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MARKET DISRUPTION AND BUSINESS RESILIENCE: EXAMINING THE IMPACT OF FUEL SUBSIDY REMOVAL ON NIGERIAN ENTERPRISES

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Abstract

This study investigates the multifaceted impact of fuel subsidy removal on Nigerian enterprises and explores strategies employed by businesses to navigate market disruptions. To guide the conduct of this study, three research objectives and questions were formulated. Utilizing a questionnaire/interview approach with a purposive sample of 150 enterprises, the research elucidates the challenges faced by Nigerian businesses post-subsidy removal and examines their resilience-building measures. Analysis of the data reveals significant effects of subsidy removal on operational costs, transportation expenses, and pricing strategies, corroborating with previous studies. Moreover, the study identifies primary market disruptions including unpredictable demand and inadequate infrastructure, underscoring the need for resilient strategies. Findings indicate that Nigerian businesses employ diverse tactics such as energy source diversification, supply chain optimization, and cost-saving measures to cultivate resilience. This research contributes to the understanding of market dynamics in Nigeria and offers insights for businesses to adapt to changing economic landscapes, particularly in the context of fuel subsidy removal. Recommendations include government efforts to provide clear energy policies, businesses diversifying energy sources, and enterprises optimizing supply chains. This study contributes valuable insights for policymakers, industry practitioners, and researchers in fostering resilience amidst market uncertainties.

Introduction

Fuel subsidy is a political and economic issue in Nigeria. In a globalized world, business enterprises can hardly afford to depend on the state for survival. The Nigerian federal

government has been involved in the importation of petroleum products into the country for over four decades as part of its wide political and economic agenda. In view of the increasing cost of importing petroleum products, the federal government set up the Petroleum Products Pricing Regulatory Agency to oversee the importation, supply, and retailing of petroleum products. However, over the years, the agency, in addition to many other problems, has failed in realizing its main goals of providing a regime of minimal government control and interference in the resources sector. The research will therefore address how and why these businesses experienced what they experienced in the absence of fuel subsidy. The questions the study seeks to address include what the businesses suffered from the causes and the ways taken to recover from the losses. This is an area that has not been fully addressed in either local or international studies. The primary reason for my passion in the research topic is my personal interest in the operations of the Nigerian enterprises in the context of its rich oil resource endowment. Nigeria, with a population of more than 200 million and a daily estimated consumption of 64.14 million liters of petrol and 14 million litres of diesel (in Q2 2022) according to the EMRC Nigeria (2023), has witnessed significant challenges in the distribution and retailing of petroleum products. Every slightest disruption in the supply chain as a result of government policies has its immediate and remote unwanted effects. The research therefore introduces the theoretical and pragmatic challenges to Nigerian businesses due to market disruptions and in a context where resilience programs are either inefficient or non-existing. Specifically, the research aims at strengthening the already existing body of knowledge in resilience planning and management in business and corporate entities in Nigeria. Also, to give an insight into the problems businesses may face in the transitional period of the planned fuel subsidy removal in Nigeria.

Background

Additionally, research by Jerome A. Odoi in 2016 on the political economy of oil and the Nigerian intra-national relations and development mentions how the Nigerian government implements different policies to reallocate the oil resources other than the revenue from the oil industry and use them for profit or self-interest by local authorities. His opinions refer to the loyalty of distribution. For example, when the government provides fuel subsidy to the citizens, the political performance will increase as the citizens enjoy the benefits from the government. The citizens also receive direction on what they should consume. He suggests that the "petro-populism" policy (supply of policies and subsidies to citizens) or "clientelism" policy (political distribution to maintain regime stability) will lead to further distortion, and the government needs to manage the citizens' dependency on fuel subsidy (Enyoghasim, et al., 2019). Accordingly, David Jackman in 1997 stated that the "grant-in-aid" or the fuel subsidy has covered the entire Nigerian oil industry for a long time. The fuel subsidy has been the "terms of mutual relationship between the producer and the state and also incorporates the construction of security arrangements which define particularly attachment to the oil rent by regulatory authorities." Therefore, he concludes that the fuel subsidy is "a political currency in the whole oil industry." His opinion confirms that the fuel subsidy is not only an economic issue but also a political issue, and the fuel subsidy policy greatly affects the market (Omotosho, 2019).

Furthermore, market disruption is commonly understood as a rapid change in the dynamics of a market due to the introduction of new technologies or radical new ways of delivering value to customers. Market disruptions are often caused by innovations in products and services. These changes can lead to a significant reduction of available market share for established companies and have a major impact on the profitability of those companies. We can think of the late 20th-century music industry: first with the market disruption caused by the widespread use of CDs in the 1980s, and then with the market disruption caused by the introduction of digital music in the 1990s and 2000s (Kivimaa et al., 2021). In both cases, the

market share for traditional companies providing products in the music industry was drastically reduced as consumers adopted the new, innovative technologies. However, it is important to note that disruptive technologies or innovations themselves do not cause market disruptions - rather, it is the rapid acceptance and adoption of those technologies by consumers that drive the changes in the market. On the other hand, revolutionary innovations that result in the creation of entirely new markets with no incumbents can cause a different kind of market disruption - that is, the rapid disappearance of the previously existing old markets (Marinakis et al., 2024). There are different cases of market disruptions that journalists and researchers love to talk about. Sometimes, a brand new product, service, or technology arrives in the market and creates a new revolution. However, other times, simple changes in the political or legal environment cause a sudden shakeup. Nonetheless, regardless of the causes and scale of a market disruption, the academic literature generally agrees that having business resilience is crucial in order to survive and flourish in the face of market disruptions.

However, Nigeria is the largest oil producer in Africa and one of the world's largest fuel subsidy programs, so it is very important in this research to choose Nigeria as the case study. In Nigeria, there are many scholars and researchers in the energy policy and economics field researching fuel subsidy - one of the biggest research topics in Nigeria as the fuel subsidy policy has been implemented for more than three decades. It is necessary for continuous study to understand how the fuel subsidy has changed the market, what the economic performance and efficiency of the whole market are, and what the relationship is between fuel subsidy and market distortion. Even more importantly, it is crucial to understand how to eradicate all the errors that arise from the fuel subsidy.

