

## **Petroleum Motor Spirit (PMS) Pricing Crisis and the Nigerian Public Passenger Transportation System**

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**Abstract:** Incessant price hike of petroleum products have led to crisis and industrial actions led by some pressure groups in Nigeria. Based on this problem, the study examines its effect on the Nigerian environment because the welfare of the nation's economy depends largely on the efficient and adequate movement of passengers which is dependent on constant supply of PMS. Questionnaire was used to collect the primary data from six major cities within Ondo State which was used as the study area. Perception scale on a 4-point Likert scale was used to elicit response from the operators of public passenger transport system. The Mean Weight Value (MWV) was calculated from the ranking of the perception scale. The result of these MWV were compared with the Group Arithmetic Mean (GAM) of each group to determine whether to accept or reject a problem item as being a reflection of the thinking of the majority for taking a decision. Results from this study shows that price hike of PMS have increased transport fare, led to hoarding of PMS, encourage long queue and black market. Problems identified above have exerted a lot of hardship on the people and the economy of the country to the extent that the poor were the worst hit. The study suggested some measures that could be put in place by Government to ensure constant supply of PMS and remove some of the bottlenecks to achieving effective and adequate public passenger transport services in Ondo State.

**Key words:** Pricing crisis, MWV, GAM, PMS, pressure groups

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### **INTRODUCTION**

Nigeria, according to Corporate Nigeria (2008), is among the World's leading oil and gas producing countries. Unfortunately, it is also a nation stepped in paradox; an energy-rich country wracked by fuel and power shortages that are preventing infrastructural progress and stifling economic development. Nigeria has massive gas reserves which are flared as oil is produced on daily basis. This uncontrolled gas flaring in addition to loss of revenue to the country has altered the local climate of the immediate environment, where oil is produced.

Nigeria is one of the countries where the price of its domestic oil has been on the increase since 1970s. This is in spite of the fact that Nigeria, in addition to having three major oil refineries also imports refined products to satisfy its domestic consumption. The crisis in the downstream segment of the Nigerian petroleum sector has therefore been a major concern to most people in Nigeria. This is because the constant fuel pump price increase in the country has been traced to the inefficiencies of the nation's refineries in addition to the sabotage from

bunkerers, oil spillagers and attitude of some marketers. The effect of this on the nation's economy is constant fuel supply disruptions leading to both economic and environmental problems.

In Nigeria, there is a multiple negative effect of incessant increase in the price of crude oil on the economy. This is because whatever happens in the oil sector affects all other sectors of the economy and by implication, it affects the macro-economic policies of the country. Premium motor spirit (petrol) is needed to power automobiles which farmers and non-farmers needed to move themselves and their goods from their homes to their places of research. Similarly, petrol is needed to power generating sets in the country because electrical energy supply from Power Holding Company of Nigeria (PHCN) is not regular and has been described in many quarters as epileptic.

Thus, the irregular supply of petroleum products leads to artificial inflation in the economy. This is because goods and people are moved over a geographical space at higher cost and this impact negatively on real income which happens to be the major determinants of demand of

individuals in the country. Incessant fuel price hikes in Nigeria, seems unabated, judging by the frequencies of its occurrence. The profile of petrol price increases shows that over twenty-five of such cases have occurred between 1978 and early 2009 (Table 1). This situation has unleashed untold hardship on Nigerians and has affected prices of agricultural products as well as manufactured goods. Many people have therefore resorted to hoarding of fuel products in their houses. The consequence of this behaviour is the rampant fire outbreaks which destroy properties and lives each time there is scarcity of fuel in the country.

The foregoing review of problems seems unabated, judging by the numerous steps taken by the Federal Government of Nigeria (FGN) to nip such problem in the bud. Thus, rather than for the fuel supply to improve, the reverse has been the case. In spite of the reasons adduced for the importation of fuel by oil companies in the country, the trend has not changed for the better.

In 1965 and thereafter, crude oil production gradually assumed ascendancy in the national economy of the country replacing agricultural production and culminating in the enactment of petroleum act of 1969. This and other legislations marked a turning point in the history of

prospecting, mining, processing and distribution of petroleum products in the country. In the 1970s, Nigeria enjoyed wind falls from the sales of crude oil and was able to finance her major capital projects as stated in the 1970-74 and 1975-1980 development plans.

