

UNETHICAL MARKETING PRACTICES BY PETROLEUM MARKETERS IN NIGERIA

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ABSTRACT: *The study focused on unethical marketing practices by petroleum marketers in Nigeria. It was motivated by the reported cases of manipulations of prices and products by dealers of petroleum products in the market. The objectives of the study were to: examine the effect of unethical pricing by petroleum marketers on motorists in Nigeria; and determine the correlation between fuel adulteration by marketers and the rate of cars/vehicles' engines damages in the country. Survey and desk research designs were adopted, hence, both secondary and primary data for the analysis. The area of study for the desk research was based on two geographical structures of the country as North and South, where some States were selected for the study; while Calabar the capital of Cross River State was used for the primary data. From a population of 2,500 motorists that patronize 10 selected filling stations regularly in Calabar, a sample size of 333 was determined at 5 percent margin of error and 95 percent level of confidence. The statistical tools of chi-square and correlation coefficient were used to test the hypothesis. The findings indicated that: unethical pricing of petroleum by marketers had significant negative effect on motorists in Nigeria, and fuel adulteration by marketers significantly affects the rate of cars/vehicles' engines damages in the country. Based on this, the study recommended that relevant law enforcement agencies should improve on their monitoring and enforcement efforts geared towards checkmating unethical marketing of petroleum products in Nigeria.*

KEYWORDS: Unethical Pricing, Fuel Adulteration, Petroleum Marketers, Nigeria.

INTRODUCTION

Empirical reports from Nigeria's petroleum regulatory agencies and other sources point to a high level of unethical practices of petroleum marketers in the country. According to the DPR, the department has been inundated with complaints from the public on the arbitrarily fixing of petrol prices above the government approved rates by marketers and perennial incidences of fuel adulteration in the country over the years, causing deaths, deformities and incalculable damages to consumers of the petroleum products in the country.

Only in 2012, the Department of Petroleum Resources (DPR) sealed 294 filling stations for various offences in Lagos (NAN, 2012). This was also accompanied with series of sanctions on several petrol stations in other states for selling above approved pump prices and adulteration of petroleum products (May, 2015; NAN, 2015; Naija.com, 2014).

According to a DPR (2014) report, the nation's petroleum products market is currently flooded with adulterated products, Department of Petroleum Resources (DPR), admitted on Thursday, July 25, 2014. Products like Premium Motor Spirit (PMS), also known as petrol, and Automobile Gas Oil (AGO), or diesel, are commonly used for domestic and automobile, and their adulteration usually causes explosion that result in social and economic catastrophe said the report. Again, the Director-General, Standards Organisation of Nigeria (SON), Dr. Joseph

Odumodu, said a nationwide sampling conducted by SON on Petroleum products showed a high level of adulteration at different levels of distribution.

For instance, In 2007, following the reduction of the pump price of petrol to N65, while the street price of kerosene dangled between N140 to N150, many unscrupulous marketers started mixing kerosene with petrol, leading to kerosene explosion in many parts of the country, as witnessed in Port Harcourt, Potiskum, Lagos, Lokoja, Delta, Kano, Abuja and Abia State respectively. In the process many Nigerians met their untimely deaths, while hundreds sustained indelible injuries (Gistmania, 2007).

A similar case was witnessed in 2009, when a family of six members in Kano State was hospitalized following an explosion from adulterated kerosene (Ogun, 2010). Then, in 2011 kerosene explosions occurred almost at the same time in Rivers and Edo states of the south-south zone of Nigeria. The explosions killed many and either incapacitated or disfigured other permanently (NAN, 2011).

This unethical marketing has gone unabated by petroleum marketers. One thing is certain, their actions is not in the spirit of marketing which revolves on the satisfaction of consumer's wants and needs, with the aim of maximizing profit, while advocating society's long term best interest (Osondu, Damilola & Austin, 2011; Ebitu, 2015).

The interests of the society have not been upheld and either had the Nigerian populace, derived optimum satisfaction from the activities of the petroleum marketers. It is the pervasive nature of the study that makes it imperative to examine the ethicality of marketing practices by marketers with emphasis on pricing and adulteration of petroleum products and the consequent effect on motorists and cars/vehicles' engines damages in Nigeria.