Research Objectives

On the whole, the benefits of the study are both academic and practice-oriented. This is because the findings are likely to be used in informing realities and expectations of business practices in Nigeria, as well as providing an alternative line of thought in the ever-dynamic world of business and market evolution. These objectives are centered on the need to provide new knowledge in relation to market disruptions and the impacts that such disruptions have on Nigerian businesses. Thus, the study has the following objectives:

1. To examine the impact of fuel subsidy removal on Nigerian enterprises.
2. To find out the major market disruptions that Nigerian enterprises are faced with.
3. To find out the strategies that Nigerian businesses employ to develop resilience in the face of various market disruptions.

Research Questions

1. What is the effect of fuel subsidy removal on Nigerian enterprises?
2. What are the primary market disruptions confronting Nigerian enterprises?
3. What strategies do Nigerian businesses utilize to cultivate resilience amidst diverse market disruptions due to removal of fuel subsidy?

Study Area

Nigeria is the geographical region being studied. Nigeria consists of 36 states, with Abuja serving as the Federal Capital Territory, and a total of 774 local government areas. Geopolitically, the country is partitioned into six distinct geopolitical zones: North West, North East, North Central, South-South, South West, and South East. Statista (2024) reported that Nigeria's population was approximately 226.2 million as of December 2023. From 1965 to 2023, the population of Nigeria experienced a consistent annual growth rate of over two percent. The population experienced a growth rate of 2.44 percent in 2023, relative to the

preceding year. Nigeria has the highest population among all countries in Africa, according to Statista's data from 2024.

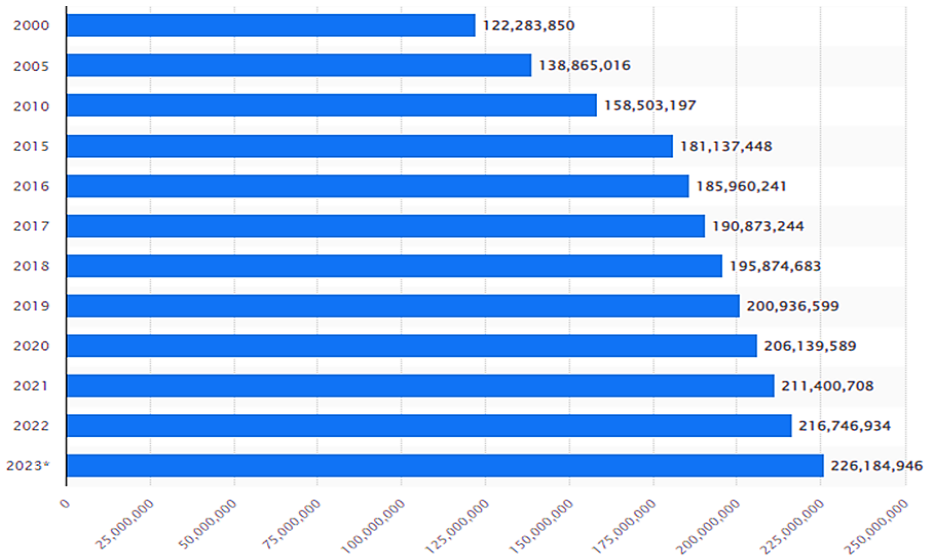

Figure 1: Nigeria Population in selected years between 2000 and 2023 (Statista, 2024)

Nigeria possesses a land area of 923,768 square kilometers, making it the 32nd largest country in the world. Nigeria possesses a significant amount of natural, human, and material resources, with crude oil being the most prominent. As a result, Nigeria is ranked as the 12th largest producer and 8th largest exporter of crude oil globally. Additionally, it holds the 10th largest proven reserves (Nuhu, 2023).

Scope

Although the research progresses globally, this research is not an exception as Nigeria has been chosen as a case study. According to Peter and Donnelly (2011), a case study makes a logical and accurate prediction, given that it addresses a how and why question. It is then suggested that a case study should only be used when the opportunity to learn is particularly rich and the use of the case is specifically to illuminate a well identified situation or set of problems. Charles (2014) supported this view when he encouraged researchers to turn to case study when a contextual and in-depth series of events or processes is to be examined using a number of different types of data. Nigeria, as a sub-Saharan Africa country, is the most populous of the regions and within it the largest oil exporter. It provides strong economic growth and better access for foreign private investment (OECD, 2014). However, this does not lead to better transportation and accessibility. It creates a bad impact on the environment because the dependency on private car usage increased. Apart from that, the economy grows fast but it provides an increase in the poverty level, which shows that the wealth is being unevenly distributed (ONU-Habitat, 2002). Domestic car usage per 1000 persons in Nigeria increased from 15 in 2000 to 35 in 2010. This shows a huge 133.3% increase for a single type of transportation. Besides that, the economy growth in Nigeria is around 6% to 7% in 2013. It is relatively high compared to the average 4.4% growth for the global in the same year (Tranberg-Hansen, 2016). He further explained that Nigeria's economic growth is driven by population expansion, city expansion, and an increase in private car usage in the more urbanized area. These phenomena led to a constantly increasing market of private cars and as a result, fuel subsidies policy in Nigeria keeps pushing in scrutiny due to the inefficiency of the subsidy's distribution shape (OECD, 2014). However, there are different points of view from different scholars and research. For instance, Lundin (2016) shows plenty of evidence which supports that fuel subsidies in Nigeria benefited the wealthy while hurting the poorest and less well-off work class as the subsidies were aimed to ease the financial burden of the

poorest and support the increase of the overall economy. He revealed that in contemporary Nigeria, the wealthiest 10% of households consume nearly 60% of the subsidized while the poorest 10% only received less than 1% of the subsidized. The same argument is made by Tafade and Yusuf (2016). This is due to the fact that the fuel subsidies do not get through to the people it is actually aimed to help and the shortage of the public funding spent on healthcare and education. They stated that the majority of Nigeria citizens want to get rid of fuel unfounded subsidies and the government has to seek a more effective way to release the increased budget amount for improving public utilities, such as modern public transportation infrastructure and cleaner fuel options.

Literature Review

This section provides a comprehensive overview of additional relevant materials, concepts, theories, and empirical frameworks related to the discussed topic. All relevant materials, from the conceptual framework to the theoretical framework, are independently sought and selected based on their relevance.

