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Assessing the Impact of Petroleum Subsidy Removal on the Performance of Small and Medium Scale Enterprises in Katsina Senatorial Zone

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ABSTRACT

The removal of fuel subsidies has emerged as a contentious issue in Nigeria following a Presidential declaration on May 29, 2023. This study aims to evaluate the ramifications of petroleum subsidy removal on the operational landscape of small and medium scale enterprises (SMEs) within the Katsina senatorial zone of Katsina state. Utilizing both primary and secondary data sources, this research employs a comprehensive analysis framework. Primary data, gathered through questionnaire surveys, underwent scrutiny through non-parametric analysis methods due to deviations from normal distribution, as confirmed by Kolmogorov-Smirnov and Shapiro-Wilk tests. The results of this investigation demonstrate compelling evidence: firstly, a noteworthy and adverse influence of heightened transportation costs resulting from the fuel subsidy removal on SME performance in the Katsina senatorial zone; secondly, a significant adverse impact of diminished consumer purchasing power, a consequence of the subsidy removal, on the operational effectiveness of SMEs within the same geographical scope; and finally, a material adverse impact of escalated raw material costs, stemming from the subsidy removal, on the performance metrics of SMEs operating in the Katsina senatorial zone. These findings underscore the imperative for policymakers and stakeholders to strategically manage the aftermath of fuel subsidy removal, particularly regarding transportation logistics, consumer affordability, and raw material procurement, to foster resilience and sustainability within the SME ecosystem of the region.

Keywords: Fuel Subsidy, Small and Medium Scale Enterprises, Performance, *Mann-Whitney* U Test.

1.0 INTRODUCTION

Nigeria is the most populous black nation in the world with a population of over 200 million people, potentially rich in human and material resources capable of propelling economic growth and development (Igbokwe-Ibeto et al, 2015). Nigeria has been struggling to achieve sustainable unity in diversity for decades. the country had experienced both military and democratic system of governments. The return of democratic rule in Nigeria after years of military regimes, raised expectations for a possible resolution of the hydra – headed socio-political and economic crisis bedeviling the nation since independence in 1960 (Igbokwe-Ibeto et al, 2015).

Unfortunately, Nigeria failed to attain desired economic and political development, hence the country moves from one economic and political crisis continuously.

The Nigerian government introduced oil subsidy to cushion the effect of rising global oil prices in the 1972. McCulloch et al, (2020) stated that subsidies exist because the government fixes the price of gasoline for consumers below the international price and uses government resources to pay for the difference. They further mentioned that subsidies were first introduced in 1970s as a response to oil price shocks in 1973. Subsidies can have both positive and negative consequences. It can be a useful tool for achieving various economic and social goals, such as reducing poverty, supporting industries during economic downturns, and promoting innovations (Niyi & Aregbesola, 2023). During president Bola Ahmed Tinubu's inauguration speech on May, 2023, he declared that the national subsidies on petroleum derivatives was lifted, and the fund earlier spent on subsidy would be spend in infrastructure, education, healthcare, and job creation (Sunday, 2023).

Niyi and Aregbesola (2023) stated that within 30 minutes of the president's address, not only fuel prices rose automatically, but the cost of transportation, food and manufacturing also increased. The removal of fuel subsidies in Nigeria has brought several changes in lives of its citizens. While the intention may be to address fiscal challenges and encourage market driven pricing, the decisions impact on inflation, transportation costs, and individual's

livelihoods cannot be overlooked Ogunode & Ukozor 2022, as cited in Niyi & Aregbesola, (2023). Thus, this study aimed to assess the impact of petroleum subsidy removal on the performance of small and medium enterprises SMEs in Katsina central zone of Katsina state.

Research Problems

The removal of subsidies on fuel has led to increase in the costs of inputs use in the production process and also has impact on the marketing and distribution of goods and services. It brought about increments in the prices of goods and services which have impacted negatively on every institution in the country. The abrupt increase in the fuel prices resulting from subsidy removal has further compounded the economic hardships faced by the already struggling Nigerian masses that are grappling with high unemployment rates and pervasive economic challenges (Darlington and Monday, 2023).

