

Persistent fuel scarcity, price increases, and way forward in Nigeria

Engr. Kazeem Babalola Olawale and Emmanuel Simon Yayock

Department of Automobile Technology, School of Secondary Education (Technical), Federal College of Education (Technical) Bichi, Kano State, Nigeria

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Abstract: The scarcity and regular increase in the price of petroleum products in Nigeria has significant negative effects on businesses, the transportation sector, and the economy as a whole. Businesses suffer as they have to spend more on transportation and energy costs, which reduces their profit margins. This increase in costs is often passed on to consumers, leading to inflation and a decrease in consumer purchasing power. The transportation sector is also heavily affected by petroleum product scarcity and price increases, as fuel costs are a significant part of their operational expenses. This leads to higher transportation costs for goods and passengers, which ultimately affects the prices of goods and services across the economy. Furthermore, the Nigerian economy is heavily reliant on oil revenue, and any disruptions in the production and distribution of petroleum products can have severe consequences for the government's revenue and overall economic growth. The way forward for Nigeria is to diversify its economy and reduce its dependence on oil as its primary source of revenue. This can be achieved by investing in other sectors such as agriculture, manufacturing, and technology. Additionally, the government can work towards improving the country's infrastructure, particularly in the area of transportation, to reduce the impact of fuel scarcity and price increases on businesses and the economy. Finally, there needs to be an increased focus on developing and implementing alternative and renewable energy sources to reduce the country's dependence on fossil fuels.

Keywords: Fuel scarcity, price increases, petroleum products, oil producer, and fuel subsidies

I. Introduction

Persistent fuel scarcity and inconsistent price increases have been major problems in Nigeria for many years (Agiri & Morka, 2018). The country, which is a major oil producer, is struggling to maintain a stable and reliable fuel supply due to a variety of factors, including poor infrastructure, inadequate refining capacity, corruption, and inefficiencies in the distribution chain (Olaseni & Alade, 2012). The situation has been compounded by frequent price increases that have made fuel unaffordable for many Nigerians. Ironically, Nigeria has been able to maintain its position as Africa's largest oil producer for two consecutive months, as it produced 1.3 million barrels per day in December 2022, according to the Organization of Petroleum Exporting Countries (OPEC). However, the persistent fuel shortage and uncontrolled prices are challenges facing people to get gasoline to either fuel their cars or run electricity generators (Oyedepo, 2012). The most unfortunate situation amid this shortage is the unjustified price increase from the government-approved pump price to prices that satisfy individual dealers based on location and patronage.

Despite reported government payments of massive subsidies totaling trillions of naira annually. There are huge queues of cars and people fumbling with containers to buy fuel at every filling station that sells gasoline in the country, from north to south and from east to west, in the sweltering sun and the pouring rain, at exorbitant costs. When there was the first interruption in gasoline supply and distribution in the first quarter of 2022 due to the introduction of adulterated gasoline into the country by the Nigerian National Petroleum Company Limited (NNPC), the pump price of gasoline, which had been officially approved at N162 per liter, unexpectedly increased to N200 per liter. Currently, a liter of fuel costs between N250 and N600 per liter depending on the locality. However, oil marketing companies have consistently attributed the scarcity and price hike to the development of basic market factors such as foreign exchange, inflation, geopolitical tension in Europe, the high cost of hiring subsidiary vessels and the cost of transporting products to many parts of the country.

