

## Effects of Partial Oil Subsidy Removal on Livelihood Activities of Rural Populace in Yewa Division of Ogun State, Nigeria

EZEKIEL OLAOLUWA AKERELE

Olabisi Onabanjo University, Yewa Campus, Ayetoro, Ogun State, Nigeria.

**Abstract.** The study focused on effects of partial oil subsidy removal on livelihood activities of Rural Populace in Yewa Division of Ogun State, Nigeria. Data were collected using multistage sampling techniques with the aid of structured questionnaires. The respondents for the study were drawn from Yewa North Local Government and Yewa South Local Government Areas. Five communities were selected from each of the local government and nine household selected from each of the community making a total of 90 respondents. The results were analyzed using descriptive, regression and budgetary analysis. Findings revealed showed that majority (76.7%) of the respondents were male while 23.3% were female. The dominance of the male farmers in farming activities may be due to the fact that it requires more strength, majority (68.9%) of the respondents range between the age of 40 and 49 years, married with formal education which enhanced their productivity and profitability level. It was also concluded that majority of the respondents were seriously affected with respect to their economic area of livelihood as majority of them disagreed that increase in oil price had brought increase on their level of sales, production, processing activities, capital for business, transportation of goods, payment of debts and access to loans, only few agreed that it has not affected the educational area of their livelihood in this area. The findings also showed that the Average Gross Margin, the Net Income and Rate of Returns on Variable cost of farmer in the study area were estimated to be ₦58,150.66,

₦9,043.54 and 10.70% respectively. It also showed a Profitability Index of 0.20, which suggests that on every Naira earned about 20 kobo was returned to the farmer as net income. The larger the farm product marketed, the higher the profitability index. The regression Analysis also showed that increase in fuel price has affected agricultural production as it has increased the cost of transportation, cost of fueling machines, tractor etc. The study recommended that removal of fuel subsidy policy should not be implemented in stages to prevent a hike in the prices of food items, because no matter the proposed positive impact of fuel subsidy removal, its long term effect will be felt on agriculture which will in turns affect the price of food negatively.

**Keywords:** Fuel, Production, Subsidy, Agriculture, Food

### 1. Introduction

The strength of any nation could be determined by its economic stability and the constant growth rate of her GDP (Gross Domestic Product) per capital. In the developed society scarcity of petroleum product is not a threat as several measures are in place to upturn such occurrence (Barakat, 2008). The significance of energy in the buildup of economic stability and advancement cannot be overemphasized, hence the need for the constant availability of energy supply. Petroleum and other related product provide a huge mass of energy, which makes its

availability as essential tool for nation building. Hence, the continuous and consistent availability of petroleum product in the advanced countries cannot be excluded from the continuous trend of growth and development witnesses in such environment, particularly in building up indigenous capability for national development. The role indigenous technology plays in the building up of these nations can be factor to the availability of energy supply, particularly those derived from petroleum products. The impact of this can be significantly identified in the contribution of locally made product returns to countries' per capital GDP (Allen & Johnson, 2008, Alozie 2009, Allwell 2012, Alli *et. al*, 2012). Unlike the developed/economically advanced countries the sub-Saharan Africa region where Nigeria belongs are faced with consistence fuel scarcity or scarcity of petroleum products. There were instances where the economic activities become stagnated due to the scarcity of petroleum product. This thus calls for a quick intervention. In a bid to averting the continual occurrence of this problem, Nigeria governments have decided to intervene by deregulating the petroleum sector in the form of subsidy removal. The aim of the government for doing this is to minimize, if not totally eradicate petroleum scarcity (Ibi, 2009, Adenikiju, 2010). Subsidy removal may however sound nice, polite and beneficial, it is essential that there be a critical evaluation of the proposed mechanism for petroleum scarcity alleviation. Lessons from developed countries where this commodity has become readily available at all time reveals that subsidy removal is not a significant measure responsible for such achievement. China for instance still gives subsidy to her citizen on petroleum product and the fact available today showed that it still among the first five economy of the world that could boast of adequate petroleum product and economic stability. It may be argued that most developed countries of the world had gone beyond subsidy. It is essential that Nigeria government look inward when formulating policies and designing program that has to do with her people, because internalizing is an essential tool for economic growth and development. No matter how good subsidy removal may look, the burden its short term effect will have on the masses should be a

subject of concern. The current living standard in Nigeria shows that about 60.09% of her citizen lives below one dollar per day (Ezeagba 2005, Ekundayo 2012). The removal of subsidy at such a period like this would exacerbate this identified scenario.