Conceptual Framework

Fuel Subsidy Removal and its Implications

Fuel subsidy removal connotes the governmental action of discontinuing financial assistance or incentives provided to consumers or producers in the oil and gas industry, resulting in the market price of fuel reflecting its actual cost of production and distribution according to The World Bank, (2023). This policy shift aims to reduce budgetary burdens, promote fiscal sustainability, and enhance market efficiency by aligning prices with global trends (Energy Policy Institute at the University of Chicago, 2020). Removal of fuel subsidy has long been a contentious issue globally, sparking debates on economic, social, and environmental fronts. Governments often subsidize fuel to alleviate the burden on consumers, but the practice carries significant costs and consequences. In the Nigerian context, the economy has been structured to primarily depend on the production and distribution of inexpensive petroleum products. A typical household in Nigeria relies on subsidized derivatives of crude oil, such as gasoline and kerosene, for both domestic and commercial purposes. This reliance is further exacerbated by the inconsistent provision of electricity by the power holding company (PHCN) (Nuhu, 2023). Most households and businesses rely on generators fueled by subsidized petrol for their power supply. Small-scale businesses such as hotels, barbers, welders, farmers, hairdressers, pepper sellers, private and government hospitals, all depend on fuel that is provided at a reduced cost. Gasoline, also known as Premium Motor Spirit (PMS) or fuel, is the second most widely consumed product in Nigeria, following food. Increases in fuel prices have a ripple effect on various sectors of the economy. The increase in transportation costs for essential services leads to a multiplier effect in the economy, which has an impact even in rural areas. The transportation sub-sector plays a crucial role in the movement of goods between locations, resulting in an increase in the prices of products and services in society, particularly in the market. Access to key components of basic needs indicators such as food, housing, clothing, and health will be adversely impacted as their cost increases. In 2000, Nigeria had an average life expectancy of 53.6 years, which increased to 55.75 years in 2023 (Macro Trends, 2024). However, Nigeria's world ranking for life expectancy is 167 according to WHO (2020). The removal of fuel subsidy may lead to a decrease in life expectancy due to the increased costs of health services, transportation, and food for the population.

On 1st January 2012, the Nigerian government under President Goodluck Jonathan announced the removal of fuel subsidy. The announcement led to widespread protests and strikes throughout the country. The Nigerian Labour Congress called for an indefinite nationwide strike and protests, effectively paralyzing the economy. President Jonathan has

maintained that this policy is in the best interest of the long-term economic success of the country. The government emphasized that the money which was set aside for fuel subsidy would be used for the development of the country, through long-term projects. In 2016, the government of President Muhammadu Buhari removed the subsidy on petroleum for good. The government announced that fuel marketers would be allowed to import products and sell within a price band of N135 – N145 per litre. The price of fuel subsequently increased from N86 to N145 per litre (Premium Times, 2016). However, there have been calls for the government to restore the fuel subsidy as the country went into recession in the same year. On the 14th May 2020, it was reported by Premium Times that the Nigerian government has paid out ₦123.3 billion in less than six months as fuel subsidy, despite the country having the second highest oil reserves in Africa (Premium Times, 2020). This represents a considerable drain on the national finances and it remains to be seen if the current subsidy policy will be retained by the government.

Fuel subsidy removal being a topic of considerable debate worldwide due to its economic, social, and political implications. This policy decision often leads to significant changes in various aspects of a nation's economy and society. The elimination of fuel subsidies in Nigeria carries a positive economic implication, as the funds previously allocated for these subsidies can now be redirected towards the development of essential public infrastructure within the country. According to scholarly consensus, including studies by Bazilian and Onyeji (2012) and Majekodunmi (2013), diverting these subsidy funds can address Nigeria's longstanding issue of inadequate financing for critical infrastructure projects. This shortage of funds has historically forced the government to rely heavily on borrowing to cover budgetary needs. However, by discontinuing fuel subsidies in 2023, the Nigerian government gains the opportunity to allocate these freed-up funds towards vital infrastructure initiatives. Moreover, other research, such as that by Gidigbi and Bello (2020) and Ogunode, Ahmed, and Olugbenga (2023), suggests that the savings from subsidy removal could also be directed towards bolstering various sectors of the economy beyond infrastructure, such as agriculture, healthcare, tourism, education, and the implementation of legislation like the Student Loan Act. Prior to subsidy removal, many sectors suffered from underperformance due to inadequate private sector investment and low levels of public expenditure, exacerbated by limited government revenue. The elimination of fuel subsidies thus presents the prospect of redirecting resources towards sectors in need of government support, fostering overall economic growth and development.

Figure 2: Nigeria Government Revenues (₦'bn)
Source: Central Bank of Nigeria

On the flip side, the elimination of fuel subsidies could have adverse effects, potentially dampening economic growth (Houeland, 2020). Such removal would trigger a hike in the prices of vital commodities and services, resulting in reduced disposable income for both individuals and small enterprises, stemming from escalating prices, stagnant wages, and a fixed national minimum wage. Consequently, there would be a downturn in consumer spending, curbing aggregate demand and leading to diminished consumption of goods and services offered by businesses. This downward trend in consumption could, in turn, hamper economic output and GDP growth rates. Furthermore, a surge in the inflation rate is expected. The withdrawal of fuel subsidies caused the price of petrol to soar from a subsidized rate of ₦190 in May 2023 to ₦537 in June 2023, and ₦617 in July 2023, with prices exceeding ₦600 in certain regions like Borno State and Akwa Ibom State, and currently soaring above ₦700 nationwide due to elevated transportation costs (Premium Times, 2024). This escalation in petrol prices is likely to trigger significant increases in the prices of consumer and industrial goods reliant on petrol for production or transportation (Mohammed, Ahmed and Adedeji, 2020). Moreover, the delayed implementation of government assistance measures to mitigate the impact on low-income households and vulnerable groups exacerbates the inflationary effect of the subsidy removal.

The allocation of funds towards addressing Nigeria's current budget deficit is a significant implication. Research, such as that by Adagunodo (2022), underscores the detrimental impact of fuel subsidies on Nigeria's fiscal deficit, advocating for their removal. Over the past decade, Nigeria has consistently grappled with budget deficits, as illustrated in Figure 3, with the budget-to-GDP ratio persistently negative. Recent projections, as depicted in Figure 4, indicate that fuel subsidies were slated to consume ₦4 trillion in 2022 and an astounding ₦17 trillion in 2023, dwarfing the approved 2023 budget of ₦21.83 trillion. This alarming scenario suggests that the fuel subsidy alone would consume approximately 77% of the budget, exacerbating Nigeria's chronic budget deficit and steering the nation towards bankruptcy. Compounding the issue, a staggering 90% of Nigeria's revenue is allocated to servicing external debt, further complicating its financial landscape amidst the fuel subsidy regime. Consequently, the recent elimination of fuel subsidies marks a positive turn for Nigeria's financial health, as the ₦17 trillion previously allocated could now bolster the national budget, potentially leading to a budget surplus in the long run (Adagunodo, 2022).

