ISSN:2782-8484

FEDPOLAD Journal of Science & Agricultural Technology (FEDPOLADJSAT): Vol. 4, ISSUE 1. OCTOBER, 2024 Edition

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COPING STRATEGIES TO MITIGATE THE EFFECT OF FUEL SUBSIDY REMOVAL ON THE LIVELIHOOD ACTIVITIES OF RURAL HOUSEHOLDS IN ONDO STATE, NIGERIA

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ABSTRACT

The study examined the coping strategies to mitigate the effect of fuel subsidy removal on the livelihood activities of rural households in Ondo State, Nigeria. A multistage sampling procedure was used to select one hundred (100) respondents from whom data were collected through questionnaire and interview schedule. Data were analysed using frequency counts, mean, percentages, Chi-square and Pearson Product Moment Correlation. The findings revealed that the mean age of the respondents was 59.75 years and they were mostly male (69.0%). A significant proportion (64.0%) of the respondents engaged in agriculture as their primary livelihood activity. Increase in daily expenses ($\bar{x}$=2.97) and increased transportation cost ($\bar{x}$=2.79) were the leading effects of the fuel subsidy removal. The effect of fuel subsidy removal was high among the majority (60%) of the respondents. However, adjustment in spending habit ($\bar{x}$=2.31), reduced travel/transportation cost ($\bar{x}$=1.71) and diversifying income sources ($\bar{x}$=1.53), were the prominent coping strategy employed to mitigate the effects of fuel subsidy removal on their livelihood activities. Respondents' Age (r=-0.218; p=0.030), gender (χ^2=14.662; p=0.000), and educational level (χ^2=10.454; p=0.015) had significant relationships with their coping strategies. The study therefore, concludes that the effect of fuel subsidy removal was high while the coping strategy employed was low. The rural households should be provided with agricultural incentives, small and medium scale enterprises' grants and other social support programmes, by government and non-governmental organisations.

Keywords: *coping strategies, fuel subsidy removal, livelihood activities, rural households.*

INTRODUCTION

Subsidy can be described as a monetary assistance or financial aid provided by a government to back critical activity, with the intension of retaining the prices lower or maintaining the income of the producers of desired commodities. Nigeria, as an oil-dependent economy has long relied on petroleum subsidy to ensure affordable fuel prices for its citizens. The country provides subsidy on petroleum products to mitigate the effects of rising fuel prices on the population (Onwuamaeze and Ekeghe, 2020). However, in recent years, the Nigerian economy has faced numerous challenges including the rising rate of inflation, unemployment and increase in poverty rates. The global fossil fuel subsidy is large and was estimated at $1 trillion in 2022, from $325 billion in 2018, according to the International Energy Agency. This amount is significantly higher than the value of global aid which was estimated at $204 billion in 2022 and larger than the combined government revenue of developing countries. This has led to call for the removal of global fossil fuel subsidy so that the saved funds can be channelled to

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assist the poor and vulnerable in need of humanitarian assistance in developing countries (Couharde and Mouhoud, 2020; Ozili and Ozen, 2021). However, the removal of fossil fuel subsidy is contentious because there is the argument that fossil fuel subsidy is a form of aid because it makes fuel more affordable for the poor. Despite this favourable argument, a large literature document the negative consequences of fuel subsidy which include; increasing air pollution and greenhouse gas emissions (Sweeney, 2020), road congestion (McCulloch, *et. al*, 2021), road accidents and premature deaths (Parry, *et. al*, 2021), foregone tax revenue (Sweeney, 2020), wider inequality gap between the poor and the rich (McCulloch *et. al*,, 2021).

Fuel subsidy is discount on the market price of fuel offered by government, to allow citizens pay less than the market price of fuel (Ovaga and Okechukwu, 2022).