Due to the continuous lack of electricity across the country, majority of small and medium scale enterprises SMEs rely on fueling their machines for business operations which is now very difficult to cater for. However, the incessant increase in the cost of transportation, changes in consumer propensity, increase in the price of inputs as well as lack of government palliatives in Katsina State have negatively affected the performance of small and medium scale businesses which continues to affect income distribution and persistent increase in the price of goods and services. This has increased the suffering of individuals from hunger and poverty. The increase in the prices of consumer goods makes many families to hardly afford three square meals. People find it difficult to travel from one destination to another due to increase in the transportation costs despite the efforts of Katsina state government to provide enough transport facilities with little travel charges under Katsina State Transport Authority (KTSTA). The situation remained the same in Katsina State and has eventually resulted to increase in social vices kidnapping, banditry, drug abuse, malnutrition, prostitution among others.

Research Objectives

The broad objective of this study is to assess the impact of petroleum subsidy removal on the performance of small and medium enterprise in Katsina Central Senatorial zone, while the specific objectives are:

i.   To examine the effects of increase in transportation cost as a result of petroleum subsidy removal on the performance of small and medium scale   businesses in Katsina senatorial zone.

ii.   To find out the impact of decrease in consumer purchasing power as a result of petroleum subsidy removal on the performance of small and medium scale enterprises in Katsina senatorial zone.

iii.   To investigate the impact of increase in cost of raw materials on the performance of small and medium scale enterprises in Katsina senatorial zone.

Research Questions

1.   What are the effects of increase in transportation cost as a result of petroleum subsidy removal on the performance of small and medium enterprises in Katsina senatorial zone?

2.   What are the impacts of decrease in consumer purchasing power as a result of petroleum subsidy removal on the performance of small and medium scale enterprises in Katsina senatorial zone?

3.   What are the impacts of increase in the cost of raw materials on the performance of small and medium scale enterprises in Katsina senatorial zone?

Research Hypothesis

Hypothesis One

i.   (H0): There is no effect of an increase in transportation cost as a result of petroleum subsidy removal on the performance of small and medium enterprises in Katsina senatorial zone.

ii.   (H1): There is a significant effect of an increase in transportation cost as a result of petroleum subsidy removal on the performance of small and medium enterprises in Katsina senatorial zone.

Hypothesis Two

i.   (H0): There is no impact of a decrease in consumer purchasing power as a result of petroleum subsidy removal on the performance of small and medium scale enterprises in Katsina senatorial zone.

ii.   (H1): There is a significant impact of a decrease in consumer purchasing power as a result of petroleum subsidy removal on the performance of small and medium scale enterprises in Katsina senatorial zone.

Hypothesis Three

    i.   (H0): There is no impact of an increase in the cost of raw materials on the performance of small and medium scale enterprises in Katsina senatorial zone.

    ii.   (H1): There is a significant impact of an increase in the cost of raw materials on the performance of small and medium scale enterprises in Katsina senatorial zone.

Scope and Limitations of the Study

This study was aimed at investigating the impact of petroleum subsidy removal on the performance of small and medium scale enterprises in Nigeria. While carrying out this research, the researchers focused on Katsina central senatorial zone of Katsina state, Nigeria. Similarly, only increase in transportation cost, decrease in consumer purchasing power and increase in cost of raw materials performance were investigated, letting out other small and medium scale enterprises performance proportion for further research.

Significance of the study

The findings of this research will benefit individuals, government and businesses in the following ways:

    i.   Government agencies in policy making: the findings of this study will assist and educate them on how to establish policies that can solve economic problems and eliminate hardship and suffering of the common man.

    ii.   Researchers as source of reference: the finding of this study will also be beneficial to researchers in conducting further researches relevant to the topic of this study.

    iii.   Civil society organization and non-governmental organizations: the findings of this study will also serve as reference document to civil society organization and non-governmental organizations.