Today the situation has changed. The oil industry has passed through turbulent periods. In 1999, the Nigeria government decided to remove the subsidies on the production of all petroleum products. To this end, the government decided to deregulate the market price for the petroleum products as well as domestic crude oil allocation to the Nigeria National Petroleum Corporation (NNPC). This was to be done to ensure export parity that would influence local pump prices for the citizen of the country. Since then, the argument in favour of deregulation of PMS by the Federal Government of Nigeria (FGN) has not stopped

In April, 2000 the Nigerian government set up a committee to reform the oil and gas industry with a focus on deregulation and privatization of the NNPC. Under this arrangement, seven subsidiaries were to be sold including the three refineries-Elleme Petro-chemical Company and Nyson Nigeria Limited (Alabi, 2003). On 30th September, 2003 the Federal Government through the Petroleum

Table 1: Price fluctuation of premium motor spirit from 1977-2009 (price L<sup>-1</sup>)

| Year | Price L <sup>-1</sup> | Fluctuation  | Increase (%) | Decrease (%) | Type of govt in power |
|------|-----------------------|--------------|--------------|--------------|-----------------------|
| 1977 | 3K                    | -            |              |              | Military              |
| 1978 | 8.5K                  | Increase     | 183.33       |              | Military              |
| 1979 | 13.5K                 | Increase     | 58.82        |              | Mil/civ               |
| 1980 | 15K                   | Increase     | 11.11        |              | Civilian              |
| 1981 | 15K                   | Increase     | 0.00         |              | Civilian              |
| 1982 | 20K                   | Increase     | 33.33        |              | Civilian              |
| 1983 | 30K                   | Increase     | 50.00        |              | Civilian              |
| 1984 | 30K                   | Increase     | 0.00         |              | Military              |
| 1985 | 39 ½ K                | Stable       | 31.67        |              | Military              |
| 1986 | 39 ½ K                | Increase     | 0.00         |              | Military              |
| 1987 | 42K/60K               | Stable       | 6.33/51.89   |              | Military              |
| 1988 | 60K                   | Incre/stable | 42.86/0.00   |              | Military              |
| 1989 | 60K                   | Increase     | 0.00         |              | Military              |
| 1990 | 70K                   | Stable       | 16.67        |              | Military              |
| 1991 | 70K                   | Increase     | 0.00         |              | Military              |
| 1992 | #5.00                 | Stable       | 614.29       |              | Military              |
| 1993 | #3.25                 | Decrease     |              | 35.00        | Military              |
| 1994 | #11.00                | Increase     | 238.46       |              | Military              |
| 1995 | #11.00                | Stable       | 0.00         |              | Military              |
| 1996 | #11.00                | Stable       | 0.00         |              | Military              |
| 1997 | #15.00                | Increase     | 36.36        |              | Military              |
| 1998 | #15.00                | Stable       | 0.00         |              | Military              |
| 1999 | #20.00                | Increase     | 33.33        |              | Military              |
| 2000 | #22.00                | Increase     | 10.00        |              | Civilian              |
| 2001 | #26.00                | Increase     | 18.18        |              | Civilian              |
| 2002 | #30.00                | Increase     | 15.39        |              | Civilian              |
| 2003 | #40.00                | Increase     | 33.33        |              | Civilian              |
| 2004 | #49.00                | Increase     | 22.50        |              | Civilian              |
| 2005 | #52.00                | Increase     | 6.12         |              | Civilian              |
| 2006 | #64.50                | Increase     | 24.04        |              | Civilian              |
| 2007 | #75.00                | Increase     | 16.28        |              | Civilian              |
| 2008 | #75.00                | Stable       | 0.00         |              | Civilian              |
| 2009 | #65.00                | Decrease     |              | 13.33        | Civilian              |

Product Price Regulatory Agency (PPRA) announced the deregulation of the downstream sector of the oil industry in Nigeria.

Since the announcement of the deregulation of the downstream sector of the oil industry, the Nigeria economy did not witness any rapid development but an increase in pump price, smuggling and pipeline vandalization, hoarding of petroleum products and speculation that price hikes are imminent every year. This in effect, affects real income of individuals and cripples demand. This therefore affects domestic demand and reduces standard of living and by extension increases the poverty level of the people.