Objectives of the study

- 1) to examine the effect of unethical pricing of petroleum products by marketers on motorists in Nigeria.
- 2) to determine the correlation between fuel adulteration by marketers and the rate of cars/vehicles' engines damages in the country.

Unethical Pricing of Petroleum Products in Nigeria: A Desk Research

Empirical reports from Nigeria's petroleum regulatory agencies and other independent sources point to a high level of unethical pricing of petroleum products in the country. The Department of Petroleum Resources (DPR) has always threatened and often met its warnings to clamp down on any petrol filling station engaged in such malpractices. According to the DPR, the department has been inundated with complaints from the public on the arbitrarily fixing of petrol prices above the government approved rate. Such actions of the marketers, said DPR (2015), negate the rules of engagement, stressing that it would sanction any outlet that indulged in these illegal acts (Adams, 2015). Hence, a desk research by this author in selected States from various parts of the country attests to these malpractices as follows:

Akwa-Ibom State

On 9th November 2015, the apex petroleum products regulatory agency in Nigeria, the Department of Petroleum Resources, DPR, sealed 35 petrol stations in Akwa Ibom for selling above N87 per litre (May, 2015). The DPR Operations Controller in the state, Mr. Asuquo

Antai, said in an interview with the News Agency of Nigeria (NAN) in Eket that, the stations were sealed in Uyo, Eket, Ikot Abasi and Nsit Ubium. The retail outlets were caught selling above N87 pump price during a DPR unscheduled inspection. The DPR vowed to continue the monitoring until all the filling stations comply (May, 2015). Following this development, members of the Independent Petroleum Marketers Association of Nigeria (IPMAN) in the state made a commitment to the DPR to sell petroleum products at approved prices. NAN (2015) reports that petroleum marketers in the state had in the last one month sold fuel at between N105 and N120 per litre, attributing the increase in price to scarcity of the product.

Cross River State

In Cross River State, the Department of Petroleum Resources (DPR) in August 2015, shutdown five petroleum depots in Calabar for selling Premium Motor Spirit (PMS) above the ex-depot price per litre. Speaking on Channels Television, Mr Asuquo Antai, DPR's Controller of Operations in charge of Cross River and Akwa Ibom, said, the depots have been suspended from loading products to marketers, for selling above the ex-depots prices stipulated by government. He further warned other depots in Calabar against dispensing or selling PMS above the official price, stressing that the wrath of the law would catch up with any one of them found culpable (Antai, 2015).

Kwara State

Again, the Department of Petroleum Resources (DPR) in Kwara on 12th September, 2015, sealed five fuel stations over diversion of petroleum products, over pricing, illegal operations and adulteration (Naija.com, 2015). The Controller of DPR in Kwara, Mr Amos Jokodola, ordered the closure of the stations during an unscheduled visit to the stations. The outlets were Bollyma Petrol station on Ilorin-Jebba road which was sealed for suspected diversion of 22,000 litres of petrol, Olutola petrol station on Ajase-Ipo road, Ilorin, shut over suspected diversion of 33, 000 litres of petrol, and AB Lawal Petroleum Station on Erin-Iie-Offa road sanctioned for selling at N120 per litre. Others were Kareinat Petrol located on Ira-Offa road for operating without DPR Licence and Rafmore Petroleum on Erin-Iie-Offa road over suspected product adulteration (Naija.com, 2015).

Jos, Plateau State

On Tuesday September 19, 2014, the Department of Petroleum Resources (DPR) sealed two filling stations in Jos, Plateau, for diversion of products. Shehu Yusuf, Head, Retails, Outlets and Marketing of the department of DPR, disclosed this to the Newsmen in Jos. He said the two stations were NIPCO at Bauchi Ring Road and E. O. Eze and Brothers in Rukuba (Naija.com, 2014). Yusuf said that the premises were sealed as deterrent to other marketers indulging in the act and to save motorists the agony of unethical practices from the marketers. NAN also reports that some stations own by the Independent Marketers were yet to sell the product while others sold at black-market price of between N120 and N130 per litre (NAN, 2015).