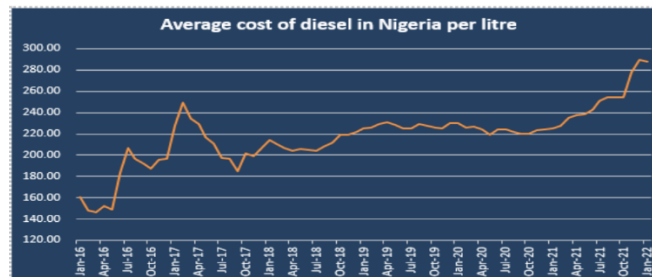


Figure 1: Variations in the cost of diesel per litre in Nigeria



Figure 2: Motorist and gallon queue up for petrol in Nigeria

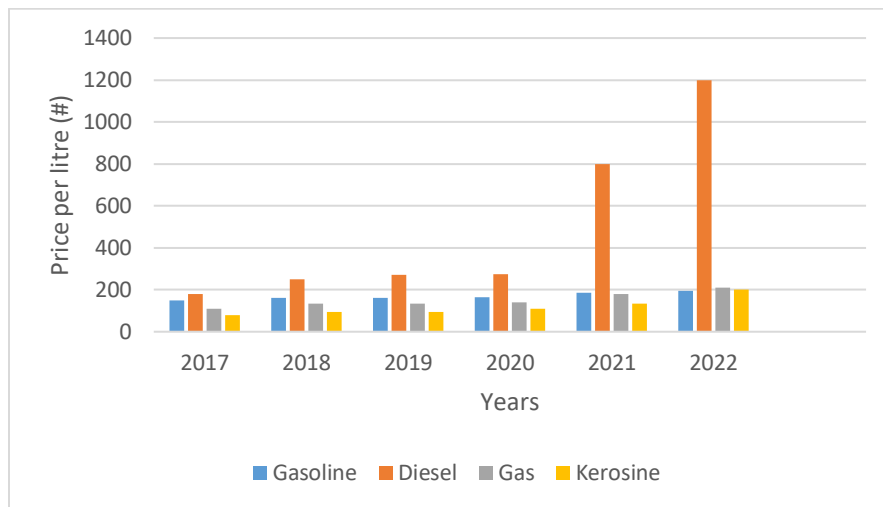


Figure 3: Price increases of petroleum products between (2017-2022) in Nigeria

From 2017 to date, there have been several price increases in gasoline, diesel, gas, and kerosene in Nigeria due to various factors, including changes in the international oil market, currency fluctuations, and government policies (Ighosewe et al., 2021). A brief overview of some of the major price increases during this period is presented. In May 2016, the Nigerian government announced the removal of fuel subsidies, which led to an immediate increase in gasoline prices from 86.50 naira per liter to 145 naira per liter (Azom, 2016). This caused widespread protests and disruptions, and the government eventually agreed to reduce the price to 125 naira per liter.

In 2017, there were several price increases in diesel and kerosene due to changes in the international oil market and the devaluation of the Nigerian currency. For example, in February 2017, the price of diesel increased from 200 naira per liter to 300 naira per liter, while the price of kerosene increased from 150 naira per liter to 300 naira per liter. In November 2018, the Nigerian government announced another round of fuel price increases, citing rising international oil prices and the need to reduce fuel subsidies (Moghaddam & Wirl, 2018). The price of gasoline increased from 145 naira per liter to 145-145.50 naira per liter, while the price of diesel increased from 200 naira per liter to 220 naira per liter. However, in March 2020, the Nigerian government announced a reduction in gasoline prices due to the global coronavirus pandemic and the resulting decrease in oil demand. The price of gasoline was reduced from 145 naira per liter to 125 naira per liter.

In September 2020, the Nigerian government announced another round of fuel price increases, citing rising international oil prices and the need to remove fuel subsidies. The price of gasoline increased from 145 naira per liter to 162-165 naira per liter, while the price of diesel increased from 160 naira per liter to 165 naira per liter.

Overall, the price of gasoline, diesel, gas, and kerosene in Nigeria has been subject to frequent fluctuations and increases over the past few years, reflecting the volatility of the global oil market and the challenges facing Nigeria's energy sector (Kojima, 2016).

Okafor et al., (2021) observed that fuel scarcity in Nigeria has a significant impact on transport fares and movement especially during festivals, which are frequently interrupted by chronic fuel scarcity. During this period, the cost of transportation typically increases significantly, as the cost of fuel rises and transport operators struggle to find enough fuel to keep their vehicles running. People traveling long distances to visit family, friends and attend religious or cultural activities are forced to pay heavily due to the scarcity of fuel. On many occasions, fuel scarcity has led to transportation disruptions, as vehicles run out of fuel or unable to make the journey due to a lack of fuel. This can be particularly challenging for people who need to travel for work or medical reasons.

