

Effect of Fuel Subsidy Removal on Socio-Economic Activities in Zamfara State

Bukoye Ademola Ismaila, Abdul Sabur Hassan

*Department of Liberal Studies, Federal Polytechnic Kaura-Namoda, Zamfara State.
Department Of Business Administration, Federal Polytechnic Kaura-Namoda, Zamfara state.*

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ABSTRACT

The study examined effect of fuel subsidy removal on socio-economic activities in Zamfara State. The study aimed to assess the relationship between fuel subsidy removal on savings and investment, unemployment and living standard in Zamfara state. Quantitative survey design was adopted for the study. Structured questionnaires were administered on the samples drawn from the entire population of the study. Data was analyzed using bootstrapping and algorithm for determining both validity and reliability between the constructs, and Multiple Regression model was used to test the hypotheses. The findings revealed that there is a significant positive relationship between fuel subsidy removal and savings and investment, unemployment and living standard in Zamfara state. The research concluded that the fuel subsidy removal has substantial negative implications on socioeconomic activities and development in Zamfara state. The study therefore recommended that government should introduce policies to mitigate the impact fuel subsidy removal on savings and investment, unemployment and living standard of the citizens.

Key word; fuel subsidy removal, savings and investment, unemployment, living standard and socioeconomic activities.

I. BACKGROUND OF THE STUDY

Globally, fuel subsidy removal entails a governmental policy decision which reverberates through the socio-economic landscape of a society and affects the standard of living of the people. It must be stated that the removal of fuel subsidy is a culmination of several reevaluations and socio-economic reviews based on economic shifts and the need for fiscal sustainability (Ozili&Obiora, 2023). Fuel subsidies are implemented by governments in many developing countries with the aim of promoting economic growth and

affordability of basic transportation and cooking fuels. However, subsidies place enormous strain on government budgets and can lead to market inefficiencies through over consumption. The removal of fuel subsidies is often an economic reform pushed by international organizations, but the impacts are complex. Thus, there is a need to understand how removal of subsidies affects aspects of socio-economic activities and development including savings and investment, employment and living standard of the people. Therefore, developing countries require well-designed reform policies and strategies that generate savings for social welfare spending and manage significant short and long term socio-economic activities to enhance better savings, employment and sustainable living standard.

Although some present the argument that fuel subsidy removal can help the government generate funds to provide humanitarian assistance to citizens, others argue that fuel subsidy is in itself a humanitarian aid, as it facilitates the affordability of fuel for the financially challenged. Knowing that fuel is used to facilitate numerous socioeconomic activities, it is one of the most important aids that the government can provide to its citizens. This created a contentious discourse about fossil fuel subsidy removal all over the world. In this regard, several scholars enumerated the negative consequences of fuel subsidy. These include increased financial burden on the government, air pollution and greenhouse gas emissions, market distortion, road congestion, resource misallocation, forgone tax revenue, government dependency, road accidents, and premature deaths, among others (Sweeney, 2020; McCulloch, Moerenhout& Yang, 2021; Parry, Black & Vernon, 2021). These foregoing reasons were highlighted to encourage government to remove fuel subsidy and channel the derived capital to other areas of the economy. Despite this, government in many countries have been skeptical about fuel subsidy removal citing

that it will facilitate an increase in the price of Premium Motor Spirit (PMS) which will in turn inflate transportation prices, and inevitably usher in a period of economic hardship on the vulnerable citizens (Harring, et'al. 2023)

It is in the light of this, fuel subsidy removal in Nigeria raised a serious question among the citizens of it economics, social and environmental implications. The recent pronouncement on the removal of fuel subsidy resulted to the high price of petroleum and consequently affects the prices of other goods and services in the country. The subsidy removal, while driven by the intent of aligns with global trends of fossil fuel subsidy reduction and enhances fiscal sustainability (Al Jazeera, 2023), presents a host of challenges. Foremost among these challenges is the potential exacerbation of socioeconomic inequality. Subsidy removal without correspondent economic benefit can lead to increase in fuel prices and subsequent rise in the cost of living. This predicament brings a lot of concern as raised by Ude (2023), emphasizing that while subsidy elimination might hold long-term benefits, it can strain the financial resources of households.