Sokoto and Kebbi

Again, according to the NAN (2015), the Department of Petroleum Resources (DPR) said it sealed six independent marketers' filling stations in Sokoto and its environs in October 2015 for various offences. The Zonal Operations Controller of the Department in charge of Sokoto and Kebbi states, Alhaji Mohammed Makera, disclosed this to newsmen in Sokoto shortly after

a DPR raid on some filling stations in the two States. Makera said that five of the filling stations were sealed for selling petrol above the official pump price of N87 per litre and fined N100,000 each. The remaining filling station was sealed for hoarding and fined N200,000. According to the DPR all the sealed filling stations would not be reopened until they write an undertaking to sell petroleum products at the government-approved pump prices. The DPR warned the marketers against contravening the government regulations, vowing to duly sanction any erring filling station in the two states. Recently the Sokoto State has been experiencing shortage of petroleum products with many filling stations closed down leading to hike in the pump price by some station owners who still have the products (NAN, 2015).

Maiduguri, Bornu State

The Department of Petroleum Resources (DPR) sealed five petrol filling stations owned by some independent marketers recently in Borno, for allegedly selling petrol above the regulated price. Mr Waziri Wadai, the Public Relations Officer of the DPR, announced this after closing them down, alleging that they sold PMS at N100 and N120 as against the approved N87 per litre. The News Agency of Nigeria (NAN, 2015) reports that fuel were selling for N1,600 black market price in filling stations that refused to sell at government's official pump price. This was due to fuel scarcity that hit Maiduguri following what many described as a complete act of sabotage to the Buhari administration by filling stations operators in Maiduguri (Naija4life, 2015).

Lagos

In the South-West, the Department of Petroleum Resources (DPR) says it sealed 294 filling stations for various offences in Lagos in 2012. Mrs. Belema Osibodu, an Assistant Director (Public Affairs) in the DPR, disclosed this to the News Agency of Nigeria (NAN, 2012) in Lagos on Tuesday. NAN (2012), said that the stations were sealed for under dispensing and hoarding of petroleum products, among others, adding that the offenders were handed over to the police for prosecution. Mr. Gbenga Koku, the DPR Acting Operations Controller in Lagos/Ogun Zone of DPR, expressed worries over unwholesome practices of some petroleum dealers. He expressed regret that some dealers still engaged in sharp practices, even when petroleum products were available, informing that the DPR was intensifying efforts to curtail fuel adulteration and under-dispensing of petroleum products by dealers. On the number of those convicted, he said that the department could not immediately provide the details because those held were handed over to the police for prosecution.

According to Naija.com (2012), that monitored the sale of petroleum in Lagos, most of the filling stations deliberately shut down to hoard their products. For instance, from Berger Bus Stop to Fadeyi area along the popular Ikorodu road, only Conoil at Onipanu and Oando at Fadeyi were open and selling petrol to motorists. The other filling stations along the road which include Total oil at Fadeyi, Oando in Berger, Oando in Anthony, Conoil in Onipanu and MRS at Onipanu were all shut (Naija4life, 2012). The News Agency of Nigeria (NAN, 2011) also found that at Ilasamaja, a suburb of Lagos, most petrol stations in the area were selling at between N110 and N120 per litre contrary to the official price of N97 per litre.

However, some of the petroleum marketers said that the current N97 per litre official pump price of petrol was no longer realistic. That the cost of lifting and transporting the product to petrol stations if added to the official price of lifting the product will add-up to an amount over N97. Hence, to sell a litre of petrol at the official N97 will mean selling at a loss.

Rivers State

Marketers of petroleum products in Port Harcourt, Rivers State, were also recently warned by the DPR against sale of adulterated products. Handing down the warning at a meeting between marketers of the products and Directorate of Petroleum Product, DPR, the latter said it had noted the tendency on the part of marketers to make high profit through sale of adulterated products and adjustment of pumps prices (NAN, 2015).