Literature Review

According to PCW (2023) fuel subsidies began in the 1970s and became institutionalized in 1977, following the promulgation of the price control Act which made it illegal for some products (including petrol) to be sold above the regulated price. It further stated that the concept of subsidy itself is noble; its administration in Nigeria has been plagued with serious allegations of corruption and mismanagement. In 2012, Former President Goodluck Ebele Jonathan began a partial deregulation of the Nigerian downstream sector, or the partial removal of fuel subsidies in Nigeria, but it was unsuccessful due to a few strong political interest groups in the country who insisted that the removal of subsidies would cause a lot of difficulties for Nigerian citizens. Subsidy payments drain the country's revenue that are supposed to be used for infrastructural development, education, health, agriculture, and other social programmes (Niyi & Aregbesola, 2023).

Tell Magazine (2012) stated that the house of representatives ad-hoc committee's report on the fuel subsidy regime established that the actual subsidy money paid by the federal government as at December 2011 was 2.587 trillion Naira as against 245 billion Naira appropriated in 2011 budget. Yet, out of this amount, 1 trillion Naira was paid to fake and non-existing companies. Therefore, there were many corruption allegations on the issue of Nigerian petroleum subsidy and as a result, the government considered it important to remove petroleum subsidies. In the same year, the Federal Government stressed that the amount spends on fuel subsidies could be used to finance infrastructural development across the country.

Fuel price was first increased from 5 kobo to 9.5kobo per liter (Daily Independence 2012, as cited in Igbokwe-Ibeto et al, 2015). With these increases in the prices of petroleum products, more money has entered into the coffers of the Federal Government which is yet to reflect in the life of the people in any correct way (Igbekwe-Ibeto et al, 2015).

Meaning of subsidy

According to the Academics Dictionary of Economics (2006) as cited in Iheagwara et al. (2014) defined subsidy – "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 is known as subsidy. This may be given as a counter balancing measure to the imposition of the custom duty (In the nature of protection duty) by an importing country government. One important objective of subsidy is to keep its prices below the cost of production."

Furthermore, in the view of Lawson (2012), subsidy can also be defined as any measure that keeps prices consumers pay for goods or products below market levels for consumers or for producers above market.

Benefits from fuel subsidy removal

According to Iheagwara et al (2014), If well implemented, there are certain benefits which the government and her economic experts explained can be derived from the fuel subsidy removal. These benefits include: -

- Fuel subsidy removal will allow government access to more funds to develop infrastructure.

- Reduction in the pressures on foreign reserves

- It will provide employment for the teeming jobless citizenry as well as improve education, health, power, water resources and agriculture.

- It will reduce borrowing

- Allows free market operation

- Helps address the great imbalance between the recurrent and capital expenditure in Nigeria.

- Encourages local and foreign direct investment in the oil sector). ☐ Frees more funds for local investment in the oil sector.

- Increases local refinery production.

Negative Consequences of Fuel Subsidy Removal

According to Abang (2012), the removal of fuel subsidy is associated with certain negative consequences which affect businesses. They include the following:

- **Increase in Cost of Production**

Removing fuel subsidy would result an increase in the cost of production for the few companies that still exist. This would lead to more job losses (as the companies would be forced to down-size in order to survive) in addition to the unavoidable increase in the cost of the companies' products.

- **Increase in the Cost of Providing Services**

Removal of fuel subsidy would increase the cost of service provision because the astronomical inflation arising from subsidy removal would not have been factored into the budget; this certainly would have negative effects on the standard of living of Nigerian households and businesses.

- **Increase in the Cost of Transportation**

Everybody appreciates the fact that when motorists pay more for fuel, the transport fare increases. This has been the case even when the increase is only marginal. In the particular case where the cost of fuel is expected to double, the increase in transport fare will be astronomical. This will in turn affect everything else – school fees, house rent, just name it.

- **Increase in Cost of Living**

In addition to school fees, house rent, etc. the cost of every item of food will astronomically increase with removal of fuel subsidy and, for all sane people; this is where the trouble is. When poor people are unable to eat because they cannot buy roasted corn or yam (which they usually eat as meal) as is bound to happen when fuel subsidy is removed, there will be no peace in this country.

