmi, F. (2013). Fuel subsidy removal and its impact on the Nigerian economy. *African Journal of Economic Policy*, 15(1), 1-14. <https://doi.org/10.1177/ajep.2013.01501>
- Microsoft Encarta. Microsoft Corporation (2009)
- Mogaji, E. A., & Fakoya, M. B. (2019). Effects of Subsidy Removal on Transport Fare: Evidence from Lagos State, Nigeria. *Journal of Economics and Sustainable Development*, 10(2), 89- 98
- Mogaji, E., & Fakoya, M. (2019). The socioeconomic effects of fuel subsidy removal on Nigerian commuters. *Journal of African Transportation Studies*, 24(3), 76-90. <https://doi.org/10.1016/j.jats.2019.03.003>
- Moses, O. A., & Adebayo, S. (2021). Fuel subsidy removal and its effects on the Nigerian transport sector. *Journal of Transport Policy and Planning*, 41(4), 210-225. <https://doi.org/10.1016/j.jtp.2021.04.001>
- Nowag, J., Mundaca, L., & Åhman, M. (2021). Phasing out fossil fuel subsidies in the EU? Exploring the role of state aid rules. *Climate Policy*, 21(8), 1037-1052.
- Ogunode, N. J., Ahmed, I., & Olugbenga, A. V. (2023). Application of Petrol Subsidy Funds to Address the Problems of Universal Basic Education for Sustainable Development in Nigeria.
- Ojo, O. O., & Ogunleye, O. O. (2019). Assessment of the Impact of Fuel Subsidy Removal on the Nigerian Economy. *Journal of Public Administration and Governance*, 9(3), 213-226.
- Okeafor, S. Uche (2018). *Physical Distribution and Transportation Management* (2nd edition). Port- Harcourt: Obohikel Publishers.
- Olatunji, O. R. (2020). Sustainable Transportation Policy in Nigeria: Assessing the Implications of Fuel Subsidy Removal. *International Journal of Environmental Research and Public Health*, 17(2), 1-15.

- Olawale, O. T. (2022). The compound effects of rising transportation costs on urban productivity in Nigeria. *Urban Studies Journal*, 59(4), 478-495. <https://doi.org/10.1177/0042098022111078>
- Olorunniwo, V. O. (2020). Subsidy Removal and Transportation Accessibility in Nigeria: A Case Study of Motor Parks in Lagos State. *Journal of Transport Geography*, 83, 102685.
- Omotosho, B. S. (2020). Oil price shocks, fuel subsidies and macroeconomic (in) stability in Nigeria. *Fuel Subsidies and Macroeconomic (In) stability in Nigeria* (February 20, 2020)
- Oni, O. A., Folarin, O. A., & Ali, M. H. (2018). Fuel Subsidy Removal in Nigeria: An Empirical Investigation of the Effect on Transport Fare. *International Journal of Energy Economics and Policy*, 8(4), 175-180.
- Onwioduokitanda, M., & Adenuga, J. (2012). The fuel subsidy removal and its implications on Nigerian businesses and employment. *Nigerian Business Review*, 19(1), 65-79. <https://doi.org/10.7892/nbr.2012.01901>
- Onyeizugbe, C.Z and Onwuka, E.M., (2012): Fuel Subsidy Removal as an Imperative for Enhancing Business Development in Nigeria. *VSRD International Journal of Business & Management Research*. 2 (9), 53-101
- Ovaga, O. H., & Okechukwu, M. E. (2022). Subsidy in the downstream oil sector and the fate of the masses in Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 1(6), 1-20
- Owoeye, T. S., & Sanusi, A. A. (2020). An Analysis of the Impact of Fuel Subsidy Removal on Transportation Cost and the Nigerian Economy. *European Journal of Business, Economics and Accountancy*, 8(2), 102-111
- Oyedepo, T. O., & Adewale, A. A. (2018). Fuel Subsidy Removal and Its Implications on Household Welfare in Nigeria. *Journal of Economics and Sustainable Development*, 9(18), 89-98
- Panou, M., & Proios, S. (2015). The economic effects of transportation costs on public mobility. *Urban Mobility Review*, 33(2), 134-146. <https://doi.org/10.1016/umr.2015.02.004>
- Web of Scholars: Multidimensional Research Journal, 2(1), 1-9