This portends a bad omen for a nation whose larger population depended on public passenger transport system. Therefore, the need for this study, whose major objective is to determine the impact of constant upward pump price of petrol on the public passenger transport system in Nigeria. It is significant to do this because the welfare of the economy of this nation (Nigeria) depends largely on the efficient and adequate movement of passengers including the farmers and their agricultural products between and within settlement.

**The study area:** The study area is Ondo State which was created out of former Ondo province in 1976 (Fig. 1). It is bounded by Kwara and Kogi State in the North, Edo State to the East, Delta State to the South East, Osun and Ogun States to the West and the Bight of Benin of the Atlantic Ocean to the South. The State has mangrove forest to the South, tropical rain forest in the middle and Guinea Savannah towards the extreme northern part. Agriculture is the main stay of the economy of the people

and they produce both cash and food crops. The state is primarily inhabited by the Yoruba people with a tradition of living in towns. The landmass of the State is 14,606 km<sup>2</sup> with a population of 3,441,024 (NPC). The state has Eighteen Local Government Headquarters, which wear urban status by all criteria. Other towns with urban status are also many in the State.

Following the indigenization Decree of 1977, Nigerian Government through the NNPC became the dominant player in the downstream oil sector. This was done by acquiring equity shares in all the international oil marketing companies in the country. Thus, the downstream sector which covers the processing of crude oil and natural gas, distribution and sale of oil products by extension became Government parastatals. This was not so before, indeed prior 1977, government participation in the oil sector was limited to the regulation and administration of fiscal policies.

Petrol crisis in Nigeria has been on since the early 1960s and its ripple effects is all over in the country. The research efforts which was conducted and reported here did not cover the whole country because of its size (largeness), it however reflects what obtains in most parts of the country. The perceptions of the operators of the commercial vehicles in Ondo State are similar to what obtains elsewhere as reported in the various National Dailies in the country at one time or the other. The burdens of the people during the period of fuel crisis irrespective of their geo-political zones are similar.

**Conceptual underpinning on downstream sector and review of related literature on fuel scarcity:** Deregulation is the deliberate removal of monopoly rights enjoyed by

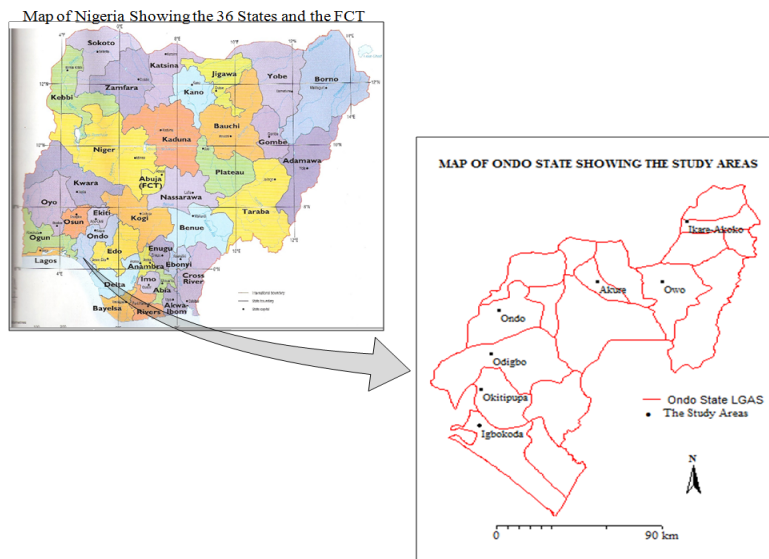


Fig. 1: Map of Nigeria

an enterprise in a particular sector of any economy. All over the world, deregulation is the driven force behind most economic activities. The main soul of deregulation initiatives, therefore is to promote competition in areas previously considered to be natural monopoly of an individual, group of people or government enterprises.

The downstream sector covers the processing of crude oil, its distribution as well as sales. While the upstream sector covers all the activities leading to the exploration and drilling of crude oil. There have been divergent opinions expressed by the public since the introduction of deregulation as government's policy to solve the oil sector problems. This is because many see the policy as a way of introducing high fuel prices by the government, while other people, however see it from the opposite angle that is a way of ending the scarcity and shortages of the product.