The backbone of any nation is highly dependent on how knowledgeable, skilful and competent the farmers in the rural area like Yewa Division of Ogun State who engage in farming activities are. Before the increase, agricultural sector of Nigeria economy has suffered years of mismanagement, inconsistency, and poorly conceived policy, lack of government intervention and lack of basic infrastructure. Nigeria is no longer a major exporter of cocoa, rubber, groundnut, palm oil. Rural dwellers means of living also revolves around both agricultural and non-agricultural livelihood activities. These rural dwellers are characterized by poor standard of living, high level of illiteracy and they have limited access to resources to produce on commercial basis. People now move away from agricultural practices to other occupation, as a result of increase in oil price which has inflated transportation fare. This thus makes transportation of their farm produce stay long on farm or at home (Abang 2010).

With the emergence of increase in oil price in Nigeria, organizations, companies and business centres have been seen folding up and that some sectors of the economy are experiencing deflation, high rate of inflation make an average man in urban area to be strongly affected, one would then imagine how the rural dwellers cope with the heat of increase in fuel price. This rural dweller will go through the worst stage of their lives and many of them will have nothing to produce, while only a few will have very little to produce, thus leading to scarcity of food crops inflation, and high rate of unemployment. To avoid the negative trends of the increase in fuel price on Nigeria economy and in particular on the rural dwellers, this research work therefore aims at proffering answer to the following objectives.

## 2. Objectives of the Study

The broad objective of the study is to determine rural dwellers perception of the effect of oil subsidy removal on their livelihood activities in Yewa Division of Ogun State, Nigeria. The specific objectives of the study are to:

- (i) describe the socio-economic characteristics of rural dwellers in the study area
- (ii) ascertain areas of livelihood where increase in oil price affect rural dwellers in the study area.
- (iii) determine the effect of increase in fuel price on agricultural production
- (iv) examine cost and returns of the rural household farmers after the change in fuel price

### 3. Research Methodology

#### 3.1 Area of the Study

The study area of this research work is Yewa Division, Ogun State of Nigeria. Yewa Division, formally known as Egbado, are a clan of the Yoruba people, and inhabit the eastern area of Ogun State, in south-west Nigeria, Africa. Their name was changed to Yewa in 1995. Yewa division comprises of five (5) Local Government Areas: Yewa-South, Yewa-North, Imeko-Afon, Ipokia and Ado-Odo/Ota LGA. The major occupation of dwellers of this area is secondarily

farming and primarily trading, tailoring etc. Yewa-South (formerly Egbado South) is a Local Government Area in the West of Ogun State, Nigeria bordering the Republic of Benin. Its headquarters are in the town of Ilaro at 6°53'00" N 3°01'00" E in the north of the area. It has an area of 629km<sup>2</sup> and a population of 168,850 at the 2006 census, and the postal code 111. (Odugbemi 1992)

#### 3.2 Sources and Methods of Data Collection

Data for this study were collected from primary and secondary sources. The primary data were collected from the respondents through the use of structured questionnaires and interview schedule. The secondary data sources were sourced from past projects, seminars, journals, bulletins and statistical reports.

##### Sampling Technique and Sample Size

Multistage sampling technique was used for data collection. Yewa Division of Ogun State, Nigeria, consists of five (5) Local Government Areas. At first stage, two of these Local Governments Area (Yewa North and Yewa South) were selected. At second stage, 5 communities were selected from each Local Government Area. At third stage, 9 households were selected in each community to make total of 90 respondents.