- **Increase in Corruption**

Removal of fuel subsidy and devaluation of the Naira would render the salaries received by civil/public servants at all levels inadequate. The tendency is that corruption, which the government has proved incapable of fighting, would increase. This has always been the case and there is no reason why this will not happen now.

2.0 RESEARCH METHODOLOGY

The researchers in this chapter indicated their efforts to generate the primary and secondary data used in this research. The chapter also highlighted the statistical tools that are used in analysis of the data collected.

Research Design

According to Lelissa (2018) research design is the overall plan for connecting the conceptual research problems with the pertinent (achievable) empirical research. Research design is a framework that includes the method and procedure to collect, analyzes, and interprets data (Bouchrika, 2023). This study is a descriptive research in which a survey research design was adopted. This will enable the researcher to assess the impact of petroleum subsidy removal on the performance of small and medium scale enterprises in the study area. Visser et al, (2000) states that survey study can be used to assess personality variables such as attitudes and opinions about events, individuals or procedures. The descriptive survey design is considered to be appropriate for this study as it would seeks the opinions of small and medium scale business owners on how the present fuel subsidy removal affect their businesses.

Area of Coverage

This study was aimed at assessing the impact of petroleum subsidy removal on the performance of small and medium scale enterprises in Katsina senatorial zone of Katsina state,

Population of the Study

The target population of this study is the registered Small & Medium scale businesses in the Local Governments under investigation. At the time of conducting this research (2023/2024), the population of the study will comprise all the 5,327 registered Small & Medium scale businesses in the 11 local government areas of Katsina senatorial zone.

3.0 RESULTS AND DISCUSSION

Sampling Technique and Sample Size Determination

Collecting data from the entire population is expensive and also time consuming. Thus, we need an appropriate sample size so that we can make an inference about the population based on that sample. We will choose multi-stage cluster sampling technique in selecting the respondents for this study. First stage is going to be purposive selection of 11 local governments (Katsina Central Zone) of Katsina state due to the availability of existing Small & Medium scale enterprises in the areas. In second stage, simple random sampling technique would be used to select three (3) communities (towns & villages) in each local government, making a total of 33 communities. In the third stage, we would randomly select the elements for sampling (i.e. owners of registered Small & Medium Scale Enterprises) across all the 33 communities.

Given the total number of populations known, Yamane's (1967) formula was used to calculate a sample size which could accurately represent the total number of 5,327 registered SMEs of the aforementioned 11 LGAs as presented in Table

1. Below is the formula: $n = N/(1 + Ne^2)$

Where n = Required Sample Size N = the Population Size

e = is the Margin of error to be decided by the researcher.

We have considered confidence level of 95 per cent in this regard. Therefore, 95% confidence interval is equal to the 0.05.

Sample Size of Rural Farmers:

$n = 5{,}327/(1 + 5{,}327 \times 0.05)^2$ $n = 5{,}327/(5{,}328 \times 0.0025)$ $n = 5{,}327/13.32$

n= 400

However, the researcher observed that 400 respondents might not be adequate and decided to add 128, hence the total sample size increased to 528 respondents. Abdullahi (2011) observed that, the higher the size of a sample, the greater the degree of reliability of a research finding. Therefore, the information about the impact of petroleum subsidy removal on the performance of Small & Medium Scale Enterprise in Katsina State will be collected from 528 business owners in the study area. In addition, the total sample of 528 business operators were divided into 33 rural settlements, which gave a sub-sample of 14 respondents from each one of 33 villages across the 11 local governments under investigation. 48 respondents will be selected from each local government.

Moreover, the variables in this study comprises production rate, sales rate, profit, level of demand on commodities and services and fuel price per liter. These variables were chosen because of their significant impact on the performance of Small & Medium Scale enterprises. The data set for all the variables will be sourced through structured questionnaire.

Reliability Tests of Data Collection Instruments

Reliability pertains to the consistency and precision of outcomes in representing the sample size of a study, as well as the reproducibility of study results using a similar method. This particular study utilized quantitative methods, employing a Likert scale questionnaire as the primary instrument. Therefore, it was crucial to assess internal consistency to gauge how well the items aligned with the study's variables. The reliability was assessed using measures such as Cronbach's Alpha Reliability Coefficient.Creswell (2012) suggests that for a research instrument to be reliable, the composite Cronbach's Alpha Reliability Coefficient for all variables should be at least 0.7. The table below displays that all variables in this study exceed the threshold, thereby affirming the study's results.