Deregulation according to NNPC group managing Director (NNPC News, October 2000) is a generalized word that refers to the process of transforming an economy to one that is open to all interested players and is usually driven by the market forces. He opined that deregulations are found in business and commercial practices uninhibited by government policies. This means that government is generally disengaged from planning and controlling direct economic decision or investment. Ogunade (2003) found that the root cause of shortage in fuel supply is not price but deliberate distortions in the processing and marketing of petroleum products which made distribution and sales of the products difficult. He opined further that sometimes therefore, fuel shortage sometimes could be artificial so as to create good atmosphere for upward review of prices. As a matter of fact, the excuses given by government is that fuel price is being subsidized and that if given the opportunity to increase the price, the products would be made available at no stress to consumers. However, experiences have shown that despite the constant increase in price of petroleum products the situation has not changed.

Odidison (2003) opines that deregulation would bring sanity into the oil industry since smuggling of petroleum products, vandalization of pipelines and all other vices in the sector will be totally removed. According to him, domestic price of oil will increase and the smugglers being irrational are likely to reduce their activities. Consequent upon this, the neighboring countries that rely on smuggled petroleum products would experience scarcity and as such would be forced to take the legal and normal route to buy fuel. Even though, this argument seems logical but the question still remains for how long can the system permit this before smuggling exercise re-surfaces.

Akinmade (2003) explained that the emergence of the private refineries will create a better maintenance culture of the refinery and this will likely reduce unemployment by employing both skilled and unskilled labour. They would also engage in the training of manpower in Nigeria and thereby contribute to human development in the country.

Some scholars and pressure groups in the country strongly believed and argued that deregulation of the downstream oil sector will have negative effects on the Nigeria economy. For example, Eson (2002) sees deregulation in Nigeria as not following the normal trends involving systematic removal of regular control structure and operational guidelines. He is of the opinion that deregulation might give marketers of petroleum products the opportunity to fix prices.

Deregulation which results in increase in fuel price have a multiplier effects on the economy that is the ensuing inflation would rubbish the income of the worker in such a way that greater percentage of their income would be spent on consumption. This in effect limits their ability to save and thus leads to little or no incentives to save. Apart from this loss of lives and properties are common during scarcity of petrol. During the period of scarcity, people attempt to buy petrol and keep in their houses which often lead to outbreak of fire whenever any mistake occurs. This leads to loss of lives and properties.

Apart from this man-hour productivity loss is often on the increase anytime, the price of oil is increased. This is because most of the time, the hike in price is usually met with opposition from pressure groups especially the NLC, which usually call-out its members for industrial strike and demonstration. During demonstration, looting and arson are common. This sometimes results in colossal loss to individuals, groups and institutions.

For a very long time, Nigerian Military personnel ruled the country hence, most of the price hike on petroleum products happened during their time. Oluranti (2003) affirmed that while military personnel bought fuel at the controlled prices, civilians could only buy at outrageous rates. Then, could it not be argued that the fuel crisis was encouraged by the military as part of the overall strategy to demonstrate its superiority over the civilians?

## **MATERIALS AND METHODS**

The research relies on both primary and secondary sources of information for this study. For the primary data, a questionnaire was designed to solicit response from public passenger transport operators and owners. Data needed through this process include people's

Table 2: Effects of petroleum crisis on commercial vehicle in Ondo State

| Effects   | Responses |     |    |    |                      |        | MWV   | Rank |          |
|---|-----------|-----|----|----|----------------------|--------|-------|------|----------|
|   | SA        | A   | D  | SD | -----Percentage----- | Remark |       |      |          |
| Price hike of PMS leads to increase in transport fares                    | 401       | 165 | 21 | 14 | 94.35                | 5.67   | 215.5 | 4th  | Accepted |
| Price hike of PMS leads to increase in the price of agricultural products | 347       | 201 | 39 | 13 | 91.33                | 8.67   | 208.2 | 5th  | Rejected |
| Price hike of PMS leads to hoarding at filling stations                   | 514       | 48  | 32 | 6  | 93.67                | 6.33   | 227   | 2nd  | Accepted |
| Fire outbreak result from PMS kept in houses                              | 344       | 201 | 24 | 31 | 90.83                | 9.17   | 205   | 6th  | Rejected |
| Price hike of PMS leads to long queue at filling stations                 | 526       | 39  | 26 | 9  | 94.17                | 5.83   | 228.2 | 1st  | Accepted |
| Price hike of PMS leads to developpt of black market                      | 491       | 44  | 45 | 20 | 89.17                | 10.83  | 220.6 | 3rd  | Accepted |
| Overloading of passengers are common during price hike of PMS             | 327       | 141 | 84 | 48 | 78                   | 22     | 194.7 | 9th  | Rejected |
| Long queue for boarding commercial vehicles are common during price hike  | 344       | 180 | 51 | 25 | 87.53                | 12.47  | 204.3 | 7th  | Rejected |
| Vehicles are often reduced on roads during price hike of PMS              | 297       | 202 | 81 | 22 | 83.17                | 16.83  | 197.8 | 8th  | Rejected |
| Productivity of workers reduced during hike prices of PMS                 | 241       | 271 | 40 | 42 | 85.35                | 14.67  | 189.9 | 10th | Rejected |

