****THE EFFECT OF 2023 FUEL PRICE HIKE ON TRANSPORTATION SYSTEM IN NIGERIA: A CASE STUDY OF PEACE MASS TRANSIT****

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**Abstract**

*Fuel is a major factor among many others influencing transport costs and transport rates in Nigeria.This aim of this study to examine the effect of price hike of furl on transportation system using Peace Mass Transit Abuja as a case study. The study made of simple random sampling and responses were derived from the staffs of the company using questionaires* ***.*** *findings from the study reveals that the increase in fuel prices affects both passengers and the profitability of transport companies. The study recommends above all thing that government should ensure they bring back the fuel subsidy policy and more so transportation companies should seek for more strategies that would help them remain in business in the face of low patronage from passengers during fuel increment .*

****CHAPTER ONE****

****INTRODUCTION****

****1.1 Background of the study****

Price fluctuation in the market for fuel has a constantly evolving effect on the logistics industry. Rapid increases in the price for fuel can have a delayed and devastating effect on freight management companies, and a sudden fall could result in short-term boosts in profit and a surge of competition within the market to provide consumers with the lowest price.

One of the major components of globalization is the transportation sector, which plays a very significant role in daily activities and the economy. During the 20th century, trade scale changed from local to global and therefore freight transport system became a global network. In particular, freight transportation is one of the most important economic activities. Freight transport has been growing even more rapidly than passenger transport and is expected to continue to do so in the future (Ribeiro et al, 2007). Truck, train, and ship are the three common transport vehicles being used for movement of containers, which are characterized by a number of advantages and disadvantages. The cost of transportation is an important selection criterion among influential parameters on identifying the appropriate mode of transportation mode for freight shipment. The main challenge of today’s transport costs is oil price. Freight movement in most modes remains largely dependent on expensive and finite fossil fuels, predominantly diesel fuel (Russell et al, 2014). The foremost single factor affecting the retail price of diesel fuel is the price of crude oil (Noordin et al, 2009). Crude oil as an energy source is a vital component that determines the condition of the world economy (McSweeney et al, 2008). Its price fluctuations impact on all industrial sectors whether directly or indirectly, be it in banking, energy, retailing or transportation industries. The impact of oil prices on transport sector depends upon three issues, which are, the relevance of the oil price on the cost of the energy used for each transport mode, to what extent oil price is transferred to transport fuel prices, and the relative weight of the energy cost on total operating costs for each mode (Casamassima et al, 2009). Fuel prices are a cost to transportation industries and a direct cost to consumers. Fuel price is one of the most important factors affecting transport cost, which comprises more than 50 percent of the total operating cost for the transportation industry nowadays (Ribeiro et al, 2007). Since the sensitivity of transport operating cost to the oil price change varies significantly across shipment modes, the oil price has become an important factor in freight mode choices. Casamassima et al. Noordin et al, (2009) revealed that the sensitivity of fuel costs of road mode and railway crude oil price was 40%, while maritime was 100% since marine fuels are exempted from government taxation. In addition, they estimated the influence of doubling of crude oil price on transport cost of road and rail freight was 10%, while for maritime was 50%.

As the cost of fuel rises, carriers are forced to raise prices or take losses. In turn, the cost of fuel does not only effect the logistics company, but also the shipper and the profit source of the shipper as well. It is an outward domino effect: If it costs more for the freight carrier to transport the freight, the shipper is going to be charged more to make up for this. If the shipper is going to be charged more to transport the freight, the receiver is going to be charged more to make up for their added costs.

****1.2 Statement of the problem****

The Petroleum Products Pricing Regulatory Agency (PPPRA) announced on Thursday 11th March, 2023 that the Nigerian government has increased the pump price of petrol to N212.61 per litre. According to the agency, the landing cost stands at N189.61 per litre while fuel depot owners will sell to marketers at N206.42, ([Premium Times](https://www.premiumtimesng.com/news/headlines/448335-just-in-nigerian-govt-deceives-citizens-raises-petrol-price-above-n200.html) reports).

This announcement comes days after Nigerians suspected there would be a hike in fuel price as depot owners were reportedly hoarding the product, and increasing prices with expectations of fuel price increment by the government, even though the NNPC responded to the speculations via a statement by its Group General Manager, Group Public Affairs Division, Kennie Obateru.

As the price of fuel increases, other basic needs of Nigerians including transportation and the cost of goods and services, to name a few, are also expected to increase in price, making it more difficult for the average citizen to afford food and other basic needs, especially without any increase in their income.

Nigerians have since taken to social media with the hagtag #FuelPriceHike to object to the decision, with several people calling for a protest in Ojota, Lagos State. Many Nigerians on there social media pages have been complaining that Nigeria no longer use coins and with the increase of fuel price to N212.61 per litre, how would they be able to get their balance when ever they purchase petrol. In 1978, fuel price per liter was 0.5 kobo. Today, [#FuelPriceHike](https://twitter.com/hashtag/FuelPriceHike?src=hash&ref_src=twsrc^tfw) is a major problem to the Nigeria’s economy especially for an average Nigerian. Hence, this study seeks to investigate the effect of 2023 fuel price hike on transportation system in Nigeria.