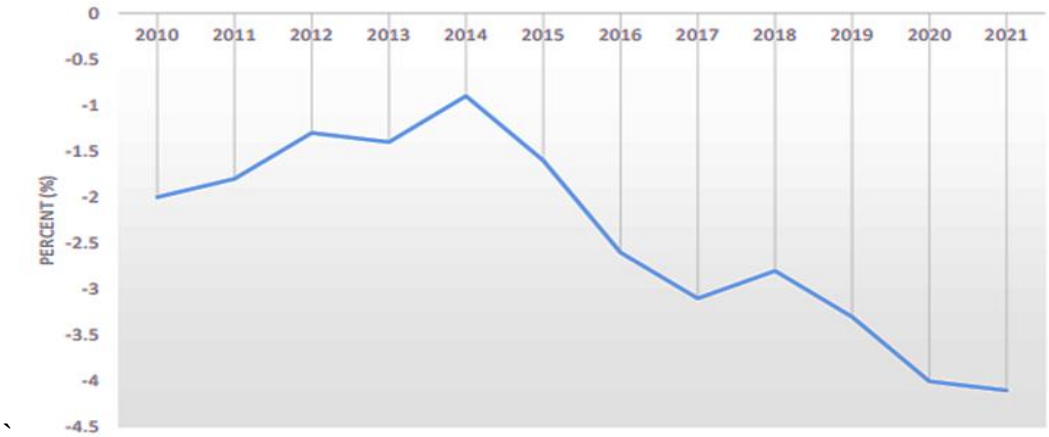

Figure 3: Nigeria Budget deficit to GDP ratio
Source: Central Bank of Nigeria

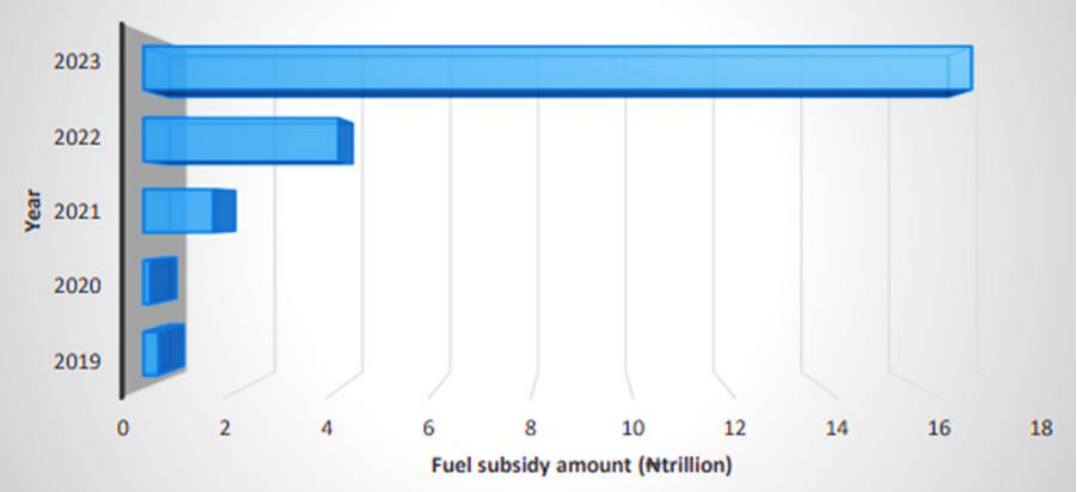

Figure 4: Nigeria Government Revenues (₦'bn)
Source: CBN & NNPC

Market Disruption and Business Resilience

Market disruption refers to a situation where a particular market, whether local or national, is disturbed and modified in terms of the normal economic activities that are taking place within it. This disturbance comes in the form of the processes and the systems that are managing and ensuring the smooth flow of economic activities within the market. Market disruptions tend to affect most businesses operating in that market, regardless of the size of a business in terms of sales, number of employees etc. When a market is disrupted, all the current systems that have been put in place no longer deliver what is expected of them and in some cases, they may not function at all. In the context of the study, for decades, governments across the world have been using subsidies to encourage the consumption of fuels. However, it is now clear that the practice of fuel subsidy is no longer sustainable and that it is doing more harm than good to the market. Fuel subsidy is a form of financial aid or support extended to an economic sector. It is mainly applied in the energy industry and the transport sector where it is meant to lower the cost of production and the cost of consumption so as to increase the consumption of fuel or to protect the local industries (Adeniran, 2016). This has both short-term and long-term impact on the market. With the lowering of cost of production because of fuel subsidy, the suppliers will tend to increase the supply for the fuel to such that there will be a shift of the supply curve and the new supply curve will intersect with the demand curve at a lower price. This excess supply due to fuel subsidy will lead to "disequilibrium" in the market which will further create a fall in the market price. This has a serious effect on the market and it will take a long time for the market to recover to equilibrium (Karanfil & Pierru, 2021). In addition, the lowering of the cost of consumption because of fuel subsidy in the transport sector will also lead to excess demand for fuel. This is because a fall in the relative price of fuel will encourage people to use more fuel. The demand curve shift outwards and the demand will exceed the supply, leading to a shortage of fuel.

Furthermore, it is important to highlight the term "systems" because the first thing that comes into the minds of many individuals when they hear of a market disruption is technology. Systems in this context mean the processes and the mechanisms that are used to manage and ensure the smooth flow of activities, which can be manual or aided by technology. These processes and mechanisms include marketing processes, supply and demand phenomena, customer satisfaction processes, among others. Market disruptions have always been there but with the current high pace in technological innovations, market disruptions are certainly becoming more prevalent and their effects are being felt in such a way that some businesses are not able to recover at all. This is what brings the aspect of business resilience, which is the ability of a business to withstand and remain unaffected at a certain level by a market

disruption. In mist of fuel subsidy removal, when the market price of fuel rises above that subsidized rate, this creates a fuel subsidy disruption where the costs to maintain that subsidy become out of line with the revenue produced from it. Businesses especially are aware of the need to become fuel price resilient - or in other words, be able to protect themselves against the market forces that might interrupt their continuity in operations. Thus, below we further examine the strategies that businesses can implement in order to enhance their resilience as well as the reasons why it is important for businesses to reconsider resilience as a critical tool for survival in any market.

