



Research Article

Volume 3 - Issue 2: 146-154 / April 2020

IMPACT OF MULTINATIONAL OIL FIRMS' CORPORATE SOCIAL RESPONSIBILITY ON AGRICULTURAL DEVELOPMENT IN HOST COMMUNITIES IN NIGERIA

Theophilus Miebi GBIGBI^{1*}

¹Department of Agricultural Economics and Extension, Delta State University Asaba Campus. PMB 95074, Asaba, Nigeria

Received: November 11, 2019; **Accepted:** February 26, 2020; **Published:** April 01, 2020

Abstract

This study examined multinational oil firms' contributions to farming communities in their Delta State operating areas in Nigeria. The study sample size was 176 respondents. Questionnaire was administered to collect data for the study. The data were analyzed using multiple regression, descriptive statistics and 4-point likert scale. The null hypotheses were tested using t-test