****1.3 Objective of the study****

The main purpose of this study is to investigate the effect of fuel price hike on transportation system in Nigeria using Ascent Transport Company (ATM), Abuja as a case study. The study specifically aimed to:

1. Examine the effect of fuel price hike on passengers of ATM, Abuja.
2. Investigate the effect of fuel price hike on the profitability of ATM, Abuja.

****1.4 Research Questions****

1. What is the effect of fuel price hike on passengers of ATM, Abuja?

2. What is the effect of fuel price hike on the profitability of ATM, Abuja?

****1.5 Research hypotheses****

The following null hypothesis will be tested in this study:

Fuel price hike does not have any effect on passengers of ATM, Abuja

Fuel price hike does not have any effect on the profitability of ATM, Abuja

****1.6 Significance of the study****

This study will enable the government of Nigeria to see the need to put measures in place to subsidize fuel in the country and avoid unnecessary hiking of the fuel price. This study will also help transport companies to draft a good strategy and mechanism to always curb the fuel hike issues in the nearest future. This study will further serve as an eye-opener to the general public to know that when ever there is a fuel hike in the country, transportation tends to be expensive. This study will also serve as a reference piece for future research on this or related domain.

****1.7 Scope of the study****

This study will focus on investigating the effect of fuel price hike on passengers of ATM, Abuja. This study will also examine the effect of fuel price hike on the profitability of ATM, Abuja. This study will be delimited to only the staffs of ATM, Abuja.

****1.8 Limitation of the study****

Finance, availability of time and relevant materials were the major constraints that the researcher encountered while carrying out this study.

****1.9 Definition of terms****

****Effect:****a change which is a result or consequence of an action or other cause.

****Price Hike:**** a sudden or large increase in prices, rates, taxes, or quantities.

****Transportation:****transportation is the movement of humans, animals and goods from one location to another

**CHAPTER TWO**

**LITERATURE REVIEW**

**2.0 INTRODUCTION**

Our focus in this chapter is to critically examine relevant literatures that would assist in explaining the research problem and furthermore recognize the efforts of scholars who had previously contributed immensely to similar research. The chapter intends to deepen the understanding of the study and close the perceived gaps.

**2.1 conceptual framework**

**Fuel**

Fuel is a combustible substance, containing carbon as a main constituent, which on proper burning gives large amount of heat, which can be used economically for domestic and industrial purpose. According to Ezeh (2012), fuel in Nigeria is an inelastic product both at demand and supply sides, which means that it is very difficult for consumers to find alternatives to the use of it in their daily lives. Alternatives such as electric trains, solar heaters and cookers are non-existent in Nigeria and hydropower and dams are not dependable sources of power in Nigeria

**FUEL Subsidy**

Fuel subsidy According to the Academics Dictionary of Economics (2006), subsidy can be defined as the cash incentive given by the government to an industry with a view to lower the price of the product of the concerned industry and to raise its competitive power. This may be given as a counter balancing measure to the imposition of the custom duty (In the nature of protection duty) by an importing country government. One important objective of subsidy is to keep its prices below the cost of production. Moreover, subsidy can also be defined as any measure that keeps prices consumers pay for a goods or products below market levels for consumers or for producers above market. Subsidies take different forms. Some subsidies have a direct impact on price. These include grants, tax reductions and exemptions or price controls. Others affect prices or costs indirectly, such as regulations that skew the market in favor of a particular fuel, government sponsoring technology, or research and development. Thus, there are two major classes of subsidies 1. Production subsidies: These form is associated with developed countries and; 2. Consumer subsidies: This is found mainly in developing countries like Nigeria. A subsidy is a reverse tax. It is a deliberate attempt by government to support a chosen economic agent a consumer and a producer and it can be applied in any market that involves the buying and selling of products and or services. Furthermore, according to OECD, subsidy is basically government action that decreases the consumption price of the consumer and or increases the selling price of the producer. Subsidies enjoy widespread use in several countries and several commodities such as petroleum products, food or farm inputs liker fertilizer and machinery (UNEP, 2002). Fuel subsidy is a government programme created to reduce how much Nigerians have to pay for petroleum motor spirit (PMS), automotive Gas Oil (Diesel), and to protect the citizens from crude oil volatility on the international market. Fuel subsidy can also be referred to the effort by the government to pay for the difference between the price of fuel in the pump and the actual cost of the product. So by paying the difference, the government enables fuel to be sold at a lower price so that it will help alleviate the burden on its people especially the lower income group. Fuel subsidy in Nigeria was before the coming of the Buhari’s administration, it is a policy of federal government meant to assist the people of Nigeria to cushion the effects of their economic hardship. Conceptually, fuel subsidy seeks to enhance financial capacity but also to accept the implied financial losses by it in the sprint of its national responsibility to ensure the well being of the populace (Emeh, 2012).