In Nigeria, fuel subsidies were first introduced in the 1970s as a response to the oil price shock in 1973. Fuel subsidies were partially removed in 1986. Since then, the fuel subsidies have been in place. In 2023, the removal of fuel subsidies leads to an immediate increase in fuel price. This triggered a chain reaction, causing higher transportation cost and ultimately contributed to inflation among other things both in urban and rural areas of the country. The petroleum subsidies can strain government finances, limiting its ability to invest in essential services. A study by Agu, *et al.* (2018) revealed that subsidy resulted in reduced government spending on social programmes, leading to a decline in access to basic services, particularly among the most vulnerable population and deepens their level of poverty. Given the rising poverty levels in Nigeria, it is imperative to consider the implications of subsidy removal on livelihoods of rural households and their coping techniques. The oil sector in Nigeria has had a significant impact on the country's economic policies and prosperity since attaining independence. The oil sector in Nigeria plays a crucial role in the country's economy, serving as a vital component rather than a mere dependency (Itumo and Onyejiuba, 2019). The primary source of Nigeria's economic strength is in the money generated from oil and gas, which constitutes over 90% of government income and about 40% of the nation's gross domestic product (GDP). Despite the notable accomplishments in the oil sector, the Nigerian government has consistently shown an inability to effectively harness the wealth generated from oil to significantly improve the well-being of its population in terms of poverty alleviation, the provision of essential social infrastructure, and meeting necessities (Raji, 2018).

According to Umar and Umar (2013) and Siddig *et al*., (2014), Nigeria's subsidy scheme distorts fiscal planning, encourages wasteful spending, and worsens inequality by benefiting wealthy families more. Umeji and Eleanya (2021) argue that despite the introduction of fuel subsidies, Nigerian oil wealth has not translated into improved standard of living, and that fuel subsidy removal could have severe consequences that can be mitigated by government transparency in spending the funds saved from fuel subsidy removal on infrastructure development.

The rural areas of Nigeria have long had challenges in terms of their quality of life, and the escalation in fuel costs has exacerbated this issue. The scarcity of food in urban areas may be attributed to the substantial transportation expenses incurred by rural residents, hindering their ability to convey agricultural and non-agricultural goods to markets for sale.

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Consequently, perishable commodities such as tomatoes, mangoes, and oranges have the potential to deteriorate, resulting in an escalation in poverty rates among rural inhabitants. Numerous studies have been conducted to examine the consequences of gasoline subsidy elimination in Nigeria. However, there is a dearth of research on the specific effects of subsidy removal on the rural population, which has historically been marginalised by successive Nigerian governments across several administrative tiers and the way they cope with effects of the removal of subsidy on their livelihoods. Thus, this study attempted to find out the coping strategies to mitigate the effect of fuel subsidy removal on the livelihood activities of rural households in Ondo State. This was achieved through the following specific objectives:

i. to describe the socio-economic characteristics of the rural households in the study area;
ii. to examine the livelihood activities of the rural households in the study area.
iii. to assess the effect of fuel subsidy removal on the livelihood activities of the rural households in the study area.
iv. to ascertain the coping strategies employed to mitigate the effect of fuel subsidy removal on the livelihood of the rural household in the study area.

RESEARCH METHODOLOGY

This study was carried out in Ondo State, Nigeria. Ondo State was carved out of the former Western State of Nigeria in 1976. Ondo State lies between latitudes 5°45' and 8°15' north of the equator and longitude 4°30' and 6°00' east of Greenwich meridian (Oladele, 2010). The population of the study comprised rural households in the study area. A multi-stage sampling procedure was used to select the respondents. The first stage involved purposive selection of two Local Government Areas (LGAs) in Ondo State (Ifedore and Ileoluji/Okeigbo LGAs). The reason for the purposive selection was to choose local government areas that are rural or have many rural communities under them. The second stage involved selection of five (5) towns/communities from each of the selected Local Government areas (Ilaramokin, Isarun, Ero, Irese and Ijare from Ifedore LGA; Bolorunduro, Ayetoro, Idiroko, Agunla, Temidire, from Ileoluji/Okeigbo LGA). While the third stage involved systematic (nth term) selection of ten (10) rural household heads from each community at 5^{th} interval for communities with large rural households and 3^{rd} interval for communities with fewer rural households. This culminated in a total of one hundred (100) respondents that constituted the sample size for the study. Data were collected with the aids of validated structured questionnaires and interview scheduled designed in line with the objectives of the study.

