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Fuel Subsidy Removal Policy; Its Marketing Implications on Consumption Pattern of Civil Servants in Abia State, Nigeria

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Abstract

The broad objective of this study is to ascertain the effect of fuel subsidy removal policy on the consumption pattern of civil servants in Abia State, Nigeria. The study adopted a survey design method. The population of this study comprised 469 management and staff of four ministries in Abia State Civil Service. Taro Yamane's formula for sample size determination was used to obtain a sample size of 216. Convenience sampling was used to administer copies of the questionnaire to the respondents. Test of hypotheses in the study was done using simple regression model. All analyses were done through the use of the Statistical Package for the Social Sciences (SPSS) version 25.0. Findings revealed that fuel subsidy removal has positive and significant effect on cost of living of civil servants in Abia State, Nigeria. Regression results further revealed that fuel subsidy removal policy has negative and significant effect on income level of civil servants in Abia State, Nigeria. Lastly, it was found that fuel subsidy removal has negative and significant effect on savings status of civil servants in Abia State, Nigeria. The study recommended amongst that government should develop policies and programs such as social safety nets or targeted subsidies for the vulnerable populations that are aimed at mitigating the negative effects of the current subsidy removal.

Keywords: *Fuel Subsidy Removal, Consumption Pattern, Cost of Living, Income Level.*

Introduction

The issue of fuel subsidy has been a contentious one for several years, with some calling for its removal and others advocating for its continuation. Fuel subsidy removal means government not paying for the difference between pump price and the actual cost of importing fuel. It means deregulating the downstream sector to pave way for vibrant competition by other interested investors. With the removal of fuel subsidy, fuel will be sold in accordance with the prevailing market price based on the actual cost of importation. 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 price below the cost of production.

According to World Bank (1997), fuel subsidy is any policy by the government that is aimed at reducing the price of energy consumed by citizens relative to what the price would have been in the absence of such policy. Eyiuche (2012), the federal government operated fuel subsidy with the aim of making petroleum products available to cushion the effect of actual market prices of the product on the general populace. The federal government during the military era was of the opinion that the cost of production transportation of fuel will be so much a heavy burden for the poor masses of Nigerian to bear alone and therefore decided to pay part of the total amount of fuel cost for every Nigerian in order to make the product available and affordable. This is actually what is referred to as fuel subsidy; that is the government paying part of the total amount of fuel cost. 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. The reality of subsidy is that as the pump price of fuel increases, invariably the cost of everything in Nigeria increases. Therefore, the essence of subsidizing the cost of pump price of fuel is to make the cost of living affordable to average Nigeria, enhance production and services affordable to every Nigerian, improve savings and income level, as well maintain fairly good standard of living.

The benefits of adoption of fuel subsidy removal include; Fuel subsidy removal would free up resources for other sectors of the economy, a significant portion of government budget on fuel subsidies, will be spent on education, healthcare, infrastructure development, amongst other key sectors, domestic refineries will be established to produce more petroleum products, reducing Nigeria's over dependence on imported fuel, availability of domestic refineries will boost the country's economy, massive creation of jobs for Nigerians(The Nations Newspaper,2023).Other benefits include reduces government borrowing and the associated huge deficit, Free resources for investment in other critical sectors, reduce/remove incentive for smuggling and associated security risk, stronger Naira and decline in imported inflation, investment flow to the downstream sector, More profitable downstream players, product availability, improved sovereign credit rating(www.pwc.com/ng,2023). According to Onanya (2012), Nigerians have not benefited from fuel subsidy, as several economist's view subsidies as highly corrupt, wasteful and bled money from the treasury into the private pockets of the rich fuel importers. As a result of this obvious reality, the federal government on June 1st of 2023 dramatically announced the end of fuel subsidy. With the intention of using the money accrued from fuel subsidy to develop other sectors of the economy and also to ensure sustainable development and wealth generation for the nation.