Scholars and international organizations, like the International Monetary Funds (IMF) have canvassed for the removal of subsidy from petroleum products due to its distortions to the actual market price resulting to its failure to reflect the actual market cost (Okwanya, Ogbu, & Pristine, 2015). They also went further to argue that the subsidy regime is characterized with corruption, and the subsidized product is consumed recklessly (Sanders & Schneider, 2000 cited in Okwanya, Ogbu, &Pristine, 2015). The Petroleum Industry Act (PIA) 2022 was signed by former President Mohammedu Buhariin preparation for full deregulation of the section, but his administration did not remove subsidy on Petroleum Motor Spirit due to the fear of protest against his government and party in 2023 general election, having known its consequence (Bukoye& Abdul sabur, 2024). Hence, the subsidy regime was ended by President Bola Ahmed Tinubu in his inaugural speech on 29th May 2023, without any strategy or palliative in place to mitigate its socioeconomic consequences. Therefore, this study assesses the effect of fuel subsidy removal on socioeconomic activities in Zamfara State.

Statement of the problem

Nigeria is blessed with abundant oil wealth as the sixth largest oil producer in the Organisation of Petroleum Exporting Countries

(OPEC) in the world, and its citizens have no reason to be thrown in to poverty(Imeokparia, Peter, Bello, Osabohien, Aderemi, Gershon, &Abidemi, 2023). Nigeria has the second largest proven oil reserve in Africa at 37.2 billion barrels, second only to Libya and it is the continent's largest producer of oil, producing about 1.78 million barrels per day (Olisah, 2020). Unfortunately, the abundant oil wealth has not translated to the wellbeing of its citizens and socioeconomic development.Successive Nigerian governments have been unable to use the oil wealth to significantly reduce poverty, improve savings and investment, reduce unemployment rate and uplift the living standard of Nigerians. Despite the oil wealth deposit and being a member of OPEC, the country does not have a functional refinery for crude oil refinement. This instigated the phenomenon of crude oil exportation for refinement and importation of the refined products, which was characterized with gross mismanagement and corruption.The government argued that subsidy can no longer be justified by its ever increasing rate in the wake of Nigeria's resources running out. The government remarked that fund should be diverted to public infrastructure, education, health care, and job creation (Ahmed &Olughenga, 2023). Based on the recent events, it is clear that the new administration cannot maintain fuel subsidy due to the significant financial burden. Today, the Nigerian government can no longer sustain the payment of subsidy on fuel because the cost of subsidizing fuel kept increasing due to corruption in the sector and over burden of the forex. Hence subsidy policy was ended by President Bola Ahmed Tinubu on 29th of May 2023, without considering its monumental effects. Ikenga&Oluka (2023) acknowledged that the existing state of the country's refineries, and dependency onforex for importing fuelevate the risk of escalating fuel price hike and its burden on socioeconomic activities. Therefore, this study examines the effect of fuel subsidy removal on the socioeconomic activities in Zamfara State.

Research Questions

The study is guided with the following research questions;

1. What is the relationship between fuel subsidy removal and savings and investment in Zamfara state?
2. What is the relationship between fuel subsidy removal and unemployment in Zamfara state?
3. What is the relationship between fuel subsidy removal and living standard in Zamfara state??

Objectives of the study

The major objective of the study is to examine the effect of fuel subsidy removal on socioeconomic activities in Zamfara State. The specific objectives are;

1. To assess the relationship between fuel subsidy removal and savings and investment in Zamfara state
2. To examine the relationship between fuel subsidy removal and unemployment in Zamfara state.
3. To evaluate the relationship between fuel subsidy removal and living standard in Zamfara state

Hypotheses

In order to answer the research questions and achieve the above objectives of the study, the following null hypotheses are advanced;

H01: There is no significant relationship between fuel subsidy removal and savings and investment in Zamfara state.

H02: There is no significant relationship between fuel subsidy removal and unemployment in Zamfara state.