Rate of Fuel Adulteration in Nigeria

According to the Director-General, Standards Organisation of Nigeria (SON), Dr. Joseph Odumodu, a nationwide sampling conducted by SON on petroleum products showed a high level of adulteration at different levels of distribution. He said that the monitoring and testing of the products had been on for six months, beginning January 2015. Indeed, this is a step in the right direction, though belated. Belated in the sense that several explosions caused by adulterated petroleum products such as fuel, diesel, gas and kerosene had been recorded in this country, most of which claimed lives and properties of the citizens. The Nigerian economy through a deliberate utilisation of human and materials resources and services in the exploration, development, exploitation, transportation and sale of crude oil and gas resources cannot compromise quality, health, safety and environmental standards (NAN, 2015). The consequences of adulterated fuel, diesel and kerosene are enormous and have been suffered by many in this country. Such consequences dip into the negative and the acts remain unchanged. Many people are not mindful of the devilish effect of petroleum adulteration because they want to make quick money (Odumodu, 2015). Meanwhile, some members of the Major Oil Marketers Association of Nigeria (MOMAN), admitted recently that aside from shortages and lack of patriotism, greed is the major reason for fuel adulteration and other petroleum products in Nigeria (Uzor, 2011).

Price Discrimination by Independent Marketers in Nigeria

Price discrimination occurs whenever there are unjustified price differences for the same product sold by a single seller. This is common during fuel scarcity in Nigeria where a seller sells fuel at different prices to different customers in order to maximize profit. It is seen as the practice of offering attractive discounts to some customers but not to others for the same product (Kotler & Armstrong, 2007). McAfee (2008) states that, price discrimination prevails when three conditions are met when consumers differ in their demands for a given good or service, when a firm has market power, and when the firm can prevent or limit arbitrage. Premium pricing is an example of pricing discrimination often experienced in the Nigeria petroleum market. It is a situation where consumers are charged with different prices for similar goods. In this example, consumers pay a premium for slightly more expensive options (Pittinger, 2013).

Against this background, it is evident that price discrimination hampers competition in the Nigeria petroleum marketing sector. During the fuel scarcity of 2012 in Nigeria, through personal experience I discovered that filling stations sold petrol at ₦110 to 140 per litre instead of the official price of ₦97, while kerosene was sold at ₦120 to ₦150 a litre instead of ₦50. These are some unethical practices that need to be addressed.

Customer loyalty is influenced by many factors including quality of product and customer trust. Peppers and Rogers (2005), Moven and Minor (1998) in Basil, Sunady, Anyadighibe and

Edward (2014), opined that creating loyal customers is at the heart of every business and that brand loyalty is directly influenced by satisfaction / dissatisfaction with the brand that has accumulated overtime as well as perceptions of the product quality. In other words, an adulterated product cannot withstand the test of time. Adulterated products may give rise to customer's dissatisfaction and this can contribute to consumerism. Consumerism is the latest development in consumer awareness and insistence on, their rights as consumers' lack of satisfaction from use of goods and services (Ebitu, 2014).

Omenazu (2010) in Igewere and Obaki (2011) noted that "the Nigerian consumer remains one of the most exploited in the global village". According to Agbonifoh, *et al.*, (2007), the emergence of consumerism in any society at any particular point in time is always occasioned by a number of precipitating factors including the implementation of the societal marketing, concept which advocates that the health and wealth of the society (consumers) must be taken into consideration in the quest for profits by manufacturing and marketing companies.

Effect of Adulterated Fuel on Consumers and Engines

Muralikrishna and Venkata (2006), reports that the increased tail pipe emissions of hydrocarbons (Hc), carbon monoxide (Co), oxides of nitrogen (Nox), particulate matter (Pm) can cause emission of air toxin substance. For instance incessant consumption of adulterated PMS by vehicles could affect the efficacy of engine parts, the emissions from these vehicles are extraneous to the atmosphere. It is harmful to the survival of habitats. It causes health problems directly in the form of increased tail pipe emissions of harmful and sometimes carcinogenic pollutants. The diversion of kerosene to the diesel sector for adulteration which is eventually used for biomass as domestic fuel in turn leads to health problems of various types due to indoor air pollution.

Adulteration of petroleum products has caused a great loss of revenue to motorists in Nigeria. Explicitly, various estimates have been made on the department of financial loss to the nation's gross domestic product (GDP) as well as the oil companies as a result of diversion of kerosene which is mixed with petrol and diesel. Nonetheless, it is rational to distribute the right quality fuel in order to achieve the targeted emission from machines. Unethical marketing practices have not only caused consumers their money but also their lives in several cases in Nigeria (Ijewere & Obeki, 2011).