1. **Diversification of Energy Sources:** Businesses heavily reliant on fossil fuels must diversify their energy sources to mitigate the impact of fuel subsidy changes. Investing in renewable energy sources such as solar, wind, or hydroelectric power can provide stability amidst fluctuating fuel prices (Wang et al., 2019). By reducing dependence on fossil fuels, businesses can minimize the impact of subsidy changes and ensure continuity in operations.
2. **Supply Chain Optimization:** Developing resilient supply chains is crucial for mitigating the impact of fuel subsidy disruptions. According to Chopra and Sodhi (2014), businesses which diversify suppliers geographically, reduces dependence on regions affected by volatile fuel prices. Implementing advanced forecasting and inventory management systems will optimize inventory levels, minimize stockouts, and mitigate the risk of supply chain disruptions caused by fuel price fluctuations.
3. **Adopting Cost-Saving Measures:** Investing in fuel-efficient technologies and vehicles can help businesses reduce their reliance on subsidized fuel and lower operational costs. Fleet optimization strategies, such as route optimization and vehicle maintenance, can maximize fuel efficiency and minimize the impact of fuel subsidy changes on transportation expenses. Moreover, embracing eco-friendly practices not only enhances resilience but also improves corporate sustainability credentials (Li et al., 2017).
4. **Financial Hedging Instruments:** Businesses can use financial hedging instruments, such as futures contracts or options, to mitigate the financial risks associated with fuel subsidy changes. By locking in fuel prices at favorable rates, companies can protect themselves against sudden price hikes resulting from subsidy reductions or eliminations. However, effective hedging strategies require careful analysis of market dynamics and risk exposure.
5: **Collaboration and Advocacy:** Collaborating with industry peers, trade associations, and government bodies can amplify the collective voice of businesses in advocating for stable energy policies. Engaging in dialogue with policymakers to influence decisions related to fuel subsidies can help create a more conducive business environment. Additionally, participating in industry forums and initiatives enables knowledge sharing and mutual support in navigating market disruptions.

Therefore, fuel subsidy changes pose significant challenges to businesses, but proactive resilience strategies can mitigate their impact and ensure continuity in operations. By diversifying energy sources, adopting flexible supply chain management practices, investing in fuel-efficient technologies, utilizing financial hedging instruments, and advocating for stable energy policies, businesses can enhance their resilience and thrive amidst market disruptions caused by fuel subsidy fluctuations.

Previous Studies on Fuel Subsidy Removal

Dadak and Smadi (2016) studied the impact of fuel pricing and how it affects drivers' mobility and location choices in the context of Amman, Jordan. This study employed

economic models to analyze spatial and fuel consumption data and the impacts of different fuel pricing scenarios. The authors found that fuel pricing can affect both individual transportation choices and aggregate urban form, and hence observed percentage of drivers who searched for petrol showed a decreasing pattern with the petrol price. Additionally, all drivers with different travel distances were very sensitive to changes in petrol price. Such findings provide new empirical evidence that petrol price indeed can be used as a tool to encourage more fuel-efficient vehicles, influence, and change the suburbanization trend. Apart from those focused on the developed countries like the studies reviewed above, some latest studies shifted their focus on assessing fuel subsidy policy and its implication on the economy and environment in the context of developing countries. For instance, a recent study by Oluseyi (2017) investigated the impacts of energy subsidy in Nigeria by means of an econometric analysis. The study took the trends of energy consumption, economic growth, and the level of energy consumption compared to output. The findings of the study may be used to support the ongoing debates on the arguments for continuing or eliminating the energy subsidy in the country by the Nigerian government. Oluseyi's result showed a long-run relationship between economic growth and foreign energy consumption, which is significant at the 1% level of significance. Moreover, the results depict that there is a bidirectional causality run from foreign energy consumption to economic growth and from economic growth to foreign energy consumption. Furthermore, Fischer and Khan (2019) conducted a comprehensive analysis of fuel subsidy reforms in various countries and found that while removal can lead to fiscal savings and improved resource allocation, it may also result in short-term inflationary pressures and adverse impacts on low-income households. Coady et al. (2015) emphasized the importance of targeted social safety nets and compensatory measures to mitigate the regressive effects of subsidy removal, ensuring that vulnerable populations are not disproportionately affected by rising fuel prices. Additionally, according to a report by Dataphyte, the subsidy payments incurred by the nation amounted to N5.3 trillion from 2017 to 2022, as illustrated in figure 5. Furthermore, Nigeria has allocated a significant portion of its revenue to subsidy payments for an extended period. The report highlights that from 2017 until the conclusion of June 2023, Nigeria is projected to have allocated 26.06% of its revenue towards subsidy payments (Dataphyte report).

Figure 5: Nigeria's revenue and expenditure on subsidy between 2017 and 2023
Source: dataphyte.com

Moreover, the removal of fuel subsidies often disrupts market dynamics, particularly in energy-intensive sectors such as transportation, agriculture, and manufacturing. Arze del Granado et al. (2012) examined the case of Indonesia's fuel subsidy reform and highlighted the challenges faced by businesses in adjusting to higher energy costs, including reduced

competitiveness and profit margins. Vermeulen et al. (2018) investigated the spillover effects of fuel subsidy removal on related markets, such as food and transportation services. Their findings underscored the interconnectedness of markets and the ripple effects of policy changes across different sectors. Additionally, the distributional effects of fuel subsidy removal have been a focal point of research, with scholars examining how different demographic groups are affected by changes in fuel prices. Akhundjanov and Larin (2016) conducted a welfare analysis of fuel subsidy reforms in Uzbekistan and found that while higher fuel prices disproportionately burdened low-income households, the overall welfare gains from subsidy removal could be substantial if accompanied by targeted transfers and income support. Moreover, Heltberg et al. (2014) emphasized the importance of understanding regional disparities in the distributional impacts of fuel subsidy reforms, as rural and remote communities may face unique challenges in accessing affordable energy alternatives. Conclusively, this study highlighted the risks of removing the energy subsidy. Before implementing any certain decision, the government should carefully assess its potential impacts on the economy and environment.