H03: There is no significant relationship between fuel subsidy removal and living standard in Zamfara state.

Review of Related Literatures

Conceptual review: This section reviews the major concepts discussed in the study which includes subsidy, fuel subsidy removal, Savings and investment, employment, living standard and socioeconomic activities.

Subsidy and Fuel Subsidy

Subsidy can be seen as a grant of financial aid from the government used to maintain the prices of a particular item at a certain level. To subsidize is to sell a product below the cost of production, fuel subsidy, therefore, means to sell petrol below the cost of importation. Subsidy exists when government helps the consumers of a particular product to pay a price lower than the prevailing market price of that commodity (Kadiri & Lawal, 2016). Some authors like Agu et al., (2018) see it as a kind of market manipulation whereby government fixes the price of the commodity below its actual market price and pay the difference to the retailers. In this case, the government fixes the pump price of fuel below the actual market price and the difference is paid to the importers and marketers by the government.

Fuel subsidy can be properly defined as

government effort in paying for the difference between the pump price of fuel at the petrol station and the actual cost of importation of the product. So by paying the difference, the government enables fuel to be sold at a lower price so as to help ease the burden of its people especially lower income group, Fuel subsidy is a grant of financial aid from the government used to maintain the low price of petroleum products (Civic Keypoint, 2023).

Fuel Subsidy Removal

Fuel subsidy removal is a policy decision by governments around the world to address fiscal challenges and promote market efficiency. The policy involves phasing out or reducing government fuel subsidies, which subsequently leads to increased fuel prices for consumers (Gupta and Mahajan, 2019). By eliminating financial assistance aimed at keeping fuel prices artificially low, governments aim to rationalize spending, increase resource allocation and reduce market distortions associated with subsidies (Ying & Harun, 2019). However, the consequences of removing fuel subsidy are different and may affect different economic sectors like impoverishing households, increased spending on transportation, higher prices for goods and services, and potentially lower purchasing power (Ying & Harun, 2019). However, with the removal of fuel subsidy in 2023 for the purpose of developing critical public infrastructure in Nigeria, the anticipated outcome can only occur if the government is transparent, honest and ensure that the saved funds from fuel subsidy removal are channeled to the development of critical public infrastructure. This is evidenced in the fact that despite Nigeria is the sixth largest oil producing country in the world, successive Nigerian governments have been unable to use the oil wealth to significantly reduce poverty and provide basic services required for better living standard of her citizens due to corruption (Okechukwu 2022).

Savings and Investment

The distinction between savings and investment is the separate acts accomplished largely by different people and for different purpose, thus while savings is done by households and business as well as government, Investment is done excessively by businessmen (Ali, Ahmad & Jibrilla, 2024). Savings simple definition shows it as the act of net spending income or consumption. Savings, on the other hand, is defined as accumulated money put aside by saving (Šubová,

Buleca,, Affuso & Mixon,2024).). Saving is a mechanism by which economic agents make deliberate choice to allocate a portion of their current income for the purpose of making investment and increasing their future earning capacity. Saving is income not spent, or deferred consumption. Methods of saving include putting money aside in, for example, a deposit account, a pension account, an investment fund, or as cash (Umoh, Okonkwo & Mbah, 2024). Saving also involves reducing expenditures, such as recurring costs.

Investment simply means the expenditure of funds leading to the creation of wealth net addition to the stock of physical capital like machines, factories, other building are investment. Investment can be broadly defined as the acquisitions of an asset with the aim of receiving a return (Bigg, 2023). It could also mean the production of capital goods; goods which are not consumed but instead used in future production. Examples include building a rail road, or a factory, clearing land, or putting oneself through college. There are several motives for investment.

Savings and investment have been identified as key to economic growth, given the multi dynamics nature of Nigeria economy. Savings and investment can be seen as propelling forces that can move the Nigeria economy from a poverty ridden state to a state of buoyancy and economic stability. Therefore, the removal of fuel subsidy and subsequent hike in inflation rate has eroded the value of household income, and consequently reduce savings and investment capacity.