Marketing Ethics and Practices by Petroleum Marketers in Nigeria

Marketing ethics is concerned with the application of ethical consideration to marketing decision making (Siham, 2013). Ethics in marketing can also be considered as a moral judgment and behaviour standards in marketing practices or moral code or system in marketing area (Gaski, 1999) in (Siham, 2013). Marketing ethics is the research of the base and structure of rules and conduct, standards and moral decision relating to marketing decision and practices (Blodgett, Lu & Ross, 1999) in Siham (2013). The study of Aluko, Gbadamosi, Odugbesan and Osuagwu, (2012) revealed that society expects reasonable ethical conduct on the part of business executive as they make decisions that affect the lives of other people. Moral standards are expected from businesses.

Therefore, marketing executives who take strategic decisions are often faced with ethical conditions and their decisions are related to all sides of marketing mix as product, price, place and promotion (Ralla, Palli, Szeinbanch & Vitell, 2000) in (Siham, 2013). Ethics, with its

various branches, is the major type of practical disciplines that tries to help us decide on how one should act not just in order to attain a given objective or objectives but, rather, all things considered (Elegido, 2009). The need for ethics arise from the desire to avoid real-life problems, it does not address issues of what you should or should not believes, instead ethics deals with principles that guide human behaviour (Brooks & Dunn, 2010). Moral and ethics fall within the disciplines of axiology, a branch of philosophy, that deals with the theory of human values (Etuk, 2008). In that same vain, Osondu, Damilola and Austin (2011) opine that ethics covers both internal and external relation of an organization which studies people rights, duties and moral rules that people apply in many decisions.

Ebitu (2015), asserts that ethics has been broadly and simply defined as the study of how individual or group decisions affect other people. While Cole (2002) in Ebitu (2015) added that ethics is a set of moral principles or values used by organizations to steer the conduct of the organization itself and its employees, in all their business activities in relation to the outside world. Having reviewed literature, and in my opinion ethics is knowing and imbibing the habit or attitude of doing the right thing at the right time considering interest of the people and the society at large. In other words, a business should not be selfish by trying to maximize profit without considering the interest of society; as done by most of the petroleum marketers in Nigeria.

Other studies on ethical and unethical dimensions of marketing in the petroleum industry in Nigeria, revealed that adulteration of petroleum has been the order of the day in Nigeria today (Udeagbara, Ojeh & Anusiobi, 2014). According to them, petroleum products such as kerosene, diesel and gasoline were tested. It was discovered that the properties varies. This variation in the properties has being causing more than harm than good in Nigeria. The knocking in automobile engines, the fire outbreak in different petroleum product sales outlets, and homes are all as a result of adulteration. Several other studies have proven that the primary factors stimulating these practices are the existence of differential pricing mechanisms of petroleum products, and easy availability of adulterants in the market. For instance, the price of diesel in Nigeria is higher than kerosene which in turn is priced higher than gasoline. At times, scarcity of products can reverse the prices thereby stimulating people into adulterating gasoline with kerosene. This practice is illegal and unethical because of the negative effects it poses on the environment.

In the study of Adegunodo (2013) it revealed that the trends in petroleum products' pricing in Nigeria have a long history beginning from the military era 1973 to 2012. The price kept fluctuating from year to another. The study discovered that government will incur low social cost if prices of PMs and DPK were raised, and advised that subsidy on household kerosene and gasoline should be reduced. Siham (2013) in his study discovered that pricing decision is seen as the most significant variable at 37.5% among other unethical marketing practices. Marketers are advice to manage ethical risks associated with marketing activities.

Also, the study of Lawal (2011) showed that major sources of adulteration were deliberate and inadvertent sources. In the case of deliberate sources, often times, blames had been trade between the NNPC, petroleum product marketing company (PPMC) and the dealers with each body passing the bulk. Recently, officials the National Union of Petroleum and Gas Workers (NUPENG) confirmed that some major dealers mix kerosene with other products in various proportions to obtain the product a higher monetary value and in high demand to make abnormal profits (Udeme, 2011) in Lawal (2011). It was also added that the petroleum and Natural Gas Senior Staff Association of Nigeria (PENGASSAN) reported that, some marketers

adulterated products in their talk farms (Ogun, 2010) in Lawal (2011). Okpara in Tide (2013) opine that oil and gas companies should now renew their commitment of quality production as that would to build their market strategies and save the public from hazards.