The dependent variable; coping strategy was measured on a 4-point scale of Not at all = 0, rarely = 1, occasionally = 2 and frequently = 3. The mean was obtained and used to categorize the respondents into having low or high coping strategy. The data collected were analysed using frequency counts, percentage, mean, Chi-square and Pearson product moment correlation (PPMC).

RESULTS AND DISCUSSION

Socio-economics characteristics of respondent in the study area

The results of socio-economic characteristics of the respondents (Table 1) revealed that their mean age was 59.75 years. This implies that majority of the respondents were elderly and therefore,

ISSN:2782-8484
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maybe vulnerable to the effect of fuel subsidy removal, and thereby requires sustainable coping strategies. Majority (69.0%) of the respondents were male. This finding implies that male-headed households were more than female-headed households in the study area. This could help the household to sustainably engage in agriculture which is the prominent livelihood activity of the rural people. This aligns with the findings of Okwuanya *et al*., (2015) that male-led households are more likely to embrace agricultural technology, because of their leading role; facilitating the planning and operation of the farm to improve productivity and maintain the well-being of the family. It further agrees with a statement in the study of Obabire and Adeleye (2024), that males are mostly stronger and often have the strength to engage in agricultural practices than female. Table 1 further revealed that the majorly (73.0%) of the household heads had one form of education or the other, leaving 27% of the respondents with no formal education. This indicate that although large number of the respondents had formal education ranging from primary to the tertiary level, the level of literacy of the sampled respondents is still relatively low, considering the number of those that had no formal education. The level of education affects the type of decision household heads take in mitigating the effect of the removal of fuel subsidy through enhanced productivity.

The results (Table 1) also revealed that the mean household size was 5.69 which is approximately 6 persons. This indicates that the respondents had moderate dependants to cater for. They could also be engaged as family labour for farming and other household livelihood activities, which could in turn influence the way the households cope with the removal of fuel subsidy on their means of livelihood. The results finally show that the mean monthly income of the respondents was ₦113,800. This implies that the rural households have an average monthly income that may not be enough to cope adequately with the removal of the fuel subsidy, given the numbers of their household members, and the economic situation in the country.

Table 1: Distribution of the respondents based on their socio-economic characteristics

Socio-economic characteristics	Frequency	Percentage	Mean
Age (Years)			
≤ 60	49	49.0	59.75
> 60	51	51.0	
Gender:			
Male	69	69.0	
Female	31	31.0	
Educational Qualification			
No formal education	27	27.0	
Primary education	31	31.0	
Secondary Education	26	26.0	
Tertiary Education	16	16.0	
Household size (persons)			
1 – 5	51	51.0	
6 – 10	48	48.0	5.69
11 – 15	1	1.0	
Monthly Income (₦)			
≤ 100,000	76	76.0	
>100,000	24	24.0	113800

Source: Field survey, 2024

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Livelihood activities of rural households in the study area

Table 2 revealed that a higher proportion of the respondents (64%) engaged in agriculture as their primary livelihood activity. This indicates that farming is the dominant occupation within the population, which is common in rural areas or developing regions where agriculture remains the backbone of the local economy. Agriculture, which is widely practiced and understood, has been identified to be a useful starting point for the development of livelihood. Offar *et al*., (2014) found that majority of the household heads were into farming as their main occupation. The sector traditionally contributes to improving food security and nutrition and remains key for stimulating growth, poverty reduction, and creating employment opportunities. Thus, agriculture is the major means of livelihood and source of income among the rural households. Makita (2016) reported that the motives to specialize in agriculture (on-farm) livelihood prevail in a region with favourable conditions for agricultural production, including low risk of prolonged drought, land degradation, flooding, and extreme weather events. The findings further revealed that appreciable number (33.0%) and 29.0% of the respondents were engaged in crafts/artisanal products making and Small business, respectively, as their means of livelihood. These activities represent very low cost, skills with low return niche occupied by the respondents with very low human capital accumulation in either formal education or vocational training. The result, however, reveals a very poor representation of households in the following livelihood activities. Government employment-civil servant (11.0%), Provision of services-Transportation (9.0%), Private employment (5.0%), Forest and natural resources' products sales and Government support – pension (4.0%), and social welfare programme (1.0%). The result indicates that most of these activities are not commonly practised within the study area, thus limiting their activities.