Unemployment

Unemployment is defined as an observable fact that arises when a person who is actively searching for employment and is willing to accept the prevailing wage rate is unable to find work. Unemployment is frequently used as a measurement of economy's health. With the current high rate of unemployment in Nigeria and removal of fuel subsidy generated a multiplying effect on unemployment rate in the country. The removal of fuel subsidy could lead to job loss in the informal sector that relies mostly on petrol for their operations, while the formal sector uses mostly diesel for their activities. The rise in petrol price would lead to the shutdown of small businesses that cannot afford the rising cost of petrol and whose profit margins have been completely eroded by fuel subsidy removal in the formal sector (Houeland, 2022). An increase in the pump price of

fuel in the country causes an increase in the cost of production, as the Nigerian production and manufacturing sector is driven by fuel, either for production or for distribution. Industries overhead cost increases leading to closure of businesses and their relocation to neighbouring countries like in the recent past (Essig, 2024). The aftermath of this is loss of jobs, worsening of already high unemployment level, and increase in social vices and criminality like armed banditry and kidnapping in the country.

Living Standard

Households' living standard encompasses all factors that contribute to the welfare and quality of life of families within the societal framework (Biggeri & Cuesta, 2021). These elements encompass the level of income, accessibility to fundamental necessities such as sustenance, shelter, healthcare, and education, as well as possession of tangible assets. The economic climate, with its fluctuations, notably alterations in employment rates and inflation, directly impact the income and purchasing power of families, thereby affecting their capacity to fulfill basic needs (Olusola, Chimezie, Shuuya & Addeh, 2022). Governmental policies, such as taxation and social programs, also play a pivotal role in modifying living standards and either facilitating or impeding families' utilization of essential services and resources. Addressing these multifaceted repercussions on the living standards of families is of utmost importance for policymakers and researchers striving to enhance overall well-being and equity within societies. The new government policy of fuel subsidy removal in Nigeria has affected all the facet of the economy. The sudden hike of fuel price resulted to hyperinflation, which subsequently reduced the purchasing power of the masses and consequently diminished the living standard of people as a result of poor access to basic necessities of life. Umeji and Eleanya (2021) argue that with the introduction of fuel subsidy, Nigeria's oil wealth has not translated into an improved standard of living.

Socioeconomic Activities

Socio-economic activities are comprehensive and multidimensional approaches aimed at improving the well-being of individuals and communities by addressing economic, social, and cultural factors. When the aforementioned factors are adequately fulfilled, it translates to social economic development. It goes beyond mere economic growth, and encompasses a broader

vision of progress that seeks to enhance the quality of life for all members of a society. In the context of socio-economic activities, Adebajo, Chukwudi, Olu-Owolabi, & Salako, (2024) posits that activities like savings and investment, unemployment rate and adverse living standard of individual have been truncated by the introduction of fuel subsidy removal. Kamran, Rafique, Nadeem & Anwar, (2023) adds that economic growth is just one facet; equally affected areas are education, healthcare, infrastructure, social equality, and environmental sustainability. This policy has increased poverty, inequality, and disparities among the citizens. And subsequently affect the savings and investment, increase unemployment rate and poor standard of living, which are inimical for a fulfilled and dignified life.

Empirical review

The fuel subsidy removal research has received a great deal of attention from notable scholars, especially as it relates to its effects on the socioeconomic activities, and development in general. The empirical studies by notable scholars offer a range of insights into the potential effects of fuel subsidy removal on socioeconomic activities and development in Zamfara State.

Adewummi, et al (2014) delved into the repercussions of fuel subsidy removal on Nigeria's socio-economic development. The study engaged a Price pass-through model and the error correction method to assess both short-term and long-term effects, using data spanning from 1980 to 2012. The research revealed that, in the short run, fuel subsidy removal yielded no immediate impact on the social well-being of Nigerians. However, the long-term perspective painted a promising picture, indicating that deregulating the downstream sector could potentially foster future economic development in the country.