Although fuel subsidies have been beneficial in terms of making petroleum more accessible to citizens, they have also had some negative impacts on the economy. For one, they have led to increased corruption and mismanagement due to weak oversight mechanisms, with some

individuals and companies taking advantage of the system to make illegal profits. In addition, the government spends a significant amount of money on petroleum subsidies, leading to increased public debt. In some cases, the cost of subsidies can exceed the revenue earned from the sale of crude oil, Nigeria's main export. However, imposing fuel subsidy removal policy poses some risk to both consumers and producers; A sudden surge of inflation in the economy on both goods and services, increase in cost of transportation, increase in cost of production and business services, abuse of consumers, downsizing in organisations, high cost of living, low income and saving. This underscores the reason why effective policies and well-thought-out implementation strategy fundamental to the success of fuel subsidy removal policy to cushion its effects on citizens. This study seeks to analyse the effect of fuel subsidy removal policy on consumption pattern of civil servants in Abia state, Nigeria.

Objectives of the Study

The broad objective of this study was to ascertain the effect of fuel subsidy removal policy on the consumption pattern of civil servants in Abia State, Nigeria.

The specific objectives were to;

i. Examine the effect of fuel subsidy removal policy on cost of living of civil servants in Abia State, Nigeria.
ii. Ascertain the effect of fuel subsidy removal policy on income level of civil servants in Abia State, Nigeria
iii. Determine the effect of fuel subsidy removal policy on savings status of civil servants in Abia State, Nigeria.

Statement of Hypotheses

The following null hypotheses were formulated to provide tentative answers to the formulated research questions.

$H0_1$: Fuel subsidy removal policy does not have significant effect on the cost of living of civil servants in Abia State.

$H0_2$: Fuel subsidy removal policy does not have significant effect on the level of income of civil servants in Abia State, Nigeria.

$H0_3$: Fuel subsidy removal policy does not have significant effect on the savings of civil servants in Abia State, Nigeria.

Review of Related Literature

Conceptual Review

Fuel

Fuel, a very versatile and flexible non-reproductive depleting natural (hydrocarbon) resources is fundamental input into modern economic activity, providing about 50% of the world total energy demand. It is an oily, bitummous liquid consisting of a mixture of many substances namely the elements of carbon and hydrogen. It also contains vary small number of non- hydrocarbons at about 0.6% in weight namely, nitrogen and oxygen. It generally occurs at depts. below 1,500 meters. It is the major source of energy and today has become the bedrock of man progress and revenue generation for government.

The use of petroleum raw materials ranges widely from the production of pharmaceuticals, fertilizers, fibers for the manufacture of textiles and numerous other products essential for human consumption, petroleum jelly for the body, and candle for lighting and bitumen for tarring roads are some of the many by-products of petroleum. Fuel subsidy is one of the most passionate and controversial issue of the Nigeria's petroleum industry. Irrespective of the technical economic, political aspect and implementation of policies, adhering to one pricing system or another would largely influence the ultimate pattern of cost and profit sharing of the two main parties concerned namely the producer and the consumers.

The concept of subsidy has been

defined by various authors and also from various perspectives via producers, consumers and government angles. One of the such definitions is that subsidy is a payment to individuals or business by a government for which it received no product or services in return (McGraw-Hill dictionary of modern economics, 1973). It is also defined as a payment made by government (or possible by private individuals) which forms a wedge between the price consumers pay and the cost incurred by the producers, such that price is less than the marginal cost (Pearce 1983). Again, the encyclopedia Britannica defined subsidy (1981) as a direct or indirect government payment, economic concessions or special privileges granted to private firms, households or other government units in other to promote public objectives.

Fuel Subsidy Removal

The issue of petroleum products pricing has always been a sensitive one in Nigeria, due to low income of the people and poor infrastructural development in areas of; transportation, information communication and electricity. The effect of petroleum products price increase is easily felt by people. For five decades now, Nigeria's economic policies, growth and other related activities have been largely influenced by the oil industry, as oil is the life-blood for the Nigerian economy (Adelabu, 2012). Despite Nigeria being the largest in Africa and the sixth largest oil producing country in the world, successive Nigerian governments have been unable to use the oil wealth to significantly reduce poverty, provide basic social and economic services her citizens need (Ering & Akpan, 2012).