Group Arithmetic Mean (GAM) = 209.12

perception on the incessant increase of petrol prices, availability of the product, hoarding of fuel, keeping fuel in the house, existence of black market, causes of scarcity, queues at the petrol stations, aftermaths of scarcity etc. apart from this questions were asked on the amount people expended on fuels on monthly basis hours spent in queuing up at filling stations during scarcity. These data were required from transport owners and those who needed petrol to power their generators. Three senatorial districts of Ondo State (North, Central and South) were used as the study area. Two hundred respondents were randomly selected from the major towns in each Senatorial District. On the whole, a total of 600 questionnaires were administered through this process.

Questions were specifically aimed at determining the effects of petroleum pricing crisis on commercial vehicles and people of Ondo State. Each statement items (Table 2) had a problem highlighting the perception of the respondent on the problem. Respondent were given options-ranging from strongly agree, agree, disagree to strongly disagree from which to choose (Nwoke, 1988).

The 4-point Likert scale response was used to calculate the weight attached to each response of SA, A, D and SD. The Mean Weight Values (MWV) were calculated from these order of responses and compared with the Group Arithmetic Mean (GAM) of each group to determine whether to accept or reject a problem item as being accepted by the majority for taking a decision.

The study also relied on secondary sources of data from Nigerian Dailies, magazines and Business bulletins. The enormous information from these secondary sources also attests to the prominence which Nigerians and the press accorded this problem.

## RESULTS AND DISCUSSION

**Socio-economic variables of respondents:** The study revealed that overwhelming majority of the respondent was between the ages of 21-40 years (86.50%), while the rest are shared between the age brackets of below 20 and 41 years and above. The implication of this age group pattern as operators and owners of commercial vehicles is that economically active population is involved in transport business. In addition, these categories of people are matured in their thinking as well as in their driving career. The educational levels of these operators of commercial vehicle as revealed by this study shows that majority of respondent did not complete their secondary education (62.67%). About 14% of them said they never had any formal education. The statistics on educational levels of the respondents, though a little bit frightening, confirmed that majority of the drivers are not well educated (Table 3). Indeed 30% of respondents never attempted the final examination of school certificate educational level.

On marital status, it was discovered that most of the respondent are married (72%), while only 20.17% are still single. This result is also expected as 86.5% of the respondents are between the ages of 21 and 40 years. Table 3 shows the income pattern of the respondent based on their net gain per day. It was discovered that very few of them earn below #1000 per day, while over 61% of the respondent earn between #2000 and #6000 naira per day as net gain. On further enquiry, it was discovered that gains are more and sometimes above #6000 whenever there is a fuel shortage. The reason

Table 3: Socio-economic variables of respondents in percentages

| Variables                                 | Frequency | Percentages |
|---|-----------|-------------|
| <b>Age (years)</b>                        |           |             |
| Below 20                                  | 44        | 7.33        |
| 21-30                                     | 215       | 35.83       |
| 31-40                                     | 304       | 50.67       |
| 41 and above                              | 37        | 6.17        |
| Total                                     | 600       | 100.00      |
| <b>Marital status</b>                     |           |             |
| Single                                    | 121       | 20.17       |
| Married                                   | 432       | 72.00       |
| Separated/divorced                        | 47        | 6.17        |
| Total                                     | 600       | 100.00      |
| <b>Educational status</b>                 |           |             |
| No formal education                       | 84        | 14.00       |
| Primary education                         | 192       | 32.00       |
| Secondary education (incomplete)          | 184       | 30.67       |
| Secondary education(completed)            | 97        | 16.17       |
| Technical education                       | 43        | 7.16        |
| Total                                     | 600       | 100.00      |
| <b>Income (Net gain) Day<sup>-1</sup></b> |           |             |
| Below #1000                               | 16        | 2.67        |
| Bet. #1000-#2000                          | 83        | 13.83       |
| Bet. #2001-#4000                          | 138       | 23.00       |
| Bet. #4001-#6000                          | 228       | 38.00       |
| Above #6001                               | 135       | 22.50       |
| Total                                     | 600       | 100.00      |