Omotosho, (2019) conducted an extensive analysis of the macroeconomic implications of oil price shocks and the prevailing fuel subsidy regime in Nigeria. To accomplish this, the study developed and estimated a New-Keynesian DSGE model that encompassed the pass-through effect of international oil price fluctuations on the retail price of fuel. The findings were illuminating, indicating that oil price shocks exerted significant and persistent impacts on the country's economic output, accounting for approximately 22 percent of its variations over a four-year horizon.

Abdulkadir, et al (2020) examined the impact of Fuel Subsidy Removal on Socio-economic Characteristics: A Survey of

Household's in Maiduguri, Borno State. The study was based on quantitative survey. Descriptive statistics and simple regression methods were employed to analyze the data. The study revealed that there is a significant relationship between fuel subsidy removal and household's livelihood in the study area. Furthermore, the study depicts that subsidy removal has a significant effect on the livelihood of the respondents in the study area. The study therefore recommended that Palliative measures be put in place by the government to cushion the hardship accompanied by subsidy removal has been perceived by most of the respondents as a means of reducing hardship associated with fuel subsidy removal in the study area.

Adepoju, et al. (2023) conducted a study to investigate the impact of fuel subsidy removal on gross domestic product and transportation costs in Nigeria. The study utilized a correlational research design and relied on secondary data on the price of Premium Motor Spirit (PMS) and the country's Gross Domestic Product (GDP). It was found that the removal of fuel subsidies in Nigeria led to a 64% increase in inflation and a 42.5% decrease in GDP. The study argues that addressing the issue of fuel subsidies has a significant effect on the economy and suggests that alternative fuels and policies promoting non-motorized transport could help mitigate the impact of fuel price increases. Additionally, the research proposed two alternatives to subsidy removal by increasing fuel supply to meet demand and exploring alternative fuels, as observed in other countries, and emphasized the importance of locally refining crude oil and privatizing refineries with strategic policies.

Prabowo, et al. (2022) analyzed the economic price of liquid petroleum gas, poverty and subsidy removal compensation in Indonesia. The study adopted an econometric analysis approach in analyzing data collected through primary and secondary sources. The study revealed that, in the short run, fuel subsidy removal yielded no significant benefit on the social well-being of masses. The study concluded that subsidy removal scenarios have economic implications, especially for Low-income households. It recommended that government should use such savings gathered as a result of subsidy removal judiciously in order to alleviate the suffering of the masses.

Ozilli and Obiora (2023) studied on an analysis of the macroeconomic and microeconomic implications of the 2023 fuel subsidy removal in Nigeria. The study engaged the discourse analysis

methodology, and provided valuable insights into the potential consequences of this policy shift. They highlight several positive outcomes, including the freeing up of financial resources for other sectors, incentivizing domestic refineries, reducing dependence on imported fuel, boosting employment, and addressing critical public infrastructure needs. However, their study also acknowledged the negative implications, such as potential short-term economic growth reduction, increased inflation and poverty levels, fuel smuggling, and job losses in the informal sector.

Bukoye and Abdul sabur (2024) conducted a study to examine the impact of fuel subsidy removal on vulnerable households in Zamfara State. A survey method of study was employed. Data was collected in seven selected local governments through a closed ended questionnaire designed in a five likert scale. Data was analyzed using SPSS statistical model, using Pearson correlation coefficient, partial correlation and regression to test the significant level of the formulated hypotheses. The study was guided by the Theory of Neo-liberalism. The results revealed that there is significant relationship between fuel subsidy removal and the three predictors of inflation, unemployment and poverty, due to increase in fuel pump price. The study concluded that fuel subsidy removal has negative impacts on vulnerable households in Zamfara State. The researchers therefore recommended that government should urgently implement short-term and long-term economic plans to mitigate its effects on vulnerable households, especially immediate disbursement of palliative packages through reliable platforms, and commencement of comprehensive social investment programmes.