**2.2 Historical overview of fuel subsidy removal in Nigeria**

According to the Centre for Public Policy Alternatives (2011), the executive arm of the Federal Government has taken the view that subsidy removal is an important element in the larger scheme to accelerate Nigeria economic development. The history of fuel subsidy removal in Nigeria is rather a long one particularly with the negative effects it has on the polity. Specifically the story of subsidy removal dates back to 1978 when the then military government of Gen. Olusegun Obasanjo reviewed upward the pump price of fuel which was at 8.4 kobo to 15.37 kobo. The concern was for government to generate enough money to run the administration particularly when it was preparing for the 1979 democratic elections and also to carter for the social needs of Nigerians (Ering and Akpan, 2012). Moreover, Gen. Olusegun Obasanjo second coming as a civilian president did not help matters as he unleashed a reign of terror on Nigerians. In his eight years reign, the nation witnessed several rounds of fuel price increases. The first started on 1st June, 2000, where the petrol price per litre was raised to ₦30.00 but only to be reduced to ₦25 one week after due to massive protests by organized labour, civil society organizations and the ordinary Nigerians. Five days later, on 13th June, 2000, the pump price was further adjusted to ₦22.00 per litre (George et al., 2014). On 1st January, 2002, Obasanjo regime increased the price from ₦22.00 to ₦26.00 and to ₦40.00on 23rd June, 2003 just one year after. In June, 2007, also the same regime raised the price of fuel per litre to ₦70, and later to over ₦100 per liter. In a statement delivered by Dr. Kachikwu, on May, 2016, it is on record that when the late President Umaru Musa Yar’Adua assumed office in May 2007, the Nigeria Labour Congress (NLC) resisted the increase and forced him to revert to ₦65 per litre. In January, 2012, the government of former President Goodluck Jonathan attempted to remove the acclaimed subsidy but this was stoutly resisted and the commodity whch was billed to sell for ₦97 per litre was later pegged to ₦87 per litre (Vanguard News, 25th May, 2016). The statement further stated that during President Buhari’s administration in 2015 to present, Nigerians have been asked to buy the product at a peak price of ₦145 per litre. Government said it decision in this regard is informed by the fact that despite the decline in the price of crude oil in the international market, marketers are finding it increasingly difficult importing refined petroleum products due to scarcity of foreign exchange (Vanguard News, 25th May, 2016).

**The birth of fuel price hike in 2023**

Acoording to Ossai (2023) Nigeria’s state oil company ruled out higher gasoline prices this month, less than a day after the fuel regulator signaled the first increase since November.The reversal means that government-owned [Nigerian National Petroleum Corp.](https://www.bloomberg.com/quote/58325Z%3ANL%22%20%5Co%20%22Company%20Overview), the nation’s sole importer of gasoline, will continue to bear the cost of subsidizing fuel in Africa’s biggest economy. It’s the second time in as many weeks that policy makers have sent out contradictory signals, after the central bank on March 4 [set aside](https://www.bloomberg.com/news/terminal/QPFMG8T0AFB6%22%20%5Co%20%22Nigeria%20Central%20Bank%20Rules%20Out%20Barring%20Foreigners%20From%20OMO%20Sales%22%20%5Ct%20%22https%3A//www.bloomberg.com/news/articles/2021-03-12/_blank) plans announced by one of its officials to bar foreigners from some debt auctions. The Petroleum Products Pricing Regulatory Agency published an announcement late Thursday saying gasoline should retail for 209.6-212.6 naira ($0.51) a liter, almost 30% higher than current rates. On Friday, the NNPC insisted there would be no increase in March, reiterating a statement published at the start of the month.Based on the PPPRA data, the NNPC is making a loss of at least 47 naira a liter on the current retail price of 165 naira.