behind this type of gain is hinged on the fact that passengers are charged double or sometimes triple of what the transport cost should be in addition to the fact that the drivers also carry overload. Table 2 shows the respondent's perception on the effect of incessant price increase of PMS on commercial vehicles. Ten major items which affects commercial vehicle owners and operators during fuel scarcity period were presented to the respondent to make their selection based on how they perceive each statement item.

The Likert scale was applied to analyse the response. On a 4-point scale response, the options of the respondents were summed up. About 94.33% of the respondents agreed that price hike of petroleum products leads to increase in transport fare in Ondo State. The calculated GAM shows that this statement is valid as it was accepted and ranked 4th position in the order of preference as a problem.

About 91.33% of the respondents agreed that price hike of Petroleum products (PMS) leads to increase in the price of agricultural products but this assertion was rejected based on the fact that the MWA (208.2) fell below the calculated GAM (209.12). This shows that many variables account for increase in the price of agricultural products and for us to attribute price hike of PMS as sole determinant is to say the least that we have attached too much importance to the effect of price hike of PMS to increase in the prices of agricultural products.

About 93.67% agreed that price hike of PMS leads to hoarding of petroleum products at the filling stations. This assertion was accepted as the MWV (227) value was

greater than the GAM (209.12). In the same vein, price hike of PMS is said to lead to long queue at filling stations. This was accepted as the most important effect of shortage of fuel in Ondo State. The MWV (228.2) also confirm this assertion as it was greater than the GAM (209.12). Apart from this the problem ranked 1st in the categories of the effect of petroleum scarcity.

Fire outbreaks resulting from petroleum kept or stored in the house during fuel scarcity was rated 6th position with 90.83% of the respondent agreeing that it was one of the effects. However, this effect was rejected based on the fact that the GAM (209.12) was greater than the MWV (205). Even though, it was rejected the closeness of the GAM-MWV shows the close correlation between fire outbreak and keeping fuel in the house.

Price hike of PMS leads to the development of black market. This assertion was confirmed by this study as 89.12% of the respondents agreed on this. Apart from this, the MWV of 220.6 was greater than the GAM of 209.12. In view of this analysis, it was accepted that the development of black market will lead to increase in the cost of transportation as well as have spiral effects on the economy.

Since the inception of the petroleum industry in Nigeria, oil business activities in both the upstream and downstream sectors were largely in the hands of multinationals. Specifically, before independence in 1960, oil companies such as ELF, Shell BP, ESSO among others dominated the oil exploration, exploitation, marketing and distribution activities in Nigeria. During this period, the role of the Government then was essentially that of the supervision and granting of licenses for the oil companies to operate (Eson, 2002).

It should be noted that four refineries were commissioned between 1965 and 1989 periods. The marketing companies took advantage of this developed infrastructure to purchase products from NNPC and distribute them to various service stations where final consumers get the product. The nation witnessed adequate supply of Petroleum products up till 1986. Thereafter, due to mismanagement, sabotage, harsh operating environment and high cost of Turn Around Maintenance (TAM), domestic production became low to the extent that demand within the country had to be substituted through imports.

Fuel pump price fluctuation in Nigeria which started in the 1970's became prominent in Nigeria in the 1980s. Today, the price situation is very unstable even though, the official price is said to be pegged at #65 L<sup>-1</sup>, the reality is that most petrol dealers sell at between #80 and 120 L<sup>-1</sup> depending on the part of the country from where you are purchasing the oil. In some of the Northern states,

petroleum products are not sold in the filling stations. What obtain are the sales of these products into jerry cans along the major routes to cities, tanks and sometimes drums. The question is what is Federal Government doing about the situation. According to Agboyi (2009), marketers sell fuel at #100 L<sup>-1</sup>, while petrol attendant collect #200 minimum before selling the product. This according to him is illegal and capable of truncating the democratic rule, if the Government does not move to stabilize things.

Selling of fuel in jerry cans, drums and tanks are not common in the southern part of the country unless there is scarcity of petrol in the country. Once there is scarcity, the products are sold in jerry cans, drums and tanks in secrecy and not in the open as done in the northern part of the country except in few cases.