Fuel subsidy was, before the coming of the Goodluck Jonathan's administration, a policy of the Federal Government meant to assist the people of Nigeria to cushion the effects of economic hardship. The Federal government has always canvassed and lobby for fuel subsidy removal, it happened in Goodluck's regime, Buhari's regime and now in Tinubu regime. An interesting matter from the economy is the issue of fuel subsidy removal, which has been a great controversy for Nigerians. The issue of fuel subsidy removal has been in Nigeria for some decades of which different governments have tried to implement the reform but were unsuccessful due to fierce public demonstration of disapproval. This has often led to massive protests by the citizens and the civil society who regard such policy as a measure to further subjugate and impoverish the masses.

Advantages of Fuel Subsidy Removal in Nigeria

The fuel subsidy removal will curb the greed for higher profits and deliberate sabotage by a few players in the oil industry which will positively affect the economy of the country. In the past, Nigeria pays N400bn monthly in fuel subsidy payments. Removing the fuel subsidy would free up resources for other sectors of the economy. The government currently spends a significant portion of its budget on fuel subsidies, which could be better spent on education, healthcare, and infrastructure development. It will banish queues from petrol stations across the nation and free the country from endless pains and suffering that come with fuel scarcity. It will reduce gasoline smuggling and diversion. Fuel subsidy removal will reduce Nigeria budget deficit and borrowing amongst other benefits.

Disadvantages of Fuel Subsidy Removal in Nigeria

As of 2022, Nigeria remains the biggest producer of crude oil in Africa. However, it is sad that this country is the only member of the Organization of Petroleum Exporting Countries (OPEC) that

imports 90-95% of refined petroleum products to meet its domestic consumption. The majority of other OPEC member countries depend on less than 20% of imported refined petroleum products for their domestic needs.

The majority of Nigeria's domestic refineries are down and the existing ones barely function. Hence, the country does not have the capacity to refine its crude oil or break it down to the petrol (also known as Premium Motor Spirit- PMS) that is used in vehicles, generators, etc. As a result, the country exports and sells the crude oil that it produces and then imports petrol into the country. The landed cost of this imported petrol is way expensive for an average Nigerian to afford and so the federal government decided to pay a subsidy so that the price of fuel may be affordable to the average Nigerian. For instance, if the landed cost of PMS is roughly N315/litre, the federal government marks a price that is reasonable for an average Nigerian to afford, say N113/litre, and then pays the difference of N202 as a subsidy.

However, with the rise in the cost of fuel and increased fuel consumption due to Nigeria's increasing population, the cost of fuel subsidies has continued to grow exponentially. Due to this, the government has to spend more on fuel subsidies in order to keep domestic prices low. Fuel subsidy removal will have a drastic effect on citizens of Nigeria, as there will be a sudden surge of inflation in the country, increase in cost of transportation, increase in cost of production and business services, abuse of customers, downsizing in organisations amongst others.

Relationship between Fuel Price Increases, Inflation and Cost of Living

In Nigeria, the price of fuel is considered as a major driver of the cost of living, as it is used by all including small businesses and many households given the unstable electricity supply. Therefore, any increase in fuel price could directly and immediately impact the prices of goods and services across the country. There is also the psychological impact that it tends to have because of the strong sentiment attached to cheap and affordable fuel. When fuel prices increase, small businesses tend to raise their prices to cover the increased cost of operation which can lead to higher prices for consumers. This can make it more difficult for people to afford basic necessities, lead to a decrease in the standard of living and contribute to poverty and inequality.

However, previous attempts to remove the PMS subsidy had mostly been accompanied by hoarding and general scarcity which invariably amplified the impact of the price increase beyond just the subsidy removal. Overall, the relationship between fuel price increases, inflation, and the cost of living in Nigeria is complex and multifaceted. While fuel price deregulation can contribute to higher costs of living and inflation, the impact can be moderated if complemented with effective policies and well-thought-out implementation strategy

Theories of Consumption

Keynes Theory of Consumption:

Keynes mentioned several subjective and objective factors which determine consumption of a society. However, according to Keynes, of all the factors it is the current level of income that determines the consumption of an individual and also of society. Keynes put forward a psychological law of consumption, according to him, as income increases consumption increases but not by as much as the increase in income. In other words, marginal propensity to consume is less than one.