Theoretical review

The study is premised on Neo-colonialism and Neo-liberalism theory of development and underdevelopment. The neocolonial theory posits that Western powers exert significant influence over African countries, often compelling them to adopt policies that are detrimental to their own populations, particularly through international financial institutions like the World Bank and the International Monetary Fund (IMF). Nyiawung, Geary & Piabuo, (2023) posited that the Western financial institutions that are ostensibly created to promote economic development and stability have been employed as instruments of control and dominance by powerful Western nations. Uwakwe J & One bunne (2022) argued that African countries have been trapped in a cycle of debt dependency, where they are forced to borrow money from

Western financial institutions to service existing debts. This debt burden, he contends, gives Western powers significant leverage over African governments, enabling them to dictate economic policies that prioritize debt repayment over social welfare. The neocolonial theory can be applied to explain why some African countries, like Nigeria, are adopting fuel subsidy removal policies, even when it appears to hurt their economies and negatively impact their populations. This study argues that the removal of fuel subsidy in Nigeria was done to appease western institutions which are more connected to political and economic ideology of dominance and control, irrespective of its consequences on the citizens. The policy typically prioritizes fiscal consolidation and economic liberalization, which often involve subsidy removal as a condition for financial assistance or debt relief.

Neoliberalism is an economic and political ideology advocates for free market capitalism, deregulation of business, trade liberalization, privatization, and reduction of government spending in attempt to increase private sector involvement in economic drive of anation (Bloom,2017). The central tenet is that unfettered markets and minimal state intervention will maximize efficiency, economic growth, and individual freedoms. The intellectual foundations of neo-liberalism can be traced back to classical liberal economic ideas of Adam Smith, Friedrich Hayek, and Milton Friedman. Manning (2022) described Neo-liberalism as a western powers ideology of political and economic dominance and control over African countries. The ideology favours private enterprise and seeks to transfer the control of economic factors from the government to the private sector. However, the main mission of neo-liberalism is the emergence of rule of market forces operation which liberates free enterprise or private enterprise from any bonds imposed by the government (the state), no matter how much social damage this causes. However in Nigeria, the provision of the theory to redirect the savings from subsidy towards broad-based provision of basic developmental services like education, healthcare services and infrastructure investment is a concern to the citizens due to trust deficit in government. Therefore, these two theories lend support to the contention of this study that fuel subsidy removal can adversely affect the socioeconomic activities and development with low savings and investment, employment menace and poor standard of living in Zamfara State.

However, this study bridges the gap in the existing studies which mostly engaged secondary

data and a unit theory of analysis. The study also extricates itself with the adoption of two underdevelopment theories to provide valuable insights into the complexities of subsidy removal, shedding light on its devastating consequences, and clearly positioning the effects of fuel subsidy removal on socioeconomic activities and development in Zamfara state.

II. METHODOLOGY

This research work is a survey study that uses primary data. The study made use of purposive sampling techniques, and appropriate respondents were selected from seven Local Government area of Zamfara state. A purposive sampling technique was adopted in order to be able to acquire data from a widely distributed population. A closed ended structure questionnaire was designed in a five likert scale. A total number of four hundred (400) copies of questionnaire were administered on vulnerable households in the areas,

while three hundred and ninety (390) questionnaires were appropriately completed and considered useful. SEM-PLS3 data analysis package is engaged, with the use of algorithm and bootstrapping model to test the above stated hypotheses.

Model specification

$$FSR=(SI,UE,LS).....(1)$$

$$FSR=\beta_0+\beta_1SI+\beta_2UE+\beta_3LS+\mu.....(2)$$

Where

FSR = Fuel Subsidy Removal

SI = Saving and Investment

UE= Unemployment

LS= Living Standard

$\beta_1, \beta_2, \beta_3$ are treated as the elasticity coefficient of; Saving and Investment(SI), Unemployment (UE) and Living Standard (LS) while β_0 is the constant or intercept.

Validity and reliability

Table 1.