Theoretical Framework

This section attempts to take recourse on some propounded theories that support the study. Theories are ideas of people intended to explain something or a phenomenon, especially based on general principles and independent of the thing to be explained. Theories serve as the foundation for further research and analysis. In this study, it provides the framework for understanding the relationships between different variables and helps to make sense of the observations and data presented.

Exhaustible Resources Theory by Harold Hotelling (1931)

The foundation of this research lies in exhaustible resource theory, which was originally articulated by Harold Hotelling in 1931. Hotelling argued for the necessity of pricing finite resources such as oil and fossil fuels in a manner that acknowledges their temporary availability. In his theory, he proposed that the price should reflect a user cost or depletion charge, compensating for the fact that future generations will be deprived of access to these commodities. This pricing mechanism may not necessarily align with the equilibrium determined by supply and demand dynamics. Similarly, Marshall's derived demand theory posits that the demand for any factor of production can be deduced from the demand for the final product, assuming constant demand for the final product and given prices for other factors of production. An increase in the supply of any factor, holding other factors constant, combined with an increase in demand for the final goods, results in heightened demand for the specific factor of production. Blomberg and Harris (1995) support this notion, suggesting that supply shocks or distribution issues lead to more pronounced price impacts when the derived demand is inelastic.

Thus, the theory of exhaustible resources has significant implications for the current study. In this context, the removal of fuel subsidies represents a prime example of the depletion of a finite resource and its repercussions on the economy and businesses. Firstly, the theory stated that the finite nature of resources like fuel, emphasizing the need for sustainable practices. The removal of subsidies forces businesses to adapt to higher fuel prices, which can lead to increased operational costs and decreased profitability. Moreover, businesses reliant on fuel-intensive operations may face disruptions in their supply chains, production processes, and distribution networks. This can result in decreased productivity and competitiveness in the market. Furthermore, the theory holds a significant importance of diversification and innovation in response to resource depletion. Nigerian enterprises may need to explore alternative energy sources, invest in renewable technologies, or implement energy-efficient practices to mitigate the impact of fuel subsidy removal. Additionally, the theory warns

against the potential for social unrest and political instability stemming from resource depletion. As fuel prices rise, it may exacerbate existing socioeconomic disparities and lead to protests or unrest, further complicating the business environment. Overall, the theory of exhaustible resources provides a theoretical framework to understand the multifaceted implications of fuel subsidy removal on Nigerian enterprises, urging policymakers and businesses to adopt strategies that promote resilience and sustainability.

Structural Transformation Theory

The theory underscores the necessity for nations to transition from reliance on a single industry or sector to cultivating a more diversified and balanced economy, promoting resilience, mitigating vulnerability to external shocks, and fostering sustainable long-term growth. This perspective, also known as structural change theory, was articulated by William Lewis Arthur, born on January 23, 1915, in the West Indies. In 1979, he was honored with the Nobel Prize in Economics for his seminal contributions to economic development, particularly his model elucidating trade dynamics between developed and less developed countries concerning agricultural labor and productivity ("The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1979"). During 1957-1963, Arthur served as an Economic Adviser to Ghana's Prime Minister, Dr. Kwame Nkrumah. The late 1970s witnessed significant shifts in the socio-political global landscape, sparking heightened interest in structural change issues. Structural change theories primarily explore the mechanisms through which underdeveloped economies transition from traditional subsistence agriculture to a more urbanized, industrially diverse manufacturing and service-based economy (Syrquin, Moshe. 1988). Arthur Lewis's contributions to this discourse are noteworthy, with his eponymous theory elucidating the growth of developing countries through labor transitions between two sectors, often referred to as the dual economic theory. This theory emphasizes the transfer of labor between two sectors as a pivotal driver of economic transformation.

Hence, Structural Transformation Theory posits that economies evolve through shifts in sectors, notably from agrarian to industrial and subsequently to services, influencing productivity, employment patterns, and economic growth. In the context of Nigeria's fuel subsidy removal, this theory underscores potential disruptions across sectors, notably affecting businesses reliant on subsidized fuel, such as transportation, manufacturing, and agriculture. The present study examined how this removal alters the economic landscape, potentially leading to shifts in resource allocation, market competitiveness, and enterprise resilience. By employing the Structural Transformation framework, researchers we analyze how businesses adapt to the changing market conditions, exploring strategies such as technological innovation, diversification, and supply chain optimization. Moreover, it enables a comprehensive examination of the implications for both individual enterprises and the broader socio-economic fabric of Nigeria, offering insights into policy formulation and intervention strategies to enhance business resilience amidst market disruptions.

Research Methodology

The research employed a questionnaire and interview methodology. Due to the lack of a sampling framework, the investigation focused on various types of businesses, namely: sole proprietorships, partnerships, cooperatives, family businesses, private limited companies, and public limited companies. Part A of the questionnaire collected demographic information from the participants, while Section B assessed the study's objectives. Each variable was assigned a numerical score from 0 to 4 based on an internal scale, with response options including "Strongly Agree" (SA), "Agree" (A), "Disagree" (D), and "Strongly Disagree" (SD) for positively formulated questions.

Validity: An expert from Al-Hikmah University, Ilorin conducted face and content validation of the instrument, ensuring its correctness, suitability, and completeness for the purpose of the study.

Reliability: The instrument's dependability was determined using the Pearson Product Moment Correlation, resulting in a reliability coefficient of 0.80.
Participants and Sample of the Study: Through a purposeful sampling, 150 enterprises engaged in the six related types of business operations were selected in Nigeria.
Method of Data Analysis: The research inquiries were addressed through the utilization of descriptive statistics, while the null hypothesis was evaluated via Pearson Product Moment Correlation analysis of the gathered data.