**Table 1: The Sample Size and Sample Techniques Procedure**

Area of Study	Local Government Area selected	Number of Villages selected	Number of households selected in each village
Yewa Division Of Ogun State, Nigeria	Yewa North Local Government Area, Ogun State (YNLG)	Ayetoro	9
		Igan-Okoto	9
		Iboro	9
		Sawonjo	9
		Imasayi	9
	Yewa South Local Government Area, Ogun State (YSLG)	Ilaro	9
		Oke-Odan	9
		Owode	9
		Ajilete	9
		Erinja	9
<b>Total</b>	<b>2</b>	<b>10</b>	<b>90</b>

#### 3.3 Methods of Data Analysis

Descriptive analysis was used to describe objective one and objective two. The descriptive analysis was adapted to analysis the socio-economic characteristics and to ascertain areas of livelihood where increase in oil prices affect rural dwellers in the study area. Tools like frequency table, mean, percentage etc was used.

##### Regression Analysis

Regression analysis was used to determine the effect of increase in fuel price on agricultural production. The general formula is given as:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 \dots U_i$$

Where:

Y = Income realized from Agricultural production (₦)

X<sub>1</sub> = Transportation cost of Fertilizer (₦)

X<sub>2</sub> = Transportation cost of other inputs (₦)

X<sub>3</sub> = Transportation cost of Produce (₦)

X<sub>4</sub> = Cost of Fueling Processing machines (₦)

X<sub>5</sub> = Cost of Fueling Tractor (₦)

X<sub>6</sub> = Cost of Fueling Motorcycle (₦)

U = Error term

#### Budgetary Analysis

Budgetary analysis was used to capture the cost and returns of the rural household farmers after the change in fuel price. This is expressed as;

Total cost (TC) = Total Fixed Cost (TFC) + Total Variable Cost (TVC)

Gross Revenue (GR) = Total Output (TO) x Unit Price (UP).

Gross Margin (GM) = GR – TVC

Net Income (NI) = GM – TFC

Profitability index =  $\frac{NI}{TC}$

Rate of return on investment (%) =  $\frac{NI}{TC} \times 100$

Rate of return on variable cost (%) =  $\frac{NI - TFC}{TVC} \times 100$

Operating Ratio =  $\frac{TVC}{TR}$

## 4. Results and Discussion

This section presents the result of different descriptive and quantitative analysis carried out in order to achieve the set objectives of the study.

**Table 2: Socio-economic Characteristics of Rural Dwellers**

Variables	Frequency	Percentage	Cumulative Percentage
<b>Age (years)</b>			
Below 29	3	3.3	3.3
30-39	22	24.4	27.8
40-49	62	68.9	96.7
50 above	3	3.3	100.0
<b>Sex</b>			
Female	21	23.3	23.3
Male	69	76.7	100.0
<b>Marital Status</b>			
Single	14	15.6	15.6
Married	76	84.4	100.0
<b>Educational Status</b>			
No formal education	7	7.8	7.8
Primary education	34	37.8	45.6
Secondary education	49	54.4	100.0
<b>Farming Experience (years)</b>			
Below 15	11	12.2	12.2
16-20	24	26.7	38.9
21-25	36	40.0	78.9
26-30	16	17.8	100.0
31 Above	3	3.3	
<b>Household Size (persons)</b>			
5-6	35	38.9	38.9
7-8	37	41.1	80.0
9-10	12	13.3	93.3

11 and above	6	6.7	100.0
<b>Farm Size (ha)</b>			
2 and below	22	24.4	24.4
3-5	54	60.0	84.4
6-8	2	2.2	86.7
9 and above	12	13.3	100.0
<b>Income before Change (₦)</b>			
49999 and below	4	4.4	4.4
100000-149999	5	5.6	10.0
150000 and above	81	90.0	100.0
<b>Methods of Land Acquisition</b>			
Personal Land	13	14.4	14.4
Inheritance/family Land	77	85.6	100.0

Source: Field Survey 2014

Considering the importance of household characteristics on the member's decision making process, the result of the analysis of the socio-economic characteristics of the sample farmers in terms of age, sex, marital status, farming experience, level of education, household size and main occupations as shown in Table 2, the age distribution of the respondents revealed that majority (68.9%) of the respondents range between the age of 40 and 49 years. The implication of this is that majority still belong to the age where they can actively involve themselves in farming business. It is generally believed that male farmers performed better than female counterpart since the sex of the respondents greatly determines their productivity (Akerlele and Aihonsu 2011). Findings showed that majority (76.7%) of the respondents were male while 23.3% were female. The dominance of the male farmers in farming activities may be due to the fact that it requires more strength. Majority (84.4%) of the respondents were married while only 15.6% were single. This signifies that married people have responsibilities which will make them to be willing to cultivate more land and children in the household will perform actively in the farming activities.