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Fuel Subsidy Removal	0.939	0.943	0.952	0.768
Living Standard	0.844	0.902	0.887	0.616
Savings and Investment	0.893	0.903	0.918	0.653
Unemployment	0.795	0.869	0.867	0.630

PLS-SEM output, 2024

The above table 1 expresses the metrics of reliability and validity of the constructs in the model. This considers that Cronbach's Alpha measures the internal consistency of the constructs. A higher value indicates better reliability. The value of Fuel Subsidy Removal at 0.939 indicates excellent internal consistency, the value of living standard at 0.844 shows good internal consistency and the value of Savings and Investment at 0.893 shows good internal consistency, indicating that the items are reliable. While Unemployment with a value of 0.795 is acceptable for internal consistency. Therefore, all constructs show good to excellent reliability, though Unemployment is slightly weaker compared to the others.

rho_A (Dijkstra-Henseler's rho) is a reliability model that measures internal consistency. The value of Fuel Subsidy Removal at 0.943 indicates that the construct has excellent reliability that is very strong. The value of living standard at 0.902 expresses excellent reliability of the construct and considered very good. Savings

and Investment with a value of 0.903 recorded excellent reliability, demonstrating that the construct is very consistent while unemployment with a value of 0.869 recorded good reliability. Therefore rho_A values confirm strong reliability for all constructs, with Unemployment being slightly lower but still acceptable.

Composite Reliability assesses the overall reliability of a construct and accounts for the varying loadings of indicators. The value of Fuel Subsidy Removal at 0.952 shows that reliability is excellent. Living Standard with a value of 0.887 shows a strong reliability of the construct. The value of savings and investment of 0.918 are considered very strong reliability while unemployment value of 0.867 are good reliability and considered acceptable. Therefore all constructs have strong composite reliability, ensuring that they are well-represented by their indicators.

Average Variance Extracted (AVE) measures the amount of variance captured by the construct relative to the amount of variance due to

measurement error. The convergent validity value of Fuel Subsidy Removal at 0.768 demonstrates good convergent validity. Living Standard with a value of 0.616 shows good convergent validity indicating that the construct captures a substantial amount of variance. The value of Savings and Investment at 0.653 expresses good convergent validity. While the value of

Unemployment at 0.630 reports a good convergent validity, indicating effective measurement of the construct. Therefore, all constructs demonstrate good convergent validity with AVE values above 0.5, indicating that they capture a significant amount of variance in their indicators.

R Square

Table II

	R Square	R Square Adjusted
Savings and Investment	0.863	0.862
Unemployment	0.781	0.779
Living Standard	0.844	0.841

PLS-SEM output, 2024

The Table II above indicates that the variability of the dependent variables is influenced by the action of independent variable as shown in the Savings and Investment value of 86.3% variability is explained by the model. This is a very strong R² value, meaning the model fits the data very well. While the minimal difference between R² and Adjusted R² suggests that the addition of predictors is beneficial, with no significant signs of over fitting.

Unemployment construct shows a value of 78.1% variability in the model. While this is still a good model, it is slightly lower than the other two variables, meaning that there is a bit more

unexplained variability. While the small reduction indicates that most of the predictors contribute meaningfully to the model, with little over fitting.

The value of living standard construct shows that 84.4% of the variability in the dependent variable related to living standards can be explained by the model. This is a strong explanatory power. While Adjusted R Square suggests that most of the predictors are useful and that there's very little overfitting. It still indicates a good model fit. Therefore, all the three models show high R² and Adjusted R² values, indicating strong fits. The slight reduction in the Adjusted R² values for each variable reflects a good balance.

Mean, STDEV, T-Values, P-Values

Table III

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Fuel Subsidy Removal -> Savings and Investment	0.929	0.929	0.013	72.529	0.000
Fuel Subsidy Removal -> Unemployment	0.884	0.885	0.017	51.387	0.000
Fuel Subsidy Removal -> Living Standard	0.803	0.803	0.038	21.295	0.000

PLS-SEM output, 2024.