Study of Udeagbara, Ojeh and Anusiobi (2014) showed that some petroleum products like kerosene petrol and diesel are sometimes adulterated. It was observed that the properties in the adulterated petroleum products varies. This variation in the properties has been causing more harm than good in Nigeria. The knocking in automobile engines, the fire outbreak in different petroleum product sales outlets and homes are as result of adulteration.

In their own study, Osueke and Ofondu (2013), also found that adulteration of petrol and diesel fuel with kerosene is very common in Nigeria. This they said increases the tailpipe emissions of harmful pollutants from vehicles. From many filling stations, they collected samples of diesel, petrol and kerosene. The samples bought were prepared in different ratios by volume and stored in different containers. The analysis showed that petrol and kerosene were mixed in: 100:00, 80:20, 70:30, 60:40 and 50:50 ratios. Likewise diesel and kerosene were prepared in: 100:00, 80:20, 70:30, 60:40, 50:50, 40:60, 30:70 and 20:80. Figure 1 below also shows the dangers posed to cars, generating sets, etc., and the variation in PM emission as a function of kerosene added to petrol by fuel marketers in Nigeria.

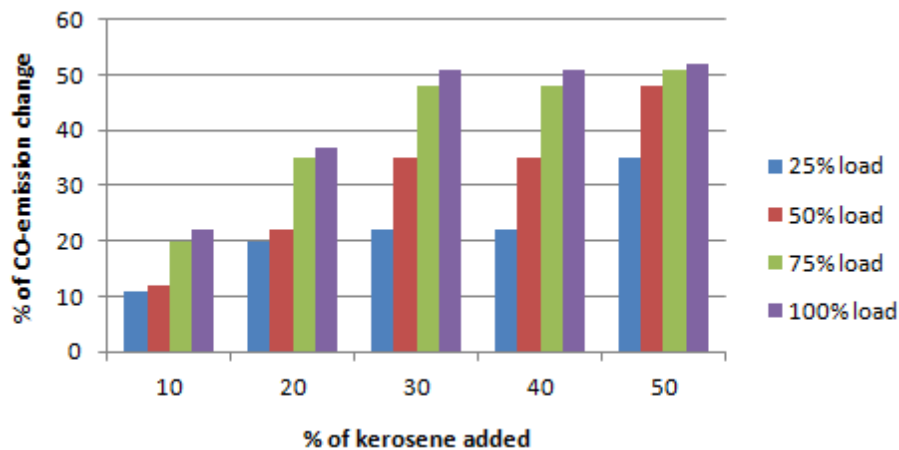


FIG. 1: Dangers posed to cars, generating sets, etc., and the variation in PM emission as a function of kerosene added to petrol by fuel marketers in Nigeria.

Source: Osueke, C. O. and Ofondu, I. O. (2013), *Fuel Adulteration in Nigeria and its consequences. International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS Vol: 11 No: 04, p.32.42.*

RESEARCH METHODOLOGY

The study adopted survey and desk research designs, to critically examine unethical marketing of petroleum products in Nigeria and the consequent effect on consumers, especially motorists and cars/vehicle engines. Specifically the study was limited to unethical pricing and adulteration of petroleum products. Taking cognizance of the time factor, availability of funds,

precision required and other limitations involved, The primary data sources was restricted to filling stations and motorists in Calabar.

Area of the Study

Taking cognizance of the time factor, availability of funds, precision required and other limitations involved, the primary data sources was restricted to filling stations and motorists in Calabar, Cross River State. For the desk research, the area of study was based on a North-South geographical dichotomy of the country, where some States (Akwa-Ibom, Cross River, Kwara State, Plateau State, Sokoto, Kebbi, Bornu State, Lagos State and Rivers State) were selected for the study, due to the prominence of the problem under study in these States.

The study has a working population of 2,500 motorists that regularly patronize 10 selected filling stations in Calabar. This filling station include: Total, Mobil, Conoil, Tonimas, NNPC Station, Northwest, Udensco, Uddy King, Basol Petroleum, Exceltech. A sample size of 333 was however arrived using the Taro Yamane from the working population of 2,500 motorists. A non-probability technique of purposive or judgmental sampling was used in distributing the questionnaire copies. This questionnaire was designed using a Likert 5-points scale. The data were presented in Likert 5-points scale, while the statistical tools of Chi-Square (X^2) and correlation coefficient were used to test the hypotheses.