Educational distribution of the respondents showed that majority of the respondents (54.4%) attained secondary education, while only 7.8 had no formal education. This implies that 92.2% of the respondents were literates. The implication of this is that it will have positive influence on their farm production, and increase their

knowledge of loan acquisition. Most respondents used hired labour with above 21 – 25 years farming experience and farm size between 3 – 5 hectares. The removal of fuel subsidy really has negative impact on farm land acquisition by the respondents which made them to result to use of family land. Data in the Table 2 showed that majority (90.0%) of the respondents made above ₦150,000 per annum., This signifies that majority of the respondents made reasonable money before the change in oil price in the study area.

#### 4.1 Livelihood Areas affected by Increase in Oil Price

As shown in Table 3, majority of the respondents were seriously affected with respect to their economic area of livelihood as majority of them disagreed that increase in oil price had brought in increase on their level of sales, production, processing activities, capital for business, transportation of goods, payment of debts and access to loans, only few agreed that it has not affected the educational area of their livelihood as majority disagreed claiming that it has affected them in this area. With respect to home and social area of livelihood, majority disagreed with the fact that it has not affected them while only few agreed. This shows that no matter how one look at it, removal of oil subsidy, whether partial or total, will affect different areas of livelihood of the rural populace, if measures to upturn such policy are not put in place.

**Table 3: Distribution of Respondents with respect to areas of livelihood affected by increase in oil price**

Effect of increase in oil price on areas of livelihood	Effect of increase in fuel price		
	Frequency (percentage)		
	Agree	Undecided	Disagree
<b>1. Economic Areas of Livelihood</b>			
Increase level of sales			90(100)
Improved level of production			90(100)
Improved level of processing activities			90(100)
Regular availability of capital for business transaction			90(100)
Easy transportation of goods			90(100)
Ability to pay back debts			90(100)
Increase access to loans			90(100)
<b>2. Educational Areas of Livelihood</b>			
Ability to pay children's school fees	5(5.6)		85(94.4)
Ability to buy children's books/uniform	3(3.3)	3(3.3)	84(93.3)
Ability to pay for extra lessons/examination	3(3.3)	3(3.3)	84(93.3)
Ability to further education	8(8.9)	6(6.7)	76(84.4)
Ability to patronize private schools		6(6.7)	84(93.3)
<b>3. Health and Home Areas of Livelihood</b>			
Feeding three times daily		4(4.4)	86(95.6)
Consistent payment of house rent		3(3.3)	87(96.7)
Contraction of personal building			90(100)
Good home maintenance	23(25.6)	20(22.2)	47(52.2)
Ability to patronize hospitals	13(14.4)	4(4.4)	73(81.1)
Ability to purchase prescribed drugs	3(3.3)	22(24.4)	65(72.2)
Ability to go for medical check-ups		4(4.4)	86(95.6)
<b>4. Social Areas of Livelihood</b>			
Regular attendance of parties/ceremony	4(4.4)	2(2.2)	84(93.2)
Ability to purchase social materials		2(2.2)	88(97.8)
Celebration of festival	2(2.2)	21(23.3)	67(74.4)
Ability to travel on holidays			90(100)
Relaxation	9(10.0)	14(15.6)	67(74.4)