Data Analysis
Research Questions
Research Question One: What is the effect of fuel subsidy removal on Nigerian enterprises?
Table 1: Descriptive Analysis of how businesses in Nigeria felt the impact of fuel subsidy removal

S/N	Variables	X	SD	Skewness	Kurtosis
1.	Our ability to invest in growth and expansion has been hindered due to increased operational costs.	6.32	1.042	.158	-1.171
2.	Our business expenses have increased significantly since the removal of fuel subsidy.	7.25	1.091	.205	-1.311
3.	The removal of fuel subsidy has affected our profitability.	5.61	.824	.130	-.622
4.	Our transportation costs have risen noticeably post fuel subsidy removal.	6.61	.913	.337	-.994
5.	We have had to adjust our pricing strategy due to increased fuel costs.	7.21	1.081	.252	-1.279

Legend: X = Mean; SD = Standard Deviation; N150
Source: Field Survey

Table 1 presents the summary statistics of the effect of fuel subsidy removal on Nigerian enterprises. Based on the result, it is seen that the mean values were 6.32, 7.25, 5.61, 6.61 and 7.21 respectively, while the standard deviation of the variables were 1.042, 1.091, .824, .913 and 1.0881. Given their means and standard deviation values, it is evident that the mean value of all the variables for this study all exceeds their respective standard deviations. This implies that the variables were relatively relevant. To put differently, the result shows that there is remarkable effect of fuel subsidy removal on Nigerian enterprises. Similarly, the skewness values imply that the variables are positively skewed towards normality. This is based on the fact that they all exhibit positive skewness values. Also, the kurtosis values from the analysis shows that the variables are not leptokurtic. The findings align with previous research, like the study done by Oluwatobi, Adejumo, and Ogunrinola (2017) found that the removal of fuel subsidy in Nigeria led to an increase in operational costs for businesses, hindered their ability to invest in growth and expansion, and affected their profitability, which corroborates with the study findings. Similarly, a study by Adenikinju (2012) highlighted that the removal of fuel subsidy in Nigeria resulted in a significant rise in transportation costs, which is consistent with the findings presented in Table 1. This increase in transportation costs could be attributed to the higher prices of fuel post-subsidy removal, leading to higher expenses for businesses reliant on transportation for their operations. Furthermore, other research such as that by Olufemi and Ayodeji (2016) indicated that businesses had to adjust their pricing strategies in response to increased fuel costs following subsidy removal. This finding

resonates with the results in Table 1, where enterprises reported having to adapt their pricing strategies due to the impact of fuel subsidy removal on their operational expenses. Overall, the finding reinforces the notion that the removal of fuel subsidies in Nigeria has substantial implications for enterprises, including increased operational costs, hindered investment opportunities, reduced profitability, higher transportation expenses, and the need for adjustments in pricing strategies. These findings collectively underscore the importance of considering the broader economic implications and potential challenges associated with fuel subsidy reforms in developing countries like Nigeria.

Research Question Two: What are the primary market disruptions confronting Nigerian enterprises?

Table 2: Descriptive Analysis of the primary market disruptions confronting Nigerian enterprises

S/N	Variables	X	SD	Skewness	Kurtosis
1.	Unpredictable market demand makes it challenging for our business to plan inventory and production.	6.28	1.030	.198	-1.132
2.	The lack of reliable infrastructure (power, transportation, etc.) significantly disrupts our business operations.	7.21	1.081	.252	-1.279
3.	Instability in government policies and regulations negatively impacts our business planning and decision-making.	5.57	.822	.169	-.579
4.	Technological disruptions, such as inadequate internet connectivity or outdated technology, impede our business operations.	6.57	.904	.380	-.900
5.	Political instability and security challenges in the country affect our business operations and investments.	6.74	1.243	.164	-.778

Legend: X = Mean; SD = Standard Deviation; N150
Source: Field Survey

Table 2 presents the summary statistics of the primary market disruptions confronting Nigerian enterprises. Based on the result, it is seen that the mean values were 6.28, 7.21, 5.57, 6.57 and 6.74 respectively, while the standard deviation of the variables were 1.030, 1.081, .8.22, .904 and 1.243. Given their means and standard deviation values, it is evident that the mean value of all the variables for this study all exceeds their respective standard deviations. This implies that the variables were relatively relevant. To put differently, the findings shows that from item no. 1 to 5 reveals that enterprises in Nigeria are confronted with remarkable market disruptions hindering their overall business operations. However, the skewness values imply that the variables are positively skewed towards normality. This is based on the fact that they all exhibit positive skewness values. Also, the kurtosis values from the analysis shows that the variables are not leptokurtic. The findings align with previous research, like the study done by Adebayo et al., (2019); Ojo, (2020) which identifies unpredictable market demand as a significant challenge for Nigerian enterprises. This finding resonates with studies that have highlighted the volatility and uncertainty in Nigerian markets, making it difficult for businesses to plan inventory and production efficiently. The lack of reliable infrastructure, including power and transportation, has long been recognized as a major obstacle to business operations in Nigeria. Previous research has emphasized the adverse impact of inadequate infrastructure on productivity, supply chain management, and overall business performance (Aremu & Adeyemi, 2019; Oseni & Rahman, 2021). Similar to the

current findings, the negative effects of unstable government policies and regulations on business planning and decision-making in Nigeria. The inconsistency and unpredictability of regulatory frameworks have been cited as significant barriers to investment and business growth (Akinboade & Adejumo, 2018; Iyoha & Afolabi, 2020). However, the impact of technological disruptions, such as inadequate internet connectivity and outdated technology, on Nigerian businesses has been widely documented in previous research. Insufficient access to technology and digital infrastructure hinders firms' ability to innovate, compete, and adapt to changing market dynamics (Adeleke & Olokundun, 2019; Ogbeibu & Olokundun, 2020).

Research Question Three: What strategies do Nigerian businesses utilize to cultivate resilience amidst diverse market disruptions due to removal of fuel subsidy?