The scarcity of the commodity has made everybody to buy the fuel irrespective of the amount as well as point of purchase. According to Ayankola *et al.* (2009), the scarcity of fuel was strategically coordinated to muzzle the Nigerian citizenry to a point that their concern would shift from the cost of the product to a desperate desire for it irrespective of price. This has made shalock fuel marketers to make triple gains, while vehicle owners suffer untold hardship.

**Causes of fuel crisis in Nigeria and its impact on the economy:** It was a little bit difficult using the questionnaire to solicit responses from the transport operators to answer questions on the causes of fuel scarcity in their environment. This is probably because of their level of education as 76.67% of the respondent have below secondary education and as such could not differentiate between the options before them. However, the secondary sources of data collection vividly addressed this issue. The causes of fuel scarcity in the country have appeared in the Daily News in Nigeria more than any other apart from the political News. This was because of the incessant hike in the price of fuel that has generated controversies and in some cases led to industrial actions by various pressure groups in the country.

**Irregular maintenance of the refineries:** In Nigeria, there is irregular maintenance of the refineries termed Turned Around Maintenance (TAM). In most cases, the refineries are over used before the TAM is carried out. It takes several months or years before they are actually carried out. This makes the facilities in the refineries to be over used resulting in the total breakdown, fuel scarcity and black market and increase in pump price of fuel. This affects the poor and the rich as inflation sets into the economy because the end users of PMS bear the brunt (Tinuola, 2002).

**People's perception of state owned enterprise:** The Nigerian National Petroleum Corporation (NNPC) is a state owned enterprise that is little guided by the principle of economic pricing. Similarly, being a parastatal of government, it is influenced by political considerations in the choice of labour recruitment and distribution of refined petroleum products. By implication, this often results in inefficient management, corruption and fraudulent practices which made PMS to be scarce. The transporters are forced to buy fuel from black markets and the passengers are made to pay higher fares.

**Smuggling of petroleum products:** It is equally observed that large scale smuggling of petroleum products is enhanced partly by the government officials and to a large extent by the smugglers who contribute to the persistent fuel crisis in the country. According to Ojo (2001), about 20% of the fuel (PMS) for domestic consumption is smuggled out of Nigeria to neighboring countries. According to him, the occurrence of this phenomenon is explained by the relatively high prices paid for the petroleum products by Nigeria's neighbors. This trend continues because, it is profitable to sell to neighboring countries who are always ready to pay more for the product. This trend contributes to the scarcity of PMS in the country and by extension the suffering of the people.

**Pipeline vandalization:** Some Nigerians vandalise pipeline in order to steal refined petroleum products which they sell to motorist. This attitude of some unpatriotic Nigerians is on the increase despite all measures put in place to check this attitude of sabotage. In some situation, when pipeline are vandalized, the supply of PMO to petroleum depots is cut-off. When this occurs, it causes artificial scarcity as the depots would be forced to depend on fuel tankers to lift PMO. This vandalization acts also waste fuel because spillage will occur on land and within the land leading to environmental pollution (Peter, 2003).

There have also been persistent violent attacks on oil facilities and on oil workers by oil producing communities (including Niger-delta militants). This also disrupt the regular supply of petroleum products as the researchers in the oil industries are afraid of being killed or kidnapped by the irate Ijaw youths and militants.

**Strike by oil workers:** Strikes by workers are common means by which they collect some of their entitlement from their management. The two major unions which the workers of the oil industry belong to are National Union of Petroleum and Natural Gas (NUPENG) and Petroleum and Gas Association of Nigeria (PENGASSON). Whenever they call out their members to embark on strike,

they stop lifting and distribution of petroleum products. In a matter of days, fuel supplies to people are cut-off and activities of individuals and government are paralyzed. This type of strike has been found to create partial collapse of the country's economy each time it occurs.

**Pricing of petroleum products:** The genesis of increase in the pricing of petroleum products could be traced to the regime of General Olusegun Obasanjo. Since then hike in price of petroleum products has been on. It is on record that hikes in petroleum products was more pronounced during the military era then during the civilian period (Table 1). In 1978, General Obasanjo's regime hiked the price of fuel from 8.5-15 kobo. Since then, subsequent administrations have continued this trend, while hiding under one excuse or the other for their actions. Table 1 shows the prices of PMS from 1977-2009 under different administration (military and civilian).