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**Transportation**

Transportation According to Oxford English Dictionary, transport was derived from two Latin words ‘trans’ which mean ‘across’ and ‘portare’ which mean ‘carry’. Transportation is the movement of people and goods from one location to another (Microsoft Encarta, 2009). According to Merriam Webster Dictionary, transportation is an act, process, or instance of transporting or being transported. The same dictionary also defines it as a means of conveyance or travel from one place to another or a public conveyance of passengers or goods especially as a commercial enterprise. Longman Dictionary of Contemporary English (2003) defines transportation as a process or business of taking goods from one place to another or a system for carrying passengers or goods from one place to another. Transportation refers to the process of conveying or moving of goods and people from place to place (Anyanwu et al 1997). According to Good and Jebbin (2015) transportation is a system for carrying passengers, raw materials and goods from one place to another both internally and internationally, often through power driven machines. It is commonly said to refer to movement of people and goods from one place to another (Okeafor, 1998). Transportation service is the port of physical distribution activity which is concerned with the actual movement of goods to their various consumers (Good and Jebbin, 2015). This service enhances the fulfillment of production because production is said to be achieved if and only if goods get to the final consumers. Transportation system has several elements or essentials without which it cannot function, the elements are; 1. Infrastructure, which includes the transportation network (i.e. roads, railways, airways, canals, pipelines, etc); 2. Vehicles, such as automobiles, trains, airplanes etc. This generally moves on the networks; 3. Operations, which deal with the control of the system such as traffic, signal and ramp meters, rail-road switches, air traffic control, etc, as well as policies, such as how to finance the system, for instance, use of tolls or gasoline taxes in the case of highway transport; 4. Nodes or terminals (such as airports, railway stations, bus stations and seaports), they are points where there is an access to any specialized form of way (infrastructure) (Adeniran & Yusuf, 2016). Transportation systems are composed of a complex set of relationships between the demand, the locations they service and the networks that support movements. They are mainly dependent on the commercial environment from which are derived operational attributes such as transportation costs, capacity, efficiency, reliability and speed. Such conditions are closely related to the development of transportation networks, both in capacity and in spatial extent. Transportation systems are also evolving within a complex set of relationships between transport supply, mainly the operational capacity of the network, and transport demand, the mobility requirements of a territory (Jean, Claude and Brian, 2006). 2.4 Transport costs and transport rates Transport costs are a monetary measure of what the transport provider must pay to produce transportation services. They come as fixed (infrastructure) and variable (operating) costs, depending on a variety of conditions related to geography, infrastructure, administrative barriers, energy, and on how passengers and freight are carried. Three major components, related to transactions, shipments and the friction of distance impact on transport costs (Jean, Claude and Brian, 2006). Transport rates are the price of transportation services paid by their users. They are the negotiated monetary cost of moving a passenger or a unit of freight between a specific origin and destination. Transport rates are often visible to the consumers since transport providers must provide this information to secure transactions. They may not necessarily express the real transport costs. The difference between transport costs and transport rates results in either a loss or a deficit from the transport service provider (Jean, Claude and Brian, 2006). Transport systems face requirements to increase their capacity and to reduce the costs of movements. All users (e.g. individuals, enterprises, institutions, governments, etc.) have to negotiate or bid for the transfer of goods, people, information and capital because supplies, distribution systems, tariffs, salaries, locations, marketing techniques as well as fuel costs are changing constantly. There are also costs involved in gathering information, negotiating, and enforcing contracts and transactions, which are often referred as the cost of doing business. Trade involves transaction costs that all agents attempt to reduce since transaction costs account for a growing share of the resources consumed by the economy (Jean, Claude and Brian, 2006). Frequently, enterprises and individuals must take decisions about how to route passengers or freight through the transport system. This choice has been considerably expanded in the context of the production of lighter and high value consumer goods, such as electronics, and less bulky production techniques. It is not uncommon for transport costs to account for 20 percent of the total cost of a product. Thus, the choice of a transportation mode to route people and freight within origins and destinations becomes important and depends on a number of factors such as the nature of the goods, the available infrastructures, origins and destinations, technology, and particularly their respective distances. Jointly, they define transportation costs (Jean, Claude and Brian, 2006).

**Transport Modes in Nigeria**

**Land transportation:** This accounts for the great majority of energy consumption. Road transportation alone is consuming on average 90% of the total energy used by the transport sector in Nigeria. This trend is not however uniform within the land transportation sector itself, as road transportation is almost the sole mode responsible for the greater chunk of the energy demand in the past two decades. Land transport in Nigeria is characterized by road, rail and pipeline systems. Road transport is further subdivided into cars, trucks, buses, motor-bikes, tricycles and military vehicles. Rail transport remains the most energy efficient land transport, and used for longdistance freight and all distances of passenger transport. Despite a falling market share, rail transport, on the basis of 1 kg of oil equivalent, remains four times more efficient for passenger than and twice as efficient for freight movement as road transport (IEA, 2005). Pipeline is another mode of land transportation which is used to transport fluids like oil and gas in Nigeria.

**Water transportation:** In Nigeria is far the least developed looking at all the modes of transport in the country. The percentage of energy consumed in the sector is far less than what is obtainable in other modes. Nigeria has 8,600 kilometers of inland waterways. The longest are the Niger Rive and its tributary, the Benue River but the most used, especially by larger powered boats and for commerce, are in the Niger Delta and all along the coast from Lagos Lagoon to Cross River. This mode of transport is being developed so as to improve the transportation of goods and passengers across the country. There has been dredging of some Rivers and revitalization of Inland Water Ways to enhance marine transport. Energy consumed in the marine transport accounts for less than 1 percent of the total energy consumed in the transport sector in Nigeria.

**Air transportation:** This plays an integral part in the development of transportation networks. The aviation industry accounts for 8% of the energy consumed by transportation in Nigeria. There are about 26 airports in Nigeria with paved runways. There are also about 21 Airstrips built mainly by the Nigerian airforce and multinational oil companies scattered about the country. Air transport has high energy consumption levels, linked to high speeds. Fuel is the second most important budget for the air transport industry accounting for 13- 20% of total expenses. Technological innovations, such as more efficient engines and better aerodynamics, have led to a continuous improvement of the energy efficiency of each new generation of aircrafts. Over the years, the aviation industry has improved significantly, thereby increasing the number of airlines as well as passengers in Nigeria.

**Drivers of FUEL Demand in Transport Sector**

**Modes of transport**: The mode of transport has correlation with the type and amount of energy to be consumed to transport a ton-kilometer for freight, or passenger kilometer for both modes of transport. The rate of consumption of motor fuel is far higher for freight than for most passenger vehicles. This is obvious in air transport where the rate of consumption is very high due to the high speed of airplanes. The mode of transport is a major driver of energy demand in the transport sector as different modes have varying capacities which depends on the work done by such vehicles.

**Efficiency and Age of vehicle**: The efficiency and age of a particular mode of transport determines the rate and quantity of energy it will likely consume. More efficient cars for example, consume less quantity of motor fuels. The efficiency of a car is largely dependent on its age. The older the car, the less efficient it becomes. This also is a factor that determines how energy is consumed in the transport sector in a country. In Nigeria, most of the cars, trucks and buses used for transportation are mostly second-hand vehicles whose age is usually more than 7 years from manufacturing date, and this has been linked to the high rate of motor fuel consumption and low efficiency of vehicles found in our roads.