Relative Income Theory of Consumption:

An American economist J.S. Duesenberry put forward the theory of consumer behaviour which lays stress on relative income of an individual rather than

his absolute income as a determinant of his consumption. According to Duesenberry's relative income hypothesis, consumption of an individual is not the function of his absolute income but of his relative position in the income distribution in a society, that is, his consumption depends on his income relative to the incomes of other individuals in the society.

According to Duesenberry, saving as a proportion of income of the individuals with relatively low incomes would not rise much with the increase in their incomes. That is, their savings would not rise to the same proportion of income as was being done by the individuals who had the same higher income prior to the present increase in income. This study was anchored on the relative income theory of consumption proposed by J.S Duesenberry, since income of consumers does not increase in proportion with the rise in the cost of goods and services occasioned by the fuel subsidy removal.

Empirical Review

Mohammed et al. (2020) assessed the impact of fuel subsidy removal on the socioeconomic characteristics of households in Maiduguri metropolis, Borno state, Nigeria. Survey data were collected and analysed using descriptive statistics and simple regression method. Result on socioeconomic characteristics revealed that about 70.4% of respondents in the study area were male, about 61.3% were married, 41.5% fall within the ages of 30-39 years. Besides, 50.7% had tertiary education, 52.1% were civil servants and about 34.5% have income level ranges between ₦40,000 - ₦59,999 monthly. It was also revealed that 56.3% of the respondents had 8 -10 family members, while 57.7% of them have 1 - 5 dependents. Results of the descriptive analysis show that 76% of the respondents agreed that fuel subsidy removal have decreased their level of income. On the other, the inferential statistic result revealed that the households' characteristics variable was positively related to fuel subsidy removal, significant at 1%, except households' age. For sustainability, attention should be focused on workers' wages and salaries increase, family planning and transportation costs reduction as these may alleviate hardship of fuel subsidy removal on low-income earners in Nigeria.

Inegbedion et al. (2020) examined petroleum subsidy withdrawal, fuel price hikes and increases in the prices of products of other sectors in the Nigerian economy. It employed input-output model to determine the value added per sector from the computed table of flow of goods. Subsequently, the impacts of reductions in petroleum subsidies (10%, 20%, 30%, 40% and 50%) on the prices of products from the other sectors were computed. Results showed that reduction in petroleum subsidies stimulate increases in prices of petroleum products and such increases trigger increases in transport fares; increases in transport fares subsequently lead to increases in prices of other products owing to the degree of interdependency among the various sectors.

Agboje (2018) looked at the implication of switching fuel subsidy on households' welfare in Nigeria. The study used a static computable general equilibrium model to assess the impact of phased and withdrawal of PMS consumption subsidy as well as their alternative curtailing policies on the welfare of farm and non-farm households in Nigeria. Results showed that partial and total PMS subsidy reform with the subsidy gains conserved reduced households' consumption level, increased their expenditures on all commodities and reduced social welfare by a worst ₦70.47 billion and lowest ₦40.80billion. However, an alternative policy of reallocating fuel subsidy into the crop and service sectors

contributed largely to increased household consumption basket and utility increased as low as 0.11% on phased PMS subsidy reform measure among urban non-agriculture and as high as 0.35% among rural agricultural households on account of subsidy withdrawal measure. Thus, social welfare increased from a minimum gain of about ₦43.42 billion on the alternative policy to phased PMS subsidy reform and a maximum gain of about ₦67.90billion on the alternative policy to PMS subsidy withdrawal.

Akinyemi et al. (2017) analysed the impact of refined petroleum subsidy removal on the agricultural sector in Nigeria, the results support a complete removal of fuel subsidy for better performance of the agricultural sector. Olaniyi (2016) investigated the effects of fuel subsidy on transport costs and transport rates in Nigeria. He observed that fuel subsidy is a major tool for enhancing citizen's welfare, especially among the middle- and low-income countries but that removal of fuel subsidies significantly influences the factors that influence transport costs and transport rates, thus leading to higher transport cost and rates. Obo et al. (2017) investigated fuel subsidy removal and the ubiquity of hardships in Nigeria. They opined that removal of fuel subsidy has dire consequences on the wellbeing of the people. According to them, fuel subsidy removal can stimulate the promotion of the public good if such removal is well-articulated, managed and targeted. They suggested the need to put an end to the importation of refined petroleum products in Nigeria.