**Continued shut down of the Nigerian national petroleum corporation depots in Enugu and Aba:** One major reason why scarcity of petroleum products persist is because of incessant shut down of oil depots. Reason adduced by government for taking this type of actions is that some unscrupulous people vandalise the pipeline carrying petroleum products from Port Harcourt refinery to Aba and Enugu depots. This problem has been noted in the past. According to Agboyi (2009), the Federal Government of Nigeria in 2007 lost #5.9 billion daily to pipeline vandals. Similarly, death arising from oil pipeline exploitation was put at over 2000. For instance, in 1998, leaking fuel from a vandalized pipeline in Jesse town, Delta state, burst into flames, killing over 1000 people reportedly scooping oil from damaged pipeline.

The implication of pipeline vandalism is acute shortage of petroleum products in the south-east area where Enugu and Aba depots are located. For the past four years that the depot has been shut, there were products that were meant for Enugu depot but never reached them. The question which therefore remained unanswered is where are those products? According to Agboyi (2009), the products were sold to friends of the NNPC officials who have private depots/dumps where they sell at high-cut throat prices. The closures of the two depots were therefore encouraged because some people are benefiting from this type of activities. What remains more disturbing is that the NNPC maintains that the Enugu and Aba depots would remain closed until community and political leaders from the south-east zone make a firm commitment to protect the pipelines that supply petroleum products to the two depots (Agboyi, 2009). According to him, the last time the pipeline was

repaired, about 32 million liters of the products was pumped but the next day, the vandals broke the pipes and stole over 11million litres of the products. According to NNPC officials, many of the security agents deployed along the route covered by the pipeline to keep the vandals at bay, colluded with them (vandals) to break the pipeline and siphon the product hence, the option of using security means to police the pipeline is also controversial.

**Sabotage by marketers:** Officials of petroleum marketers have been noted to divert petroleum products meant for some states to private hands and far away from the states for which they are meant. For example, 150 truck load of fuel allocated to the Independent Petroleum Marketers Association of Nigeria (IPAN) disappeared in Ore depot and this triggered a serious crisis among members of the association (IPAN).

Federal government allocated the fuel to IPAN in order to alleviate the fuel scarcity in three states (Ondo, Ekiti and Osun) but was diverted by two members of the executive of the association (IPMAN,2009). According to IPMAN (2009) those behind the diversion would make #70.2 million, if the product is sold at the control price of #65 L<sup>-1</sup>. The executive of the IPMAN was therefore dissolved and a petition had been made to the Economic and Financial Crimes Commission (anti-graft agency) by some aggrieved members of IPMAN in Ore depot. The implication is that the people living in the three states have been deprived of their share of allocation which further strengthens the scarcity in the states. This in effect makes buyers to continue to buy from black market at high prices.

## CONCLUSION

One of the major aftermaths of fuel scarcity to Nigerians is the hardship that it creates in the system. Buyers of the products spend hours getting the products depending on the level of scarcity and when the scarcity starts. The following are therefore recommended based on the findings of this research effort. Government should get all the four refineries working and mandate the oil companies involved in oil exploration to be involved in oil refinery before deregulating the downstream sector.

Government should set machineries to check the smuggling of refined oil across the borders. All filling stations should be made to have dedicated section to commercial vehicles whenever there is fuel scarcity. This will enable these vehicles to provide the necessary services for the poor and not too rich people who may not want to pass through the stress of getting fuels during the period of scarcity.



Sales of oil should be restricted to filling stations only. The use of jerry cans, drums and tanks for selling fuels should be prohibited. It was observed that incessant price hike of PMS was more during the era of the military without notice whereas it was not so during the democratic rule. As much as possible, democratic government should be promoted in the country because directives are not just imposed unless it is debated in the House of Assembly

There should be regular turn around maintenance of the refineries. Government should not wait until the refineries breakdown before TAM is carried out. Government should close down erring private depots since they have been found to constitute avenues, where PMS are sold as black markets. Nigerians need to be re-orientated to be more patriotic and put the country first in all they do. Vandalising oil pipeline in order to scope oil for sale is an act that is unpatriotic and should stop.

The militants parading the Niger Delta Regions and holding oil workers to ransom should be checked. This should be seen as economic sabotage to the nation and should not be condoned.

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