**Transport Infrastructure:** The state and availability of transport infrastructure in a country is one of the factors that determine the pattern of energy consumption. If the state of roads, rails, airports and ports (jetty) are properly designed and in good shape, it affects the level of energy consumed in the transport sector. If for example the road network of a particular city is properly designed and in good condition, the vehicles used will get to their destinations in fewer time than would have spent if the design is not good. It will also lead to consumption of fewer motor fuels. Good roads will also reduce the level of decay of a given vehicle which in turn is a factor affecting the efficiency of the vehicle. The state of transport infrastructure in Nigeria is not a model for a good and well designed masterpiece. This could be observed from the nature of our roads especially the highways linking major cities in the country which are usually poorly maintained making them to be nightmares for users, thereby leading to wastages of both man hours and higher consumption of motor fuels.

**Lifestyle**: The lifestyle of citizens of Nigeria is another major driver of energy demand in the transport sector. Car ownership in Nigeria is still been perceived as luxury and most people strive to acquire more cars even when they already have cars that can serve them and their families. This lifestyle and the choice of transport mode contribute significantly in the amount of energy consumed in the transport sector in Nigeria. The use of personal cars for transportation where there is existence of a good transport scheme. Apathy on the use of train for passenger as well as freight is another factor being driven by lifestyle. This most often leads to high consumption of energy because train uses less energy to convey the same amount of both passengers and freight as would have done by other modes.

**Effect of fuel price hike on transportation system**

According to Akpan (2019) fuel price hike has implication on both passenger and owners of transport companies.the implication can be captured thus:

1. The increase in fuel price limit mobility of passengers who would have love to travel because of the fright that cost of transportation is on the increase
2. Increase in fuel has a negautive impact on tyransport companies as they tend to invest more on low energy vehicles and reduce the number of their vehicles on the road.
3. Moreso fuel price hike affects transport companies as they limit the number of route they toll. This is because their might be a low tide of patronage from passengers.
4. By the reason given above, this limited vehicle makes cost of operation high and their over heads increased as they might be forced to shut down a bit until fuel price comes back to normal.

**Impacts of fuel subsidy on the factors affecting transport costs and transport** **rates**

It is quite obvious that fuel subsidy impact the major factors affecting transport costs and transport rates. Since transport costs are mostly fixed amount, the factors are mostly associated with transport rates meanwhile, the factors affecting transport costs and transport rates and how fuel subsidy impact them are listed below:

**Geography:** Its impacts mainly involve distance and accessibility. Distance is commonly the most basic condition affecting transport costs. The more difficult it is to trade space for a cost, the more important is the friction of distance. The friction of distance can be expressed in terms of length, time, economic costs or the amount of energy used. It varies greatly according to the type of transportation mode involved and the efficiency of specific transport routes. Landlocked countries tend to have higher transport costs, often twice as much, as they do not have direct access to maritime transportation (Jean, Claude and Brian, 2006). Fuel subsidy will tend to reduce the overall transport costs and transport rates incurred on distance and accessibility, also, the removal of fuel subsidy will add more or increase the overall transport cost and transport rates incurred on distance and accessibility;

**Type of product:** Many products require packaging, special handling, are bulky or perishable. Coal is obviously a commodity that is easier to transport than fresh flowers as it requires rudimentary storage facilities and can be transshipped using rudimentary equipment. Insurance costs are also to be considered and are commonly a function of the value to weight ratio and the risk associated with the movement. As such, different economic sectors incur different transport costs as they each have their own transport intensity. For passengers, comfort and amenities must be provided, especially if long distance travel is involved (Jean, Claude and Brian, 2006). Fuel subsidy will tend to reduce the overall transport costs and transport rates incurred on product packaging, special handling, bulky or perishable products also, the removal of fuel subsidy will add more or increase the overall transport cost and transport rates incurred on product packaging, special handling, bulky or perishable products; 3. **Economies of scale**: Another condition affecting transport costs is related to economies of scale or the possibilities to apply them as the larger the quantities transported, the lower the unit cost. Bulk commodities such as energy (coal, oil), minerals and grains are highly suitable to obtain lower unit transport costs if they are transported in large quantities. A similar trend also applies to container shipping with larger containerships involving lower unit costs (Jean, Claude and Brian, 2006). If goods are transported in large quantity, more fuel will be required. Therefore, the advantage incurred on transporting large volumes of goods is a disadvantage to the amount of fuel to be consumed. If fuel is been subsidized, the cost of fuel to be consumed when transporting large volumes of goods will be minimal but in the case of subsidy removal, the cost of fuel to be consumed will be at a very high rate and transport service provider must be critical and analytical in taking decisions of cost; analytical in taking decisions of cost;

1. **Energy:** Transport activities are large consumers of energy, especially oil. About 60 percent of all the global oil consumption is attributed to transport activities. Transport typically accounts for about 25 percent of all the energy consumption of an economy. The costs of several energy intensive transport modes, such as air transport, are particularly susceptible to fluctuations in energy prices (Jean, Claude and Brian, 2006). According to Ezeh (2012), fuel in Nigeria is an inelastic product both at demand and supply sides, which means that it is very difficult for consumers to find alternatives to the use of it in their daily lives. Alternatives such as electric trains, solar heaters and cookers are non-existent in Nigeria and hydropower and dams are not dependable sources of power in Nigeria. In a nation with single means of fuelling transport vehicle, fuel subsidy is mostly preferable and will results into reduced transport costs and rates but in the case of fuel subsidy removal, transport costs and rates will increase. It is quite better that before subsidy removal, other sources of energy or fuel or other sources of energy powered vehicle such as hydrogen gas, electric, solar and others should be made readily available, for it will normalize the high effects on transport cost and overall production cost because of the available close substitutes which will be influenced as a result of competition.