II. Review of related studies

In a study conducted by Ocheni, (2015) on the impact of fuel increase on the Nigerian economy. The author explores the effects of fuel increase on Nigeria's economy, focusing on the impact on the price level, inflation rate, Gross domestic products (GDP), and balance of payments. The paper suggests that the increase in fuel prices has led to a rise in the general price level of goods and services in the economy, which has contributed to inflation. The high cost of fuel has also had a negative impact on the GDP of Nigeria, as it has increased the cost of production and transportation, which has ultimately led to a decrease in economic activity.

Similarly, Akpan & Nnamseh, (2015) provides an overview of the causes and effects of fuel scarcity in Nigeria, as well as potential solutions. The authors argue that addressing corruption and improving infrastructure are key to resolving the challenges facing the Nigerian petroleum industry. In addition, Joshua & Akinyemi, (2018) provides a historical overview of fuel subsidies in Nigeria and highlights the political and economic factors that have contributed to its growth. The paper examines the potential benefits and costs of fuel subsidy removal, including improved fiscal sustainability and reduced corruption, as well as the negative impacts on the Nigerian economy, particularly on the poor. The authors also discuss potential alternatives to fuel subsidy removal, emphasizing the need for a more nuanced approach to addressing the challenges facing the Nigerian petroleum industry and considering the impact of policy decisions on the wider economy and society.

Furthermore, Kate et al., (2016) examined the impact of fuel scarcity on business growth in Nigeria over a ten-year period from 2005 to 2015. The authors provide a historical overview of fuel scarcity and identified its causes and effects on the economy. They find that fuel scarcity has had a significant negative impact on business growth, particularly in the manufacturing and transportation sectors. The authors propose solutions to address the challenges of fuel scarcity, including the privatization of the Nigerian National Petroleum Corporation, investment in infrastructure, and policy reforms, emphasizing the importance of addressing the root causes of fuel scarcity and promoting a conducive business environment to support economic growth in Nigeria.

However, from the foregoing, it can be seen that the literature addressing why fuel scarcity still exists in Nigeria is sparse and inconsistent, and lacks specific reasons why fuel scarcity still exists. Although great efforts have been made by previous authors to propose solutions to the impacts caused by fuel scarcity, little or no effort has been made to address why the scarcity still persists. This study, therefore, seeks to explore this area and find solutions to the question of why the fuel shortage persists despite enormous subsidies and measures taken by the government to avert it. In this sense, this study attempts to fill this gap by offering solutions and further investigating the causes of the persistent shortage and the way forward. Therefore, further studies are needed

Why fuel scarcity persist in Nigeria

Fuel scarcity and price increases in Nigeria can be attributed to a variety of factors, including a shortage of refining capacity, inadequate infrastructure, corruption, and inconsistent government policies (Kate et al., 2016). Although the government has made efforts to address these issues, progress has been slow, and the problem persists.

One of the main reasons for fuel scarcity in Nigeria is the country's reliance on imported refined petroleum products, which makes it vulnerable to supply disruptions and price fluctuations in the global market (Kate et al., 2016). In addition, the refining capacity of the country's four refineries is inadequate to meet domestic demand, and the facilities are poorly maintained, leading to frequent breakdowns and shutdowns. Another factor contributing to fuel scarcity and price increase in Nigeria is the inadequate infrastructure for transporting and distributing petroleum products across the country (Guridno E dan & Guridno A, 2020).

Many of the pipelines and storage facilities are old and poorly maintained, leading to leaks, theft, and other disruptions (Sanni, 2014). However, corruption is also a major problem in the Nigerian petroleum industry, with many officials and middlemen siphoning off funds and diverting resources intended for infrastructure improvements and maintenance (Sanni, 2014). Inconsistent government policies and regulations have also hindered progress, with changes in tax and pricing policies creating uncertainty and discouraging investment in the sector.