Kilian (2014) "investigated oil price shocks: Causes and consequences." He observed real price of oil originate from economic fundamentals and that oil price shocks do not occur under normal circumstances. To this end the need to explicitly explain the changes in demand and supply which are may explain oil price shocks when studying their transmission to the domestic economy becomes inevitable. He therefore suggested the use of structural models of the global economy explaining the relationships between oil price fluctuations and the economy, including the oil market. Lorussoa and Pieronib (2018) investigated the "causes and consequences of oil price shocks on the UK economy." They assessed the consequences of oil price fluctuations on the UK economy by employing a method which permitted the decomposition of oil price fluctuations from the root causes of the shock. They found that different types of oil shocks were responsible for the consequences that oil price fluctuations had on macroeconomic aggregates in the UK and that a rise in real oil price causes increases in domestic inflation.

Fueki et al. (2018) investigated "the role of expectations in the crude oil market on oil price shocks and their consequences" they employed structural vector autoregressive model to examine the factors that were crucial to oil price fluctuations by assessing the extent to which expectations influenced future aggregate demand and supply of crude oil. The results showed that future demand and supply shocks explain about 30-35% of historical oil price fluctuations. Lee and Ni (2002) showed in a seminal finding, that almost all U.S. industries experience oil price shocks which manifest largely through reduction in demands. Jo et al. (2017) re-examined "industry effects of oil price shocks" by re-examining Lee and Ni's (2002) seminal finding by updating the data with two additional decades and employed enhanced empirical methods, including structural factor-augmented vector auto regressions. The results were consistent with those of Lee and Ni (2002).

Uzonwanne et al. (2015) analysed fuel subsidy removal and the Nigerian Economy. The study used Rosenstein-Rodan's Thesis or Theory of the "Big Push" to drive home the message. The major sources of data used in the study were primary and secondary data. The primary data were collected through the use of questionnaire and the secondary data were also collected. Descriptive statistics was used to analyze the data. The study found that fuel subsidy has not resulted in a significant improvement in the quality of the life for the majority of Nigerians.

Onyeizugbe and Onwuka (2012) looked at fuel subsidy removal as an imperative for enhancing business development in Nigeria. The study is based on the classical economic theory of regulated monopolies within which subsidies themselves, are perceived as distorting to the forces of demand and supply. In pursuance of the objectives of the study, the descriptive survey design was adopted. Data were collected using questionnaire administered to 300 respondents selected from south –eastern part of Nigeria. Data obtained were analyzed using statistical summation technique and Z-test at 0.05 level of significance for empirical testing of the hypothesis that guided the study. The result of the findings shows that there is no significant relationship between fuel subsidy removal and job creation in Nigeria. The research concludes that fuel subsidy removal is an important element in the larger scheme to accelerate business development.

Methodology

Research Design

The study adopted a survey design method to analyse the inherent problem. The survey study method was adopted because its approach provides a holistic and in-depth investigation of the phenomena and is compatible with a critical interpretive research paradigm. The design is descriptive and analytical in nature and employs quantitative approach.

Population of the Study

The population of this study comprised of management and staff of four ministries in Abia State Civil Service. These ministries were; the ministry of education, ministry of health, ministry of agriculture, and the ministry of finance and economic development. The total number of staff in these ministries is 469.

The population distribution for the study is as follows;

Table 1: Population distribution for the management and staff of the selected ministries in the Abia State Civil Service

S/N	Ministries	Number of Staff
1.	Ministry of Education	135
2.	Ministry of Health	106
3.	Ministry of Agriculture	124
4.	Ministry of Finance and Economic Development	104
	Total	**469**

Source: Personnel Departments, 2023

Sample Size Determination

To obtain a sizeable sample for the study Taro Yamane's sample size determination formula was used thus;

$$n = \frac{N}{1 + N(e^2)}$$

Where n = sample size
N = Total population
e = error (0.05)

Note: Here, the researcher assumes a 5% level of significance (95% confidence level).