**EMPIRICAL STUDIES**

According to Afolabi (1999), it has been shown in the past, that any significant increase in the fuel price often cause economic recession, such as witnessed in year 1973, year 1979 and year 2016. One way in which the government had made fuel sufficiently available and affordable to the low income earner is through subsidy. The introduction of subsidy indirectly promotes economic growth and development as a result of the affordability of the price of goods which provides an enabling point for the middle class citizen to contribute significantly to the economy. He also stated that lesson derived from China shows how subsidy had contributed significantly to economic growth and development. The success could be attributed to the affordability of energy and hence an increase in its demand. Furthermore, in the perspective of Nwosu (2009), subsidy removal though will play significant role in nation building it is not the absolute resort to improve the economy. While it looks significantly important, there are other measures that could be adopted even without subsidy removal which would improve the economy significantly. And the presence of subsidy will play a pivotal role to the accomplishment of this measure as is being witnessed in china. Moreover, in the perspective of 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 results 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. Additionally, Ering and Akpan (2012) 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 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. Increases in transportation costs always have ripple effects on other social issues. The prices of food stuff also went up. The result of fuel price increase results into increase transportation costs, increase production cost and marketers had to factor in the increment in order to make marginal gain.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 AREA OF STUDY**

Peace Mass Transit is a transport company with its headquarter in Lagos with different branches in other states. Peace Mass Transit (PMT) offers fully air conditioned luxurious buses and cars suitable for short and distance travel as well as courier services and charter services with professional drivers. Peace Mass Transit (PMT) provides the routes below for easy identification. each of the parks listed can take their passengers to the other terminals of ATM from any of the locations. Peace Mass Transit Abuja is located at Utako, Abuja FCT, [Abuja](https://www.businesslist.com.ng/state/abuja%22%20%5Co%20%22Companies%20in%20Abuja), Nigeria.

**3.2 RESEARCH DESIGN**

Research designs are perceived to be an overall strategy adopted by the researcher whereby different components of the study are integrated in a logical manner to effectively address a research problem. In this study, the researcher employed the survey research design. This is due to the nature of the study whereby the opinion and views of people are sampled.

**3.3 POPULATION OF THE STUDY**

According to Udoyen (2019), a study population is a group of elements or individuals as the case may be, who share similar characteristics. These similar features can include location, gender, age, sex or specific interest.

The emphasis on study population is that it constitute of individuals or elements that are homogeneous in description.

This study was carried out to examine the effect of 2023 fuel price hike on transportation system in Nigeria using Ascent Transportation Management as a case study. Staffs of ATM Abuja branch forms the population of this study

Statistics derived from the human resources department of ATM company shows that the total population is 102

**3.4 SAMPLE SIZE DETERMINATION**

A study sample is simply a systematic selected part of a population that infers its result on the population. In essence, it is that part of a whole that represents the whole and its members share characteristics in like similitude (Udoyen, 2019). In this study, the researcher adopted the simple random sampling (srs.) method to determine the sample size.

**3.5 SAMPLE SIZE SELECTION TECHNIQUE AND PROCEDURE**

The Taro Yamane (1967:886) provides a simplified formula to calculate sample sizes.

**Assumption**

95% confidence level

 P = .5



n=100/1+100 (0.05)2

n= 100 /1+100 (0.0025)

n= 100 /1+0.25

**n=80**

Therefore, for this study, the sample size is 80

**3.6 SOURCES OF DATA COLLECTION**

The research instrument used in this study is the questionnaire. A 10 minutes survey containing five (5) questions were administered to the enrolled participants. The questionnaire was divided into two sections, the first section inquired about the responses demographic or personal data while the second sections were in line with the study objectives, aimed at providing answers to the research questions.

**3.7 METHOD OF DATA ANALYSIS**

The responses were analyzed using the frequency tables, which provided answers to the research questions.

**3.8 VALIDITY AND RELIABILITY OF THE STUDY**

The reliability and validity of the research instrument was determined. The Pearson Correlation Coefficient was used to determine the reliability of the instrument. A co-efficient value of 0.68 indicated that the research instrument was relatively reliable. According to (Taber, 2017) the range of a reasonable reliability is between 0.67 and 0.87

**CHAPTER FOUR**

**DATA PRESENTATION AND ANALYSIS**

**Introduction**

The focus of this chapter is to present and analyse the data collected. The total 80 questionnaires was issued and all were retrieved. 80 respondent answered the research questions and thus its analyzed.