Reliability Summary

Variable	Cronbach's Alpha	Number of Items in The Scale
Transport Cost	0.943	10
Consumer Purchasing Power	0.964	10
Cost of raw materials	0.954	10

Table 1. Reliability test

1. What are the effects of increase in transportation cost on the performance of small and medium enterprises in Katsina senatorial zone?

Items	SD	D	N	A	SA
1	90	18	54	90	234
2	126	18	72	162	108
3	90	18	36	144	198
4	54	54	54	180	144
5	72	72	72	144	126
6	72	126	54	108	126
7	90	54	54	126	162
8	90	18	54	144	180
9	90	36	54	126	180
10	90	72	54	108	162

Table 2. Responses on research question 2

(H0): There is no effect of an increase in transportation cost on the performance of small and medium enterprises in Katsina senatorial zone.

(H1): There is a significant effect of an increase in transportation cost on the performance of small and medium enterprises in Katsina senatorial zone.

Test Statistics

	Transport Cost
Mann-Whitney U	18630.000
Z	-2.996
Asymp. Sig. (2-tailed)	.003

Table 3. Test of hypothesis 1

The Mann-Whitney U statistic is 18630.000, and the associated Z statistic is -2.996. The p-value (asymptotic, 2-tailed) is .003.

With a p-value of .003, which is less than the typical significance level of .05, we reject the null hypothesis. This indicates that there is a statistically negative effect of an increase in transportation cost on the performance of small and medium enterprises in Katsina senatorial zone. The negative Z statistic suggests that the mean ranks of the variables are significantly different, implying that higher transportation costs are associated with lower performance of small and medium enterprises

2. What are the impacts of decrease in consumer purchasing power on the performance of small and medium scale enterprises in Katsina senatorial zone?

Items	SD	D	N	A	SA
1	90	54	90	144	108
2	72	36	54	144	180
3	54	72	36	144	180
4	108	54	72	126	126
5	90	54	54	90	198
6	72	0	144	144	126
7	72	72	54	108	180
8	54	54	54	144	180
9	90	72	72	108	144
10	54	72	108	162	90

Table 4. Responses on research question 2

(H0): There is no impact of a decrease in consumer purchasing power on the performance of small and medium scale enterprises in Katsina senatorial zone.

(H1): There is a significant impact of a decrease in consumer purchasing power on the performance of small and medium scale enterprises in Katsina senatorial zone.

Test Statistics

	consumer purchasing power
Mann-Whitney U	12312.000
Z	-7.660
Asymp. Sig. (2-tailed)	.000

Table 5. Test of hypothesis 2

The Mann-Whitney U statistic is 12312.000, and the associated Z statistic is -7.660. The p-value (asymptotic, 2-tailed) is .000.

With a p-value of .000, which is less than the typical significance level of .05, we reject the null hypothesis. This indicates that there is a statistically significant impact of a decrease in consumer purchasing power on the performance of small and medium scale enterprises in Katsina senatorial zone. The negative Z statistic suggests that the mean ranks of the variables are significantly different, implying that lower consumer purchasing power is associated with lower performance of small and medium scale enterprises.

3. What are the impacts of increase in the cost of raw materials on the performance of small and medium scale enterprises in Katsina senatorial zone?

Items	SD	D	N	A	SA
1	108	54	54	234	36
2	72	18	72	216	108
3	36	108	90	180	72
4	54	54	90	162	126
5	72	54	72	180	108
6	72	72	126	108	108
7	54	54	126	144	108
8	72	54	72	162	126
9	72	54	72	162	126
10	36	18	144	162	126

Table 6. Responses on research question 3

(H0): There is no impact of an increase in the cost of raw materials on the performance of small and medium scale enterprises in Katsina senatorial zone.