Thus $n = \frac{N}{1 + N(e^2)}$

$$n = \frac{469}{1 + 469(0.05)^2}$$

$$n = \frac{469}{1 + 469(0.0025)}$$

$$n = \frac{469}{2.173}$$

n = 216 respondents.

A stratified sampling method was adopted to determine the number staff selected from each of the studied ministries in the Abia State Civil Service. The Bowley's (2004) proportional allocation formula is given as;

$$nh = \frac{nNh}{N}$$

Ministry of Education = $\frac{135}{469} \times 216$ = 62 respondents

Ministry of Health = $\frac{106}{469} \times 216$ = 49 respondents

Ministry of Agriculture = $\frac{124}{469} \times 216$ = 57 respondents

Ministry of Finance = $\frac{104}{469} \times 216$ = 48 Respondents

62 + 49 + 57 + 48 = 216 respondents

Therefore, a sample size of 216 respondents was used for the study.

Sampling Technique

For the present study, convenience sampling was used because of the nature of the respondents. Convenience sampling was employed because it offered the researcher the opportunity to select and interview those civil servants who were willing to provide the relevant information needed for the study. The researcher approached these civil servants in their offices where copies of the questionnaire were administered and retrieved immediately after completion. Based on the sample size of 216, copies of the questionnaire were administered.

Sources of Data

Primary data were sourced through survey. For this study, it involved mainly the questionnaire. The questionnaire contained relevant questions posed to elicit response from the respondents. The structure of the major questions for the questionnaire involved the use of the Likert scales, combined with unstructured question type.

Validity of the Instrument

Before the questionnaire was administered which is the major research instrument used for actual study, its content was validated through pilot survey. The importance of this test is to ensure that the questionnaire covered all the intended dimensions of the research. It also assisted

the researcher in eliminating questions that were ambiguous. Space allocated for the answers was also be determined to be adequate or not. In response to this, necessary modification and adjustment were made. A minimum of five (5) academics which included the research supervisor were involved in this testing. Thus, content validity was used.

Reliability of the Instrument

Firstly, test re-test was conducted to establish the initial reliability of the instrument. A further reliability test was conducted in the study using the Cronbach's Alpha. The reliability of the instrument was upheld when the reliability coefficient (r) exceeded 0.7 according to Nunnally (1978). Cronbach's alpha seeks to measure how closely test items are related to one another and thus measuring the same construct.

Method of Data Analysis

The test of hypotheses in the study was done using simple regression model. All analyses were done through the use of the Statistical Package for the Social Sciences (SPSS) version 25.0.

Model Specification

(i) The regression model used to examine the effect of fuel subsidy removal policy on cost of living of civil servants in Abia State, Nigeria is implicitly stated as follows;

$$y = \beta_0 + \beta x + e_i \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(i)}$$

where;

y = cost of living (captured with a 5 point likert scale)
x = fuel subsidy removal (captured with a 5 point likert scale)
e = error term

(ii) The regression model used to ascertain the effect of fuel subsidy removal policy on income level of civil servants in Abia State, Nigeria is implicitly stated as follows;

$$y = \beta_0 + \beta x + e_i \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(ii)}$$

where;

y = income level (captured with a 5 point likert scale)
x = fuel subsidy removal (captured with a 5 point likert scale)
e = error term

(iii) The regression model used to determine the effect of fuel subsidy removal policy on savings status of civil servants in Abia State, Nigeria is implicitly stated as follows;

$$y = \beta_0 + \beta x + e_i \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(iii)}$$

where;

y = savings status (captured with a 5 point likert scale)
x = fuel subsidy removal (captured with a 5 point likert scale)
e = error term

Results and Discussion

Effect of fuel subsidy removal policy on cost of living of civil servants in Abia State, Nigeria

Table 2: Simple regression analysis showing the effect of fuel subsidy removal policy on cost of living of civil servants in Abia State, Nigeria