Despite the government's efforts to address these issues, progress has been slow, and the problem of fuel scarcity and price increase persists in Nigeria (Ovaga, 2010). It will require sustained efforts and a long-term commitment to addressing these underlying factors to truly overcome the problem

The regular strikes by the Nigeria Association of Petroleum Tanker Drivers (NUPENG) have contributed significantly to fuel shortages and price increases in Nigeria (Ayofe Akinwale, 2014). NUPENG is a union that represents drivers who transport petroleum products such as gasoline, diesel, and kerosene from refineries and depots to various parts of the country. A strike by the union could disrupt the supply of petroleum products and lead to fuel shortages in various parts of the country. This in turn could lead to an increase in fuel prices as demand exceeds supply. If the strike continues for a prolonged period, it could also impact the economy by increasing transportation costs and affecting businesses that rely on fuel, leading to higher prices for goods and services in Nigeria.

In Nigeria, the activities of the price regulatory agency for petroleum products, such as the Petroleum Products Pricing Regulatory Agency (PPPRA), can have a significant impact on fuel scarcity and price increase (Isaac Oladepo, 2014). The PPPRA is responsible for regulating the prices of petroleum products, including petrol, diesel, and kerosene, in the country. The agency sets the prices at which oil marketers can sell these products to consumers, based on the prevailing market conditions and other factors. However, the effectiveness of the PPPRA in regulating fuel prices and ensuring availability of petroleum products has been a subject of debate in Nigeria. Therefore, the activities of the PPPRA has contributed to fuel scarcity and price increase as a result of:

- i. **Delayed price adjustments:** The PPPRA may delay adjusting fuel prices to reflect changes in the international market, resulting in a mismatch between the cost of importing fuel and the regulated price at which marketers can sell the product. This can lead to a situation where marketers are unable to import and distribute fuel at a profit, which can contribute to fuel scarcity and price increase.
- ii. **Inadequate pricing framework:** The pricing framework used by the PPPRA may not accurately reflect the cost of importing and distributing fuel, leading to underpricing or overpricing of petroleum products. Underpricing can lead to fuel scarcity, as marketers are not able to make a profit from selling fuel, while overpricing can lead to price increase and reduce the purchasing power of consumers.
- iii. **Inefficient distribution system:** The PPPRA regulates the prices of petroleum products, but it does not control the distribution system. Inefficient distribution, caused by factors such as pipeline vandalism, inadequate storage facilities, and corruption, can contribute to fuel scarcity and price increase, even if the regulated price is fair.
- iv. **Lack of transparency:** The activities of the PPPRA may lack transparency, making it difficult for stakeholders to understand the basis for the agency's pricing decisions. This can create a lack of trust and confidence in the system, and contribute to fuel scarcity and price increase.

My contribution to reduce the persistent fuel scarcity in Nigeria

Nigeria has the potential to survive fuel scarcity by utilizing its abundant food processing wastes and starch crops for ethanol production (Ben-Iwo et al., 2016). The country's agricultural sector generates significant amounts of waste that can serve as feedstock for ethanol production (Awoyale & Lokhat, 2019). Nigeria also produces starch-rich crops like cassava, corn, and yam, which can be converted into ethanol. The availability of these resources, coupled with the potential to increase agricultural output and existing ethanol production facilities, provides a foundation for ethanol production. Successful examples of ethanol blending in other countries and the economic and environmental benefits associated with ethanol production further support Nigeria's capacity to overcome fuel scarcity (Ohimain, 2013). While implementation would require planning and investment, Nigeria possesses the resources and potential to reduce dependence on imported fuels.

By converting food wastes rich in starch content into ethanol, Nigeria can effectively supplement depleting fuel reserves while addressing environmental concerns associated with food waste disposal (Abila, 2014). This approach promotes resource efficiency, reduces waste generation, and contributes to renewable energy production. However, it is important to ensure sustainable sourcing of food waste feedstock and establish proper waste management systems to prevent competition with food production and prioritize food security (Morone et al., 2019).

Hence, measures such as blending ethanol into gasoline can help reduce fuel scarcity in Nigeria by expanding the fuel supply and increasing availability. Ethanol can be sourced locally, thus reducing dependence on imported petroleum products and promoting energy security. The blending process involves mixing ethanol with gasoline, typically in a 10% ethanol to 90% gasoline ratio (E10). This process has several benefits, including cleaner emissions, support for renewable energy, job creation, and improved air quality. Implementing ethanol blending would require infrastructure adaptations, government support, and public awareness campaigns to ensure acceptance. Overall, ethanol blending offers a viable solution to mitigate fuel scarcity in Nigeria while promoting sustainable agricultural practices and economic development.