**4.1 DATA PRESENTATION**

**Table 4.1: Demographic data of respondents**

|  |  |  |
| --- | --- | --- |
| **Demographic information** | **Frequency** | **percent** |
| Gender Male Female  | 50 | 70% |
| 30 | 30% |
| Religion |  |  |
| Christian | 30 | 37.5% |
| Muslim | 50 | 62.5% |
| Age |  |  |
| 22-32 | 32 | 40% |
| 32-42 | 38 | 47.5% |
| 42+ | 10 | 12.5% |

**Source: Field Survey, 2023**

From the above table, 30%% respondents are female and 70% are male. 30% respondent are Christian while 62.5% respondent are Muslim. 40% respondents are aged 22-32 years, 47.5% respondents are aged 32-42 years. 12.5%respondent are aged 42 and above years.

**4.2 ANSWERING RESEARCH QUESTIONS**

****Research Questions****

QUESTION 1:The hike of fuel price has led to increase in transport fare charged on passengers

|  |  |  |
| --- | --- | --- |
| **Options** | **Frequency** | **Percentage** |
| Yes | 80 | 100 |
| No | 00 | 00 |
| Undecided | 00 | 00 |
| **Total** | **80** | **100** |

Field Survey 2023

From the responses derived in the table above, 100% of the respondent said yes to the option, there was no record for undecided or no.

QUESTION 2: The price hike of fuel has delimit passengers from travelling as they would have when fuel price was normal.

Table 4.3

|  |  |  |
| --- | --- | --- |
| **Options** | **Frequency** | **Percentage** |
| Yes | 80 | 100 |
| No | 00 | 00 |
| Undecided | 00 | 00 |
| **Total** | **80** | **100** |

Field Survey 2023

From the responses derived in the table above, 100% of the respondent said yes to the option, there was no record for undecided or no.

QUESTION 3:What is the effect of fuel price hike on the profitability of ATM, Abuja?

Table 4.4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Options** | **Yes** | **No**  | **Undecided** | **Total**  |
| Reduces the number of buses on route | 80(100%) | 00 | 00 | 80(100%) |
| increase cost of operation and over-heads | 80(100%) | 00 | 00 | 80(100%) |
| Experiences low patronage from passengers due to increase in transport fare | 80(100%) | 00 | 00 | 80(100%) |

Field Survey 2023

From the responses derived in the table above, 100% of the respondent said yes, there was no record of no and uncertain.

QUESTION 4: Fuel price hike does not have any effect on passengers of ATM, Abuja

Table 4.5

|  |  |  |
| --- | --- | --- |
| **Options** | **Frequency** | **Percentage** |
| Yes | 10 | 12.5 |
| No | 50 | 62.5 |
| Undecided | 20 | 25 |
| **Total** | **80** | **100** |

Field Survey 2023

From the responses derived in the table above, 12.5% of the respondent said yes.62.5 % of the respondent said no. 25% of the respondent were uncertain

Question 5: Fuel price hike does not have any effect on the profitability of ATM, Abuja

|  |  |  |
| --- | --- | --- |
| **Options** | **Frequency** | **Percentage** |
| Yes | 10 | 12.5 |
| No | 60 | 75 |
| Undecided | 10 | 12.5 |
| **Total** | **80** | **100** |

Field Survey 2023

**4.3 TESTING OF HYPOTHESIS**

**H0**:Fuel price hike does not have any effect on passengers of ATM, Abuja

**H0**: Fuel price hike does not have any effect on the profitability of ATM, Abuja

**Hypothesis One:**

H0: Fuel price hike does not have any effect on passengers of ATM, Abuja

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Response**  | **Observed frequencies** | **Expected frequencies (E)**  | **O-E** | **(O-E)2** | **(O-E)** **E** |
| YesNo Uncertain | 105020 | 26.626.626.6 | -16.623.4-6.6 | 275.56547.5643.56 | 10.420.61.632.6 |

**Source: field survey 2023**

Degree of freedom = (row-1) (column-1)

= (3-1) (2-1)

= 3\*1

=2

At 0.05 level of significance, given the above degree of freedom, table value of X2 (ie X2t) = 5.991.

To test our hypothesis, the decision rule is

Accept Ho if X2t>X2cal, and

Reject Ho if X2t<X2cal

Thus, since the X2t (5.991) < X2cal (32.6), we reject H0 and accordingly accept H1.We conclude by accepting the alternate hypothesis which states fuel price hike has a significant effect on passenger of ATM.

**Hypothesis Two**

**H0**: Fuel price hike does not have any effect on the profitability of ATM, Abuja

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Response**  | **Observed frequencies** | **Expected frequencies (E)**  | **O-E** | **(O-E)2** | **(O-E)** **E** |
| YesNo Uncertain | 106010 | 26.626.626.6 | -16.633.4-16.6 | 275.561115.56275.56 | 10.441.910.462.7 |

**Source: field survey 2023**

Degree of freedom = (row-1) (column-1)

= (3-1) (2-1)

= 3\*1

=2

At 0.05 level of significance, given the above degree of freedom, table value of X2 (ie X2t) = 5.991.

To test our hypothesis, the decision rule is

Accept Ho if X2t>X2cal, and

Reject Ho if X2t<X2cal

Thus, since the X2t (5.991) < X2cal (62.7), we reject H0 and accordingly accept H1.We conclude by accepting the alternate hypothesis fuel price hike have an effect on on the profitability of ATM Abuja.