Model	B	Std. Error	t-value	P-Value	R	R^2	F-Ratio
(Constant)	3.804	0.301	12.638	0.000	0.772	0.759	114.049
Fuel subsidy removal	0.334	0.046	7.260	0.000			

Source: SPSS Output, 2023

Table 2 provides details summary of regression analysis for the effect of fuel subsidy removal policy on cost of living of civil servants in Abia State, Nigeria. The results in Table 4.1 reveal that fuel subsidy removal has positive and significant effect on cost of living of civil servants in Abia State, Nigeria ($\beta = 0.334$, $t = 7.260$, $\rho<0.05$). The R-squared value reveals that fuel subsidy removal explained almost 76 percent of the variances in cost of living of civil servants in Abia State, Nigeria ($R^2=0.759$), while 24% of the variations are explained by other factors not included in the model. The F-ratio is 114.049, and its p-value was 0.000 which is less than the critical value. It implies that the current fuel subsidy removal significantly affects the cost of living of civil servants in Abia State, Nigeria at $p <0.05$.

From the above regression equation, the regression coefficient of fuel subsidy removal was 0.334, which implies that a unit increase in fuel subsidy removal would lead to 0.334 increase in cost of living of civil servants in Abia State, Nigeria. Therefore, the null hypothesis one ($H0_1$) which states that fuel subsidy removal policy does not have significant effect on the cost of living of civil servants in Abia State is hereby rejected. This implies that the current fuel subsidy removal policy has significant effect on the cost of living of civil servants in Abia State.

Effect of fuel subsidy removal policy on income level of civil servants in Abia State, Nigeria

Table 3: Simple regression analysis showing the effect of fuel subsidy removal policy on income level of civil servants in Abia State, Nigeria

Model	B	Std. Error	t-value	P-Value	R	R^2	F-Ratio
(Constant)	3.714	0.312	11.903	0.000	0.832	0.778	109.321
Fuel subsidy removal	-0.311	0.038	-8.184	0.000			

Source: SPSS Output, 2023

Table 3 provides details summary of regression analysis for the effect of fuel subsidy removal policy on income level of civil servants in Abia State, Nigeria. The results in Table 3 reveal that fuel subsidy removal policy has negative and significant effect on income level of civil servants in Abia State, Nigeria ($\beta = -0.311$, $t = -8.184$, $\rho<0.05$). The R-squared value reveals that fuel subsidy removal explained about 78 percent of the variances in income level of civil servants in Abia State, Nigeria ($R^2=0.778$), while 22% of the variations are explained by other factors not included in the model. The F-ratio is 109.321, and its p-value was 0.000 which implies the fitness of the model. It also shows that fuel subsidy removal significantly affects income level of civil servants in Abia State, Nigeria at $p <0.05$.

From the regression coefficient of fuel subsidy removal was -0.311, which implies that a unit increase in fuel subsidy removal would lead to -0.311 decrease in income level of civil servants in Abia State, Nigeria. This assumption is at the 99% confidence level. With this result, the null hypothesis two ($H0_2$) which states that fuel subsidy removal policy does not have significant effect on the level of income of civil servants in Abia State, Nigeria is rejected and the alternative hypothesis accepted. It is concluded that fuel subsidy removal policy has significant and negative effect on the level of income of civil servants in Abia State, Nigeria.

Effect of fuel subsidy removal policy on savings status of civil servants in Abia State, Nigeria

Table 4: Simple regression analysis showing the effect of fuel subsidy removal policy on savings status of civil servants in Abia State, Nigeria

Model	B	Std. Error	t-value	P-Value	R	R^2	F-Ratio
(Constant)	4.164	0.418	9.961	0.000	0.821	0.763	120.157
Fuel subsidy removal	-0.236	0.073	-3.232	0.023			

Source: SPSS Output, 2023

Table 4 provides details summary of regression analysis for the effect of fuel subsidy removal policy on savings status of civil servants in Abia State, Nigeria. The results in Table 4.3 reveal that fuel subsidy removal has negative and significant effect on savings status of civil servants in Abia State, Nigeria (β = -0.236, t = -3.232, ρ<0.05). The R-squared value reveals that fuel subsidy removal explained 76 percent of the variances in savings status of civil servants in Abia State, Nigeria (R^2=0.763), while 24% of the variations are explained by other factors not included in the model. The F-ratio is 120.157 with p-value 0.023 indicating that the model specification was correct. The estimated regression line shows that savings status of civil servants in Abia State, Nigeria is a linear function of fuel subsidy removal.