How can government maintain uniform pump price of petroleum products in Nigeria

Maintaining a uniform pump price of petroleum products in Nigeria can be a challenging task for the government, given the various factors that can affect the pricing of petroleum products. Here are some ways the government can attempt to maintain a uniform pump price of petrol in Nigeria:

- i. Subsidies: The government can offer subsidies to petroleum marketers to ensure that they sell petrol at a uniform price across the country. This involves the government paying a portion of the cost of producing or importing petrol, which can help to keep the price of petrol affordable for consumers.
- ii. Price control: The government can also implement price controls to regulate the price of petrol across the country. This involves setting a maximum price that petroleum marketers can charge for petrol, which can help to prevent price gouging and ensure that petrol remains affordable for consumers.
- iii. Monitoring: The government can monitor the pricing of petrol to ensure that marketers are not selling petrol above the regulated price. This involves deploying officials to petrol stations to monitor their pricing and take action against marketers who violate pricing regulations.
- iv. Encouraging competition: The government can encourage competition in the downstream oil sector by promoting the entry of more players, which can help to keep prices in check. This involves creating an enabling environment for private sector investment in the downstream oil sector, including infrastructure development and regulatory reforms.

It should be noted that maintaining a uniform pump price of petrol in Nigeria can be challenging, and the government may need to employ a combination of these strategies to ensure that the price of petrol remains affordable and accessible for all Nigerian

How Nigeria may move forward with its ongoing fuel shortage and price increase

Deregulation of the downstream oil sector and privatization can potentially improve product availability in Nigeria by creating a more competitive and efficient market (Kennedy-Darling, 2008). He offered ways in which it could work:

- i. Increased competition: Deregulation and privatization can increase competition in the downstream oil sector, leading to improved efficiency and reduced costs. This can encourage more players to enter the market, which can lead to better quality products and services, lower prices, and more options for consumers.
- ii. Investment in infrastructure: Privatization can lead to increased investment in infrastructure, including refineries, pipelines, and storage facilities. This can help to improve the efficiency of the downstream oil sector and ensure that products are readily available.
- iii. Price stability: Deregulation can help to stabilize prices by allowing market forces to determine the price of petroleum products. This can help to reduce the volatility in the market and ensure that products are available at a fair price.
- iv. Government revenue: Privatization can also generate revenue for the government, which can be used to invest in social programs and infrastructure development.

However, it is important to note that deregulation and privatization can also have some potential drawbacks. These include possible job losses, increased prices for consumers in the short term, and environmental concerns if not properly regulated. Therefore, a comprehensive and well-thought-out plan should be put in place to ensure that the benefits of deregulation and privatization outweigh the potential risks.

The Nigerian government can take several steps to overcome fuel scarcity caused by pipeline vandalism in the oil-producing states in Nigeria. Some of these steps include:

- i. Increase security measures: The government can increase security measures in the oil-producing states to deter pipeline vandalism. This can be achieved by deploying more security personnel and advanced surveillance technology to monitor and protect pipelines.
- ii. Diversify energy sources: The government can also diversify its energy sources by investing in renewable energy technologies such as solar, wind, and hydroelectric power. This will reduce the country's dependence on oil and mitigate the impact of pipeline vandalism on fuel supply.
- iii. Build more refineries: Nigeria has only four refineries that are old and inefficient, resulting in a heavy reliance on imported petroleum products. The government can build new refineries or upgrade the existing ones to increase local production capacity and reduce the impact of pipeline vandalism on fuel supply.

- iv. Increase transparency and accountability: The government can improve transparency and accountability in the oil and gas sector by implementing measures such as regular audits, public disclosure of contracts and revenues, and stricter penalties for pipeline vandalism and other related crimes.
- v. Encourage private sector participation: The government can encourage private sector participation in the oil and gas sector by offering incentives such as tax breaks and other financial incentives to investors. This will increase competition, stimulate innovation, and improve efficiency in the sector.