**CHAPTER FIVE**

**CONCLUSION AND RECOMMENDATION**

**5.0 Introduction**

This chapter summarizes the findings into the effect of 2023 fuel price hike on transportation system using Ascent Transport Company as case study.The chapter consists of summary of the study, conclusions, recommendations and suggestions for further studies.

**5.1 Summary Of Study**

In this study, our focus was to examine the effect of 2023 fuel price hike on transportation system Using Ascent Transport Company Abuja as a case study. The study aimed at examining the effect of fuel price hike on passengers of ATM, Abuja. It Investigated the effect of fuel price hike on the profitability of ATM, Abuja. The study made use of random sampling. 80 eighty responses were elicited from the field survey. Staffs of Ascent Transportation Company form the population of the study.

**5.2 Conclusion**

The following conclusion was drawn from the finding of the study

1. Fuel price hike has a significant negative impact on Nigeria Transport system and passengers as a whole.
2. The increase in fuel price limit mobility of passengers who would have love to travel because of the fright that cost of transportation is on the increase
3. Increase in fuel has a negative impact on transport companies as they tend to invest more on low energy vehicles and reduce the number of their vehicles on the road.
4. Moreso fuel price hike affects transport companies as they limit the number of route they toll. This is because their might be a low tide of patronage from passengers.
5. By limiting the number of vehicles makes cost of operation high for transportation companies and their over heads increased as they might be forced to shut down a bit until fuel price comes back to normal.

**5.3 Recommendation**

The following recommendation was made due to finding of the study

1. Government of Nigeria should see the need to put measures in place to subsidize fuel in the country and avoid unnecessary hiking of the fuel price.
2. Transport companies should draft a good strategy and mechanism to always curb the fuel hike issues in the nearest future
3. Fuel subsidy will reduce the overall transport costs and rates incurred on transport distance and accessibility, also, the removal of fuel subsidy will increase the overall transport cost and rates incurred on transport distance and accessibility;
4. Fuel subsidy will reduce the overall transport costs and rates incurred on product packaging, special handling, bulky or perishable products also, the removal of fuel subsidy will increase the overall transport cost and rates incurred on product packaging, special handling, bulky or perishable products;
5. If goods are transported in large quantity, more fuel will be required; therefore, the advantage incurred on transporting large volumes of goods is a disadvantage to the amount of fuel to be consumed. If fuel is been subsidized, the cost of fuel to be consumed when transporting large volumes of goods will be minimized but in the case of subsidy removal, the cost of fuel to be consumed will be at a very high rate and transport service provider must be critical and analytical in taking decisions of cost;
6. In a nation that has no close substitutes to vehicle fuel or energy, fuel subsidy is mostly preferable and will results into reduced transport costs and rates but in the case of fuel subsidy removal, transport costs and rates will increase. It is quite better that before subsidy removal, other sources of energy or fuel to power a vehicle such as hydrogen gas, electric, solar and others should be made readily available, for it will normalize the high effects on transport cost and overall production cost;
7. If fuel is subsidized, the import costs will be minimized but if fuel subsidy is removed, import cost will be very high and this will significantly increase the cost of the products and consumables. If Nigeria will rely on importation, there is need for fuel subsidy. The present shifting in the diversification of the economy should also results into shifting from fuel subsidy to fuel subsidy removal. This will also improve the development of Nigeria economy;
8. Efficient transport infrastructures results into low fuel consumption and the better if fuel subsidy removed. Also, poor transport infrastructures results into high fuel consumption and fuel subsidy is needed. Hence, fuel subsidy removal should be better considered if the government must have provided a smooth transport network for easy accessibility.

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**QUESTIONNAIRE**

**PLEASE TICK [√] YOUR MOST PREFERRED CHOICE (s) ON A QUESTION**

**SECTION A**

**PERSONAL INFORMATION**

**Gender**

Male [ ] Female [ ]

**Age**

23-30 [ ]

31-37[ ]

38 and above [ ]

SECTION B

QUESTION 1:The hike of fuel price has lead to increase in transport fare charged on passengers

|  |  |
| --- | --- |
| **Options** | **Please tick** |
| Yes |  |
| No |  |
| Undecided |  |

QUESTION 2: The price hike of fuel has delimit passengers from travelling as they would have when fuel price was normal.

|  |  |
| --- | --- |
| **Options** | **Please tick** |
| Yes |  |
| No |  |
| Undecided |  |

QUESTION 3:What is the effect of fuel price hike on the profitability of ATM, Abuja?

|  |  |  |  |
| --- | --- | --- | --- |
| **Options** | **Yes** | **No**  | **Undecided** |
| Reduces the number of buses on route |  |  |  |
| increase cost of operation and over-heads |  |  |  |
| Experiences low patronage from passengers due to increase in transport fare |  |  |  |

QUESTION 4: Fuel price hike does not have any effect on passengers of ATM, Abuja

|  |  |
| --- | --- |
| **Options** | **Please tick** |
| Yes |  |
| No |  |
| Undecided |  |

Question 5: Fuel price hike does not have any effect on the profitability of ATM, Abuja

|  |  |
| --- | --- |
| **Options** | **Please tick** |
| Yes |  |
| No |  |
| Undecided |  |