Table 2: Distribution of the respondents based on their livelihood activities n = 100

S/N	Livelihood Activities	Frequency	Percentage
1	Agriculture	64	64.0
2	Small business	29	29.0
3	Forest and natural resources' products sales	4	4.0
4	Handicrafts and artisanal products making	33	33.0
5	Government employment-civil servant	11	11.0
6	Private employment	5	5.0
7	Government support – pension, social welfare programme.	1	1.0
8	Provision of services- Transportation	9	9.0

Source: Field survey, 2024

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Effect of fuel subsidy removal on the livelihood activities of the rural households

Table 3 presents the results of the effect of fuel subsidy removal on the livelihood of rural households in the study area. Increase in daily expenses as a result of fuel subsidy removal ranked highest with a mean ($\bar{x}$=2.97), among the effects of subsidy removal. This may be as a result of increased daily transportation cost, increased feeding cost, and other daily expenses which cannot be neglected. The effect was also pronounced in the area of increased transportation cost ranking 2nd with a mean of ($\bar{x}$=2.79). This may be as a result of the increased prices of fuel in the country after the removal of the subsidy. The implication is that the high cost of transportation would increase the production cost which could negatively impact the livelihood activities of the respondents. The study conducted by Yunusa, et al., (2023) stated that **the removal of the fuel subsidy has led to increased prices for transportation and commodities, adding to economic hardships, businesses struggle as they are forced to spend more money on fuel consumption.** In the same vein, the study of Umeji and Eleanya (2021) explained that Nigerian citizens, especially the poor, suffer more in the form of higher transport fares and increased prices of food items and other essential commodities. In addition, the fuel subsidy removal had contributed to high cost of input among the respondents in the study area with a mean of ($\bar{x}$=2.57) as noted by the respondents. This may be as a result of increased cost of goods, taxes and reduced procuring power. Other effects include; Increased energy cost ($\bar{x}$=2.42, rank=4th), reduced profitability of livelihood activities ($\bar{x}$=2.39, rank=5th), negative impact on one's ability to generate income ($\bar{x}$=2.36, rank=6th) and increased cost of production ($\bar{x}$=2.34, rank=7th). Some of the respondents also agreed that fuel subsidy removal led to reduced patronage ($\bar{x}$=1.88) in their businesses and increased debt burden ($\bar{x}$=1.52), respectively, ranking 8th and 9th. A few respondents believed that fuel subsidy removal led to reduced remittances ($\bar{x}$=1.31), and reduced agricultural productivity ($\bar{x}$=1.31) which jointly ranked lowest in the study area. The implication of these may be lack of purchasing power to procure agricultural inputs and transport themselves to their farms on daily bases because of the high cost of transportation due to the subsidy removal.

Table 3: Distribution of the respondents based on the effect of fuel subsidy removal on their livelihood activities n = 100

S/N	Statements	Mean	Rank
1	The removal of fuel subsidy has led to an increase in my daily expenses	2.97	1st
2	The removal of fuel subsidy has negatively impacted my ability to generate income.	2.36	6th
3	The changes in fuel prices have affected the profitability of my livelihood activities.	2.39	5th
4	The cost of production of my goods has increased seriously	2.34	7th
5	Reduced agricultural productivity	1.31	10th
6	Increased debt burden	1.52	9th
7	Increased energy cost	2.42	4th
8	Reduced remittances	1.31	10th
9	High cost of input	2.57	3rd
10	Increased transportation	2.79	2nd
11	Reduced patronage	1.88	8th