Source: Field Survey 2014

**4.2 Effect of Increase in Oil Price on Agricultural Production after Partial Oil Subsidy Removal.**

This was carried out by regression techniques. Linear regression analysis was estimated. As shown in Table 2, the F-value associated with the regression are significant at 1% level of significance thus, the regression provide a good fit for the data. The Adjusted R<sup>2</sup> shows that 68.8% in the variation of the sales revenue of the respondents was explained by the explanatory variables. The coefficient of the explanatory variables i.e (X<sub>i</sub>), Transportation cost of Fertilizer (X<sub>1</sub>), Transportation cost of other inputs (X<sub>2</sub>), Transportation cost of produce (X<sub>3</sub>), Cost of Fueling processing machines (X<sub>4</sub>), Cost

of Fueling Tractor (X<sub>5</sub>), Cost of Fueling Motorcycle (X<sub>6</sub>)

The coefficients with positive signs indicate that an increase in the level of these variables would lead to an increase in the sales revenue of respondents *ceteris paribus*. The coefficients of which had negative sign implied that an increase in this input would lead to a decrease in the sales volume of respondents. In this case the entire coefficient had negative sign which suggest that every additional use of fuel will lead to a decrease in the income realized from agricultural production in the study area. This further showed that the effect of increase in oil price was really felt on agricultural production as food prices have been seen increasing over a period of time.

**Table 4: Effect of Increase in Oil Price on Agricultural Production**

Variable	Reg. Coefficients	T-value
Constant ( $\beta_0$ )	2.23	3.568
Transportation cost of Fertilizer ( $X_1$ )	-0.339***	4.544
Transportation cost of other inputs ( $X_2$ )	-0.152***	3.978
Transportation cost of Produce ( $X_3$ )	-0.661***	5.441
Cost of Fueling Processing Machines ( $X_4$ )	-0.046***	4.235
Cost of Fueling Tractor ( $X_5$ )	-0.449***	-4.873
Cost of Fueling Motorcycle ( $X_6$ )	-0.056Ns	-0.353
F-value	9.34***	
R <sup>2</sup>	0.660	
Adjusted R <sup>2</sup>	0.688	

Where: \*\*\* = 1% level of significance and Ns = Not Significant.

Source: Field Survey 2014

**4.3 Distribution of Respondents According to their Cost and Returns after Change in oil Price**

Budgetary Technique was used to analysis the Gross Margin, Net Income and Profitability of Respondents in the study area. The result of the Budgetary is presented in Table 5. The Average Gross Margin, The Net Income and Rate of Returns on Variable cost of farmers in the study area were estimated to be ₦58,150.66, ₦9,043.54 and 10.70% respectively. Profitability index of 0.20, which suggests that on every Naira earned, about 20 kobo was returned to the farmers as net income. The larger the farm product marketed the higher the profitability index. This suggests that the farming business in the study area is still profitable after the change in oil price, but was reduced significantly as revealed by their income before and after the change. This means that change in oil price has affected their level of farm output in one way or the other. No matter the proposed positive impact of fuel subsidy removal, its long term effect will be felt on agriculture which will in turns affect the price of food negatively

**Table 5: Cost and Returns of Respondents after Change in oil Price**

	Mean	Percentage (%)
Fixed Cost		
Cutlass	2528.95	52.42
Hoe	1929.77	40.00
Basket	365.43	7.58
Total Fixed Cost	4,824.15	100
Variable Cost		
Cassava stem	5927.77	15.02
Maize Seeds	1849.72	4.69
Cost of Labour	3813.33	9.67
Cost of Transporting produce	4800.00	12.16
Cost of Fueling Tractor	6155.00	15.60
Cost of Fueling Motorcycle	5211.00	14.29
Cost of Transporting other inputs	3500.00	8.87
Cost of Fueling Processing Machines	4202.00	10.65
Cost of Transporting Fertilizer	4000.00	10.14
Total Variable Cost	39,458.82	
Total Cost	44,282.97	
Gross Revenue	58,150.66	
Gross Margin	13,867.69	
Net Income	9,043.54	
Profitability Index	0.20	
Rate of Returns on Investment (%)	20	
Rate of Returns on Variable Cost (%)	10.70	
Operating Ratio	0.68	