The Nigerian government can take several steps to prevent fuel hoarding and activities of black marketers in Nigeria to ensure fuel availability. Some of these steps include:

- i. Increase fuel supply: The government can increase fuel supply to the market by improving local production capacity, importing more petroleum products, and repairing and protecting the pipelines that transport fuel across the country.
- ii. Enforce anti-hoarding laws: The government can enforce anti-hoarding laws that make it illegal for individuals or companies to stockpile fuel or engage in any activity that disrupts the normal supply and distribution of petroleum products. Those found guilty of hoarding can be prosecuted and penalized.
- iii. Improve monitoring and surveillance: The government can improve monitoring and surveillance of the fuel supply chain to detect any irregularities or suspicious activities that may indicate hoarding or black marketing. This can be achieved through the use of advanced technology such as GPS tracking, drones, and CCTV cameras.
- iv. Increase public awareness: The government can increase public awareness about the negative effects of fuel hoarding and black marketing on the economy and society at large. This can be done through public education campaigns, mass media, and community engagement.
- v. Strengthen enforcement agencies: The government can strengthen the capacity of law enforcement agencies such as the police, the Nigerian Security and Civil Defense Corps, and the Department of Petroleum Resources to detect and prosecute cases of fuel hoarding and black marketing. This can be done through training, provision of equipment and resources, and collaboration with other agencies.

One possible way forward is for the government to invest more in the country's refining capacity. Nigeria currently relies heavily on imported fuel, which is subject to fluctuations of the international oil market. By building more refineries and upgrading existing ones, the country could produce more of its own fuel, reducing its reliance on imports and making the supply more stable and reliable.

Another approach would be to address the corruption and inefficiencies in the distribution chain. Many observers believe that fuel scarcity is caused by hoarding and black marketeering by middlemen and distributors who are seeking to profit from the situation. By cracking down on these activities and increasing transparency in the fuel distribution process, the government could help ensure that fuel gets to where it is needed, and at a fair price.

The Nigerian government can take several steps to avert regular strikes by petrol tanker drivers and strengthen fuel availability in Nigeria. Here are a few suggestions:

- i. Improve infrastructure: The Nigerian government can invest in improving the country's road infrastructure. This will help reduce the time it takes for petrol tanker drivers to transport fuel to different parts of the country. Better roads will also reduce the risk of accidents and breakdowns.
- ii. Increase fuel storage capacity: The Nigerian government can invest in increasing the country's fuel storage capacity. This will help reduce the frequency of fuel shortages and make it easier to distribute fuel to different parts of the country.
- iii. Implement better safety measures: The Nigerian government can work with petrol tanker drivers and other stakeholders to implement better safety measures. This can include regular safety training for drivers, mandatory safety equipment in vehicles, and stricter enforcement of safety regulations.
- iv. Engage with stakeholders: The Nigerian government can engage with petrol tanker drivers and other stakeholders to better understand their concerns and work towards resolving them. This can involve regular dialogue and negotiation, as well as the establishment of a formal dispute resolution mechanism.
- v. Promote alternative modes of transportation: The Nigerian government can promote the use of alternative modes of transportation, such as pipelines and rail transport, for the distribution of fuel. This will help reduce the reliance on petrol tanker drivers and make the fuel supply chain more resilient.

III. Conclusion

Persistent fuel scarcity and unwarranted price increases have contributed significantly to the economic hardship of many Nigerians. This has been attributed to factors such as dependence on imported refined petroleum products, foreign exchange fluctuations, inflation, poor refining facilities, and high cost of hiring vessels, among others. In particular, inconsistent government policies and regulations, such as changes in tax policies, have created uncertainty and discouraged foreign investors in the sector. However, this paper identifies measures such as subsidy removal, price control, infrastructure improvement, monitoring, deregulation, and diversification of energy sources as Nigeria is blessed with abundant sunshine and wind, and investing in renewable energy could help reduce the country's dependence on fossil fuels and create a more sustainable energy system. This would require significant investment and planning, but could have long-term benefits for the country's energy security and economic development.

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