Data Presentation and analysis

333 copies of the questionnaire were distributed to the target respondents, but only 301 representing 90.39% were returned. This was because some of the illiterate tanker drivers shied away from answering the questions. The demographic information of the respondents shows that 78% of the respondents were male, while 22 percent were female. 40 percent were in the age bracket of 21 - 30yrs, 30 percent were between 31 – 40yrs, 25 percent were in the age range of 41-50yrs, while 5 percent were 51 years or above.

The academic qualifications of the respondents shows that 10.01 percent of the respondent had only first school leaving certificates, 59.66 percent had First Degrees or its equivalents, while 30.33 percent had Masters or Ph.Ds. 49.33 percent of the respondents were civil servants, 20.66 percent were taxi drivers; 22.67 percent were long-distance transporters, while the remaining 7.34 percent were tanker drivers. Figure 2 below gives the graphic picture of their occupational distribution.

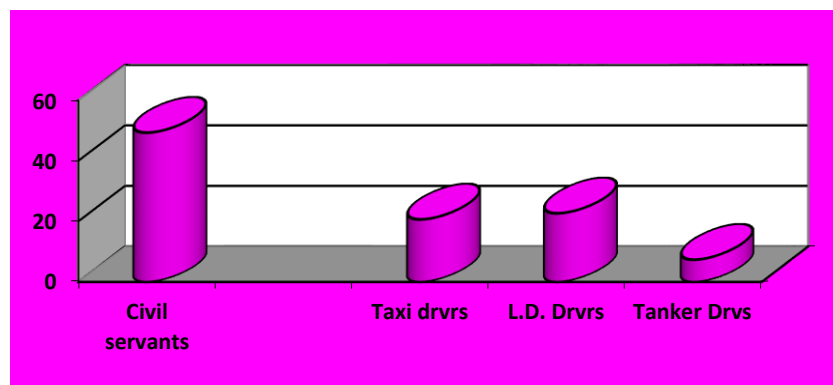


FIG. 2: Respondents occupational distribution.

Tests of Hypotheses

This part is based on Likert's 5-points scale, where the extreme value Strongly Agree (SA) is weighted 5-points, while the lowest values in the ranking order Strongly Disagree (SD) is weighted 1 point.

Test of Hypothesis One:

Ho: Unethical pricing of petroleum products by marketers does not have significant negative effect on motorists in Nigeria.

Hi: Unethical pricing of petroleum products by marketers have significant negative effect on motorists in Nigeria.

Test Statistics = Chi-Square (X^2)

Test Table 4.1 for Hypothesis 1

S/ N	Unethical Pricing	Effect on motorists in Nigeria					X^2	p-value
		SA	A	Und	D	SD		
1	Price manipulations by petroleum marketers affect you as a car owner or motorist in Nigeria quite negatively	117(42)	133(59)	21(23)	25(84)	5(93)	645.9	P< 0.05 Significant
2	As long as there is fuel availability, you do not mind illegal adjustments of pump prices at petrol filling stations in Nigeria	4(42)	23(59)	25(23)	112(84)	137(93)		
3	Unethical pricing of petroleum products by independent marketers do not have significant negative effect on motorists in Nigeria	5(42)	22(59)	23(23)	115(84)	136(93)		

Degree of Freedom = 4. Hence, Critical Chi-Square at 5% Margin of Error = 9.49

Source: Field survey, 2015.

DECISION

Since the calculated chi-square [$X^2_{cal} = 645.9 > t_{0.05} = 9.49$]. is greater than the critical value at 0.05 level of significance, we hereby reject the Ho and accept the Hi which says that: "unethical pricing of petroleum products by marketers have significant negative effect on motorists in Nigeria."

Test of Hypothesis Two:

Ho: There is no significant correlation between fuel adulteration by the marketers and the rate of cars/vehicles' engines damages in the country.

Hi: There is significant correlation between fuel adulteration by the marketers and the rate of cars/vehicles' engines damages in the country.