Source: Field Survey 2014

## 5. Conclusion and Recommendations

Removal of fuel subsidy is an indirect way of increasing fuel price. This study established that fuel subsidy removal whether partial or total, has effect on food prices. Increase in fuel price also increase cost of transportation of goods, cost of fueling processing machines, tractor and motorcycle which in turns cause the price of food to skyrocket. Despite the profitability index of farming after change in oil price, farming in the study area was hampered by a major constraint of increased transportation cost which has in turns caused food price to increase over time. It can also be concluded that increase in fuel price has significant effect on the livelihood activities of the populace in the study area. The effect of partial oil subsidy removal was also felt on agricultural production as shown by the regression analysis coefficient of determination, and with some reduction in their profitability level. Their income level after the change in oil price is incomparable to the income they made before the scenario. This shows that no matter the proposed positive effect of oil subsidy removal, it will have long run effect on the entire economy of this Nation.

The study recommended that removal of fuel subsidy policy should not be implemented in stages to prevent a hike in the prices of food items. Eventually, after the protests and outcry from Nigerians home and abroad, the government decided to cap the gas price at \$0.67. While the people wanted it to be revert to the original price of \$0.41, this new price was a relatively welcome change from the \$0.90 it was initially set at. The new price was grudgingly accepted and the process is still ongoing. However, because deregulation of this sector is still very probable, here are a few recommendations for the next time the policy that will be introduced.

(a) Transparency in Fuel Pricing: Presently, Nigeria practices ad hoc pricing. This leaves a lot of room for ambiguity and inherently, corruption, as several “fees” can be appropriated as miscellaneous. Ghana, her neighbor, practices the formula based pricing. Adopting this formula pricing will increase transparency and credibility and eventually help towards building trust with her citizenry

(b) Tighten the country’s borders to militate against smuggling and set up trustworthy agencies to check and balance oil marketers. This is to help reduce the amount of corruption in the system.

(c) The government can introduce more competition into the sector especially with issuance of licenses of import licenses. Importers should have to compete for lower freight costs, product costs, margins and other like costs. This will eventually drive down the cost of gas to the consumer.

## References

- Abang I.S. (2010): *Linear function Application: Enlightenment to the Impact of Fuel Subsidy Removal in Nigeria, 2012* from [www.ndpi.com/journal/sustainability](http://www.ndpi.com/journal/sustainability)
- Adenikinju, A. (2010). *Energy Pricing and subsidy reforms in Nigeria* retrieved on 22<sup>nd</sup> December 2011 from [www.oecd.org/dadaoecd/58/61/42987402](http://www.oecd.org/dadaoecd/58/61/42987402)
- Akerele E. O. and J.O.Y Aihonsu (2011): Determinants of Women Participation in Entrepreneurship Development in Yewa North Local Government Area, Ogun State. *Nigerian Journal of Agricultural Economics*. Vol. 2, No. 1, pp. 68 - 78
- Alli, Y., Ofikhenua, J. and Ugwuanyi, E. (2012), ‘*Fuel Prtoteests Rock Cities,*’ *the Nation*, Wednesday, january 4, pp1,4
- Allwell, O. (2012). *State and Local Government subsidy reinvestment program* [www.punchang.com](http://www.punchang.com) retrieved April 23, 2012
- Alozie, E. (2009), ‘*The lies About Deregulation,*’ *Nigerian Newsword* Vol. 3 Num 4, October 26, pp 15-21
- Barakat, N. (2008), *Impact of Removal of fuel subsidy on the manufacturing industry in Jordan*. Retrieved on 20<sup>th</sup> December 2011.
- Ekundayo, A. and Ajayi, A.I. (2008), ‘*The Deregulation of University Education in Nigeria: implication or Quality Assurance*’ *Nebuta* 5.4 (December), pp. 21-28
- Ezeagba, C.E., (2005), ‘*Deregulation of Nigerian Economy: implication for the Downstream Petroleum industry,*’

*Certified National Accountant, July-September.*

Food and Agriculture Organization (2012) FAO bulletin 2012.

Iba, L. (2009), *'Fuel Crisis: will deregulation roll away all our problem?'* *Daily Sun* October 5, pp3,39.

Odugbemi O. O. (1992): *Ogun State in Maps.* Charles Publication, Ibadan.