(H1): There is a significant impact of an increase in the cost of raw materials on the performance of small and medium scale enterprises in Katsina senatorial zone.

Test Statistics

	cost of raw materials
Mann-Whitney U	18954.000
Z	-2.753
Asymp. Sig. (2-tailed)	.006

Table 7. Test of hypothesis 3

The Mann-Whitney U statistic is 18954.000, and the associated Z statistic is -2.753. The p-value (asymptotic, 2-tailed) is .006.

With a p-value of .006, which is less than the typical significance level of .05, we reject the null hypothesis. This indicates that there is a statistically significant impact of an increase in the cost of raw materials on the performance of small and medium scale enterprises in Katsina senatorial zone. The negative Z statistic suggests that the mean ranks of the variables are significantly different, implying that higher cost of raw materials is associated with lower performance small and medium scale enterprises.

4.0 CONCLUSION

Based on the interpretations of the hypotheses, the findings suggest that various external factors significantly influence the performance of small and medium enterprises in the Katsina senatorial zone. Specifically, an increase in transportation cost, a decrease in consumer purchasing power, and an increase in the cost of raw materials as a result of petroleum subsidy removal have significant impacts on the performance of these enterprises. Higher transportation and raw material costs, along with lower consumer purchasing power, are associated with decreased performance. These results underscore the importance of effectively managing these external factors to enhance the performance and competitiveness of small and medium enterprises in the zone.

REFERENCES

Abang I. S. (2012), Enlightenment to the Impact of Fuel Subsidy Removal in Nigeria

Akakpe, I. P. (2014). Bureaucracy and Good Governance. Lagos: Punmark Publishers Bouchrika, I. (2023). Types of Research Design: Perspective and Methodological Approaches. Research.com. https://research.com

Bouchrika, I. (2023). Types of Research Design: Perspective and Methodological Approaches. Research.com. https://research.comurnal.io

Cresswell, J. W. (2014). A Concise Introduction to Mixed Methods Research. SAGE Publications, London, pp(2-40).

Darlington, N. & Monday, T. (2023). Price unleashed: examining the ripple effects of petroleum subsidy removal on consumer buying behavior in Nigeria (systematic literature review). International Journal of Advanced Academic and Educational Research, 13(7), 40-51 https://projectclue1.medium.com/subsidy-removal-and-how-it-affects- academicresearch-in-nigeria-dddf415e33e8. Subsidy removal and how it affects academic research in Nigeria\by project clue\2\June, 2023\ medium

Igbokwe-Ibeto, C. J., Ekwim, N. C., & Agbodike, F. C. (2015). Nigerian government and oil subsidy regime: a dilemma. International Journal of Development and Management Review, vol. 10, 188-200

Iheagwara, A.I, Nwiko, L.A, Out, O.A et al. (2014). Non-Parametric Analysis on the Effects of Fuel Subsidy Removal on Small Business Performance in South-East Nigeria, The International Journal Of Business & Management, pp(81-91).

Kothari, C. R. (2004). Research Methodology: methods and Techniques. 2nd edition. New Age International (p) Limited. New Delhi, India.

Lawson Alaenetonwa (2012), "Fuel Subsidy Removal: The Challenge before House Committee on Petroleum Downstream", retrieved from http://www.themaceonline.com/house-of-reps-news/241-fuel-subsidy-removal-thechallenge-before-house-committee-on-petroleum-downstream.

Lelissa, T. B. (2018). Chapter Five Research Design and Methodology; University of South Africa, PhD Thesis. McCulloch, N.,

Moerenhout, T. & Yang, J. (2020). Fuel subsidy reform and the social contract in nigeria: micro-economic analysis. International Centre for Tax and Development. www.ictd.ac

Niyi, J. O. & Aregbesola, B. G. (2023). Impact of subsidy removal on Nigerian educational system. Middle European Scientific Bulletin, vol.39. https://cejsr.academicjo

NPC (2006). National Population Commission, Federal Republic of Nigeria Official Gazette, vol. 94, 24

PWC, (2023). Fuel Subsidy in Nigeria – issues, challenges and the way forward. https://www.pwc.com/ng