Table 3: Descriptive Analysis of the strategies do Nigerian businesses utilize to cultivate resilience amidst diverse market disruptions due to removal of fuel subsidy

S/N	Variables	X	SD	Skewness	Kurtosis
1.	We invest in alternative energy sources to reduce dependence on fuel.	7.21	1.082	.256	-1.286
2.	We engage in strategic partnerships to enhance resilience during market disruptions.	5.56	.825	.147	-.587
3.	We frequently adjust our pricing strategies to accommodate fuel price changes.	6.57	.912	.362	-.921
4.	We encourage innovation and creativity among employees to adapt to changing market conditions.	6.34	.988	.212	-.531
5.	We actively diversify our supply chains to minimize the impact of fuel-related disruptions.	6.55	.908	.373	-.920

Legend: X = Mean; SD = Standard Deviation; N150
Source: Field Survey

Table 3 presents the summary statistics of the primary market disruptions confronting Nigerian enterprises. Based on the result, it is seen that the mean values were 7.21, 5.56, 6.57, 6.34 and 6.57 respectively, while the standard deviation of the variables were 1.082, .825, .912, .988 and .908. Given their means and standard deviation values, it is evident that the mean value of all the variables for this study all exceeds their respective standard deviations. This implies that the variables were relatively relevant. To put differently, the findings shows that from item no. 1 to 5 reveals that businesses in Nigeria utilizes remarkable strategies to cultivate resilience amidst diverse market disruptions due to removal of fuel subsidy. Thus, the skewness values imply that the variables are positively skewed towards normality. This is based on the fact that they all exhibit positive skewness values. Also, the kurtosis values from the analysis shows that the variables are not leptokurtic. The result aligns with prior research by Adegbite and Odunayo (2020) who found that businesses in Nigeria often resort to diversifying their supply chains and adjusting pricing strategies to navigate challenges in volatile market environments. Similarly, Okafor et al. (2019) highlighted the importance of strategic partnerships and innovation in enhancing business resilience amid economic uncertainties. The positive skewness values imply that these strategies are more commonly employed by Nigerian businesses, indicating their adaptability and proactive approach to market disruptions. Additionally, the kurtosis values suggest that the distribution of these strategies is not excessively peaked, further supporting their effectiveness in maintaining resilience without overly concentrating risks. Furthermore, Oyedepo et al. (2019) and Adelaja et al. (2021) highlighted the importance of diversifying energy sources and supply chains, as well as fostering innovation and strategic partnerships, as effective mechanisms for

mitigating the impact of market disruptions. Therefore, the results of this study corroborate the existing literature, emphasizing the necessity for Nigerian businesses to implement multifaceted resilience strategies to navigate challenges stemming from the removal of fuel subsidies (Oyedepo et al., 2019; Adelaja et al., 2021). Additionally, Adeleye, Olokundun, and Ibidunni (2019), who stress the significance of such strategies in enhancing organizational resilience amidst market uncertainties. The positive skewness values suggest that these strategies are commonly utilized by Nigerian businesses, corroborating with research by Okoli and Schabram (2010), who found that firms often resort to proactive measures during disruptive events to maintain competitiveness. Moreover, the non-leptokurtic nature of the variables aligns with the findings of studies such as Oke and Adeoti (2014), which indicate that businesses tend to employ a variety of strategies rather than relying solely on a single approach to navigate through market disruptions. Overall, the findings of this study contribute to the existing body of literature by providing empirical evidence on the effectiveness of diverse resilience-building strategies in the context of Nigerian businesses facing fuel subsidy removal-induced market disruptions.

Conclusion

In conclusion, the removal of fuel subsidy in Nigeria has profound implications for businesses operating within the country. The research sheds light on the multifaceted challenges faced by enterprises in adapting to market disruptions resulting from subsidy removal, as well as the strategies employed to enhance resilience in the face of these challenges. Through the lens of theories such as Exhaustible Resources Theory and Structural Transformation Theory, the study underscores the need for sustainable practices, diversification, and innovation to mitigate the adverse effects of subsidy removal on businesses. The findings highlight the significant impact of subsidy removal on operational costs, pricing strategies, and overall business performance. Moreover, the analysis of market disruptions confronting Nigerian enterprises underscores the importance of addressing unpredictable market demand, inadequate infrastructure, and regulatory uncertainties. However, the research also reveals that businesses are proactive in cultivating resilience by diversifying supply chains, optimizing operations, and fostering strategic partnerships. These findings contribute to the existing body of knowledge on resilience planning and management in Nigerian businesses, providing valuable insights for policymakers, industry practitioners, and researchers. Moving forward, it is imperative for businesses to continue adapting and innovating in response to market disruptions, while policymakers should prioritize policies that support long-term sustainability and economic growth.

Recommendations

Based on the comprehensive analysis of the impact of fuel subsidy removal on Nigerian enterprises, coupled with the challenges posed by market disruptions and strategies employed for resilience, several recommendations can be proposed to mitigate adverse effects and enhance business sustainability:

1. The Nigerian government should strive to provide a stable and predictable policy environment, particularly in the energy sector. Clear and consistent policies regarding fuel subsidy removal, energy pricing, and investment incentives will foster investor confidence and enable businesses to plan effectively for future contingencies.
2. Businesses should proactively diversify their energy sources to reduce reliance on fossil fuels and mitigate the impact of fuel subsidy changes. Investing in renewable energy technologies such as solar, wind, and hydroelectric power can enhance energy resilience and contribute to long-term sustainability.
3. Enterprises should optimize their supply chains by diversifying suppliers geographically, implementing advanced forecasting and inventory management

systems, and investing in resilient infrastructure. Robust supply chains will mitigate the risk of disruptions caused by fuel price fluctuations and ensure continuity in operations.

4. Businesses should prioritize cost-saving measures such as investing in fuel-efficient technologies, optimizing fleet management practices, and embracing eco-friendly initiatives. By reducing fuel consumption and operational costs, enterprises can improve profitability and enhance resilience in the face of market disruptions.
5. The Nigerian government should prioritize investment in critical infrastructure such as power generation, transportation, and logistics to enhance the resilience of businesses. Improved infrastructure will facilitate efficient supply chain management, reduce operational costs, and stimulate economic growth.
6. Businesses should invest in capacity building and innovation to adapt to changing market dynamics and emerging challenges. Training programs, research, and development initiatives can equip enterprises with the knowledge and skills needed to navigate market disruptions and seize growth opportunities.
7. Continuous monitoring and evaluation of market dynamics, policy changes, and business performance are essential for effective decision-making and strategic planning. Enterprises should implement robust monitoring mechanisms to assess the impact of fuel subsidy removal and market disruptions on their operations and adjust strategies accordingly.

Gaps in Literature

Despite extensive research on fuel subsidy removal and its implications for Nigerian enterprises, there remains a notable gap in the literature regarding the longitudinal effects of market disruptions post-subsidy removal. While existing studies provide insights into immediate challenges and initial adaptation strategies, there is limited longitudinal analysis tracking the sustainability and effectiveness of these strategies over time. Additionally, there is a lack of comprehensive studies exploring the interplay between market disruptions, business resilience, and long-term economic development in the Nigerian context.

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