Test Statistics = Spearman Correlation Coefficient

Table 4.2: Respondents answers to research objective two

S/N	Issues	SA	A	In d	D	SD
4	Adulteration of petroleum product by dealers is very rampant in the country	78	71	68	55	29
5	Cars/vehicles' engines are often damaged by adulterated product.	55	83	96	48	21

Source: Field survey, 2015.

Test Table 4.3: Spearman's Correlation result of fuel adulteration and car/vehicle engine damage

			Fuel Adulteration	Cars/vehicles' engines damage
Spearman's rho	Fuel Adulteration	Correlation Coefficient	1.000	.599**
		Sig. (2-tailed)	.	.000
		N	301	301
	Cars/vehicles engines damage	Correlation Coefficient	.599**	1.000
		Sig. (2-tailed)	.000	.
		N	301	301

** . Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS analysis 2015.

The result shows that the correlation of 0.599 was significant at 0.05 level. This can be established through a p-value of 0.000 which was lower than the cut-off point of 0.05 needed for the acceptance or rejection of the null hypothesis. It follows therefore since 0.000 was lower than 0.05; we reject the null hypothesis and accept the alternative hypothesis which stated that there is significant correlation between fuel adulteration by the marketers and the rate of cars/vehicles' engines damages in the country.

Summary of Results

A summary of the data analysis results show that:

- i. Unethical pricing of petroleum products by marketers have significant negative effect on motorists in Nigeria.
- ii. There is significant correlation between fuel adulteration by the marketers in Nigeria and the rate of cars/vehicles' engines damages in the country.

Discussion of Findings

It was found out that unethical pricing of petroleum products by marketers have significant negative effect on motorists in Nigeria. This result lends credence to the claim of the DPR that the agency has over the years been inundated with complaints from the public on the arbitrarily fixing of petrol prices above the government approved rate. It also receives support from the report of the News Agency of Nigeria that petroleum marketers in some states had in the last one month sold fuel at between N105 and N120 per litre, attributing the increase in price to scarcity of the product (NAN, 2015). That must have been before this study, because presently petrol is being sold at between N140 to N200 across States in the South-East and South-South of Nigeria. This makes nonsense that assurance of members of the Independent Petroleum Marketers Association of Nigeria (IPMAN) to the DPR to sell petroleum products at approved prices. However, most of the marketers lay the blame of the current price hike on the door step of government, saying that they are merely obeying the laws of scarcity.

It was also found out that there is significant correlation between fuel adulteration by the marketers in Nigeria and the rate of cars/vehicles' engines damages in the country. This result supports the findings of Udeagbara, Ojoh and Anusiobi (2014) showed that some petroleum products like kerosene, petrol and diesel are sometimes adulterated. It was observed that the properties in the adulterated petroleum varies. In Nigeria, adulteration of fuel is very rampant, because the products of comparable quantities have different prices and that the fuel dealers do this (adulteration) so as to make maximum profit from the product neglecting the damages it does to motor vehicles and other harmful effects to human life especially when kerosene is adulterated with petrol, which had claimed many lives in this country (Osueke and Ofondu, 2013). Engineers like Osueke and Ofondu (2013), have also observed that fuel adulteration has many effects especially on any vehicle that uses such fuel; there will be an increase in the tailpipe emission which subsequently leads to engine knock. This must be why Ijewere and Obeki (2011) lamented that adulteration of petroleum products have caused a great loss of revenue to motorists in Nigeria, while unethical marketing practices have not only caused consumers their money but also their lives in several cases in Nigeria.

Recommendations

Based on the findings and other revelations of this study, it is recommended as follows:

- i. The Government of Nigeria must do everything possible to check fuel scarcity in this country, as a way of guarding against arbitrary increase in fuel prices by marketers.
- ii. The DPR should employ more field personnel that would be monitoring filling stations across the country on a daily basis against illegal increase in pump prices, adulteration, hoarding and other malpractices.

- iii. Law enforcement agencies in the country must ensure that staff of the petroleum regulatory agencies on field duty are not compromised with bribes by the marketer in carrying out their monitoring and enforcement duties. Anyone of them caught should be made to lose his job as a deterrent to others in order to engender sanity in the Nigerian petroleum industry.
- iv. Government should come up with strong policies that will help upheld ethical standards in marketing practices within the petroleum industry in Nigeria.

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