Source: Field survey, 2024

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Level of the effect of fuel subsidy removal on livelihood activities

Result of analysis on table 4 shows the mean categorisation of the respondents based on the effect of fuel subsidy removal on their livelihood activities, to ascertain the level of the effect in the study area. The result shows that the majority of the respondents (60.0%) experienced a high level of effect of fuel subsidy removal on their livelihood activities. The implication of this is that most of the respondents were highly affected by fuel subsidy removal.

Table 4: Mean categorization of the respondents based on the effect of fuel subsidy removal on their livelihood activities n = 100

Level of effect	Scores	Frequency	Percentage
Low effect	10.0 – 23.85	40	40.0
High effect	23.86– 30.0	60	60.0
Minimum score	10.0		
Maximum score	30.0		
Mean score	23.86		

Source: Field survey, 2024

Coping strategies to mitigate the effect of fuel subsidy removal on the livelihood activities of the respondents

The distribution of the respondents' coping strategies is presented in Table 5. Based on the result, the most common livelihood coping strategy utilised by the respondents in the study area was adjusting their spending habits to cope with the increased cost of fuel ($\bar{x}$=2.31). Reduction in expenditure and enhancing their personal income is a good a way of coping with the fuel subsidy removal. The implication of this is that most of the respondents would concentrate on needs rather than wants. Reducing travel and transportation cost ($\bar{x}$=1.71) ranked 2nd. Base on the high cost of fuel after the removal of subsidy, reducing travel and transportation cost becomes a common coping strategy among the respondents. The implication of this is that only important places would be visited through transit and taking public transit rather than fuelling personal vehicles/motorcycle. Furthermore, diversified income sources to mitigate the impact of fuel subsidy removal ranked 3rd with a mean of ($\bar{x}$=1.53). This strategy involves an increase in the number of economic activities regardless of the sector or location at a given point in time (Oluwatayo, 2009; Alobo-Loison, 2017), In the study area, income sources diversification is adopted as a consequence of economic push or constraints; hence, the need to widen income earning sources (Michael *et al*., 2016). The findings further revealed that increased agricultural diversification was also a popular ($\bar{x}$=1.28) adoption across the study area. This implies that the strategy is the 4th most adopted strategy in the area. The study also revealed that the respondents explored more cost-effective technologies or practices in their livelihood activities ($\bar{x}$=1.09) and looked for alternative sources of energy to reduce dependency on fuel ($\bar{x}$=0.83). The alternative sources of energy such as solar power system could reduce dependency on fuel. Agricultural intensification ($\bar{x}$=0.81) was also implored by some of the respondents. Registering for government support programmes such as conditional money transfer, SMSE grants ($\bar{x}$=0.46) and Engaging in community-based initiatives or collaborations, to address the challenges arising from fuel subsidy removal ($\bar{x}$=0.42) ranked list among the coping strategies

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utilized. These two were not frequently used by the respondents probably because some of the respondents were not aware of the initiatives or the initiatives are not regularly opened to them.

Table 5: Distribution of the respondents based on their coping strategies to the effect of fuel subsidy removal on their livelihood activities n = 100

S/N	Coping strategies	Mean	Rank
1	Looked for alternative sources of energy to reduce dependency on fuel	0.83	6th
2	Adjusted my spending habits to cope with the increased cost of fuel.	2.31	1st
3	Diversified my income sources to mitigate the impact of fuel subsidy removal.	1.53	3rd
4	Engaged in community-based initiatives or collaborations to address the challenges arising from fuel subsidy removal.	0.42	9th
5	Explored more cost-effective technologies or practices in my livelihood activities.	1.09	5th
6	Agricultural intensification	0.81	7th
7	Increased agricultural diversification	1.28	4th
8	Reduced travel and transportation cost	1.71	2nd
9	Registered for government support programmes – Conditional money transfer, SMSE grants etc	0.46	8th

Source: Field survey, 2024

Mean categorization of respondents based on their coping strategies

Result of analysis on table 6 shows the mean categorization of respondents based on their coping strategies**.** According to the result, majority of the respondents (59.0%) had low level of strategies in coping with the effect of fuel subsidy removal on their livelihood in the study area whereas 41.0% reported high level of strategies. The low level strategy recorded in the result could be as a result that some of the coping strategies were not open to the respondents or they did not have sufficient knowledge about the strategy.