To analyze the data in the above table, the Sample Mean (M) is quite close to the original sample value, indicating consistency in the data. The standard deviations provided are relatively small, suggesting that the data points are closely clustered around the mean. The T-value is calculated as the ratio of the original sample mean to the standard deviation. This statistic is used to

determine how much the sample mean deviates from a hypothesized value, in units of standard deviation. Larger T-values indicate that the sample mean is significantly different from the hypothesized value. In this case, all T-values are very high, suggesting strong deviations from the hypothesized value. While the p-value assesses the significance of T-value, it measures the probability

of observing a T-value as extreme, or more extreme than, the value observed if the null hypothesis is true. All p-values here are 0.000, which is less than 0.05, indicating that the results are statistically significant. For all three relationships, the results are highly significant, as indicated by the low p-values. The high T-values and low standard deviations suggest that the observed effects (in terms of mean differences) are not only statistically significant but also robust and reliable across the samples.

III. DISCUSSION OF FINDINGS

To test the first null Hypothesis (H_0) that there is no significant relationship between fuel subsidy removal and savings and investment in Zamfara State, as α is set at 0.05 as the threshold to determine whether the results are statistically significant or not. The p-value associated with the T-statistic is 0.000, and less than 0.05. This indicates that the observed relationship between fuel subsidy removal and savings and investment is statistically significant. The finding of this study aligns with the position of Aruofor&Ogbeide, (2023) and Oboro&Agbamu, (2024) who agreed that fuel subsidy removal has adverse effect on savings and investment.

To test the second null hypothesis (H_0) that there is no significant relationship between fuel subsidy removal and unemployment rate in Zamfara State, as α is set at 0.05 as the threshold. The p-value associated with the T-statistic is 0.000, and less than 0.05. It shows that the observed relationship between fuel subsidy removal and the unemployment rate is statistically significant. There is sufficient evidence that the p-value (0.000) is less than the significance level (0.05) and consequently the study rejects the null hypothesis. Therefore, it's concluded that there is a significant relationship between fuel subsidy removal and the unemployment rate in Zamfara State. The effect of fuel subsidy removal on the unemployment rate is statistically significant. The findings of this study is in conformity with the opinion of Yunusa, et'al, (2023) and Ikenga & Oluka, (2023) who noted that the rise in petrol prices lead to the shutdown of small businesses that cannot afford the rising cost of petrol and other overhead cost, and the aftermath of this is loss of jobs and worsening of the already high unemployment level.

Lastly, to test the third null hypothesis (H_0) that there is no significant relationship between fuel subsidy removal and living standards in Zamfara State, as α is set at 0.05 threshold, the p-

value (0.000) is less than the significance level (0.05) and the study rejects the null hypothesis. Therefore, it's concluded that there is a significant relationship between fuel subsidy removal and living standards in Zamfara State. Hence, the effect of fuel subsidy removal on living standards is statistically significant. The finding of this study is inline with the views of Yakubu, Abdullahi, Maijama'a, & Musa, (2023), Ali, Ahmad & Jibrilla, (2024) and Adepoju, Balogun, & Bekesuomowei, (2023) who posited that fuel subsidy removal worsen the existing deteriorated living standard of the masses in Nigeria.

IV. CONCLUSION

The study concludes that fuel subsidy removal has significant effects on savings and investment, unemployment rate, and living standards in Zamfara State. The results are consistent across all areas studied, with each relationship showing statistical significance. This implies that fuel subsidy removal has substantial negative implications on socioeconomic activities and development in Zamfara state.

Recommendations

Based on the conclusion of the study, the study hereby recommends as follows;

1. Promote savings through government-sponsored programs, such as matched savings accounts or high-interest savings bonds, to encourage individuals to save more and promote tax incentives and subsidies for individuals and businesses that invest in key sectors such as infrastructure, technology, and agriculture. This can stimulate savings and investments.
2. Government should develop vocational training programs and apprenticeships to increase the workforce that have relevant skills needed in the emerging industries to provide immediate employment opportunities in infrastructure projects and public works, and to offer grants, low-interest loans, and training to small and medium-sized enterprises (SMEs) to foster entrepreneurship.
3. Government should introduce policies to mitigate the impact on the cost of living, such as regulating prices of essential goods and services to prevent inflationary pressures. Strengthen social safety nets such as cash transfer programs, food assistance, and housing support to help those adversely affected by the subsidy removal. Government should also increase investment in basic

services like healthcare and education services to remain affordable and accessible for better and improved living standard.

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