From the above regression table, the regression coefficient of fuel subsidy removal was -0.236, which implies that a unit increase in fuel subsidy removal would lead to -0.236 decrease in savings status of civil servants in Abia State, Nigeria. This result implies that the null hypothesis three ($H0_3$) which states that fuel subsidy removal policy does not have significant effect on the savings of civil servants in Abia State, Nigeria is rejected. It can thus be concluded that fuel subsidy removal policy has significant and negative effect on the savings of civil servants in Abia State, Nigeria.

Discussion of Result

The study has analysed the effect of fuel subsidy removal policy on the consumption pattern of civil servants in Abia State, Nigeria using regression model. On the effect of fuel subsidy removal policy on cost of living of civil servants in Abia State of Nigeria, regression result revealed that fuel subsidy removal has positive and significant effect on cost of living of civil servants in Abia State, Nigeria. It implies that the current fuel subsidy removal has significantly affected the cost of living of civil servants in Abia State, Nigeria. This is in agreement with previous findings. Uzonwanne et al. (2015) found that fuel subsidy removal has significantly affected the quality of the life for the majority of Nigerians. Agboje (2018) similarly found that partial and total PMS subsidy reform increased households' expenditures on all commodities. Inegbedion et al. (2020) showed that reduction in petroleum subsidies stimulate increases in prices of petroleum products and such increases trigger increases in transport fares which subsequently lead to increases in cost of living.

Regression results further revealed that fuel subsidy removal policy has negative and significant effect on income level of civil servants in Abia State, Nigeria. This is also in tandem with the finding of Mohammed et al. (2020) who discovered that fuel subsidy removal has decreased consumers' level of income. Increased fuel prices can decrease disposable income available to consumers. When a significant portion of income is allocated to fuel expenses, individuals and households have less money to spend on other goods and services. This reduction in disposable income can lead to a decrease in consumption expenditure.

Lastly, regression result showed that fuel subsidy removal has negative and significant effect on savings status of civil servants in Abia State, Nigeria. This finding is in alignment with the finding of Agboje (2018) who equally found that partial and total PMS subsidy reform affected households' savings and consumption levels. In theory, removing fuel subsidies leads to an increase in the cost of living for Nigerians, potentially leading to a reduction in their savings as they have to spend more on essential goods and services.

Conclusion and Recommendations

It is no doubt that the current removal of fuel subsidy by the President Bola Ahmed Tinubu's administration has resulted to an increase in the price of fuel. This, in turn has led to an increase in transportation costs, higher prices for goods and services, and an overall increase in the cost of living for Nigerians. As a result, consumption patterns of Nigerians have been affected with the removal of fuel subsidies. The results of this study which is on the effect of fuel subsidy removal policy on the consumption pattern of civil servants in Abia State, Nigeria have confirmed that fuel subsidy removal has significant effect on cost of living, income level, and savings status of civil servants in Abia State, Nigeria. Therefore, it can be concluded that the current fuel subsidy removal policy in Nigeria has significantly affected consumption patterns of civil servants in Abia State, Nigeria.

Based on the findings of the study, the following recommendations were made;

1. Government should develop policies and programs such as social safety nets or targeted subsidies for the vulnerable populations that are aimed at mitigating the negative effects of the current subsidy removal.
2. Both the federal and state governments should improve public transportation systems in the country to encourage civil servants to use public transportation instead of their private vehicles. This will help reduce the significant portion of the income of civil servants that is allocated to fuel expenses.
3. The government should invest more in renewable energy sources in the country such as wind, solar and hydroelectricity. This will reduce dependence on fossil fuels and reduce family expenditure of fuels and also promote increased savings by the civil servants.

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