Table 6: Mean categorization of the respondents based on the coping strategies to mitigate the effect of fuel subsidy removal on their livelihood activities n = 100

Level of coping strategies	Scores	Frequency	Percentage
Low level of strategies	3.0 – 10.43	59	59.0
High level of strategies	10.44 – 20.0	41	41.0
Minimum score	3.0		
Maximum score	20.0		
Mean score	10.44		

Relationship between socio-economic characteristics of the respondents and their coping strategies to mitigate the effect of fuel subsidy removal on their livelihood activities.

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Table 7 reveals that there is a significant relationship between the respondents' age and the coping strategies to the effect of fuel subsidy removal on their livelihood activities (r=-0.218, p=0.030). This suggests that the household heads' age can negatively affect coping strategies to the effect of fuel subsidy removal on their livelihood activities. This implies that the prospect of adopting more activities may decrease with the advancement in age and vice versa. More so, this study showed that there are no significant relationship between the household size (r=-0.183, p=0.068), Income (r=-0.006, p=0.950) and coping strategies. Based on the result, household size and income had little or no influence on the coping strategies utilized by the households.

Table 7: Correlation analysis of the relationship between the socio-economic characteristics of the respondents and their coping strategies to mitigate the effect of fuel subsidy removal on their livelihood activities

Variables	r – value	p-value	Decision
Age and coping strategies	-0.218	0.030	Significant
Household size and coping strategies	-0.183	0.068	Not Significant
Income and coping strategies	-0.006	0.950	Not Significant

Source: Field survey, 2024

Relationship between the socio-economic characteristics of the respondents and their coping strategies to mitigate the effect of fuel subsidy removal on their livelihood activities.

Table 8 shows the Chi-square analysis of the relationship between the selected socio-economic characteristics of the respondents and their level of coping strategies to mitigate the effect of fuel subsidy removal on their livelihood activities. The findings from the analysis revealed that there is a significant positive relationship between the socio-economic characteristic such as Gender (χ^2=14.662, p=0.000), Educational level (χ^2=10.454, p =0.015), of the respondents and their coping strategies. Therefore, the null hypothesis was rejected. The positive relationship implies that male household head are likely to cope more with the effect of fuel subsidy removal than their female counterpart because the male are mostly stronger as such can easily diversify in different labour to mitigate such effect. In the same vein, those with one form of education or the other tend to cope better than those without formal education.

Table 8: Chi-square analysis of the relationship between the socio-economic characteristics of the respondents and their coping strategies to mitigate the effect of fuel subsidy removal on their livelihood activities

Variables	χ^2 – value	df	p-value	Decision
Gender and coping strategies	14.662	1	0.000	Significant
Educational level and coping strategies	10.454	3	0.015	Significant

Source: Field survey, 2024

CONCLUSION

Based on the findings of the study, it could be concluded that agriculture was the most practised livelihood activity by the respondents. An increase in daily expenses, increased transportation and high cost of input, were the prominent effects of fuel subsidy removal on the rural households'

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livelihood activities. Adjustment in spending habits, reduced travel and transportation cost, as well as diversifying income sources, were the major coping strategies employed to mitigate the effect of fuel subsidy removal on the livelihood activities of the rural households, however, the coping strategy employed was low on the average. Their coping strategies were influenced by age, education and gender. Agricultural incentives, small and medium scale enterprises' grants and other social support programmes should be provided by the various stakeholders to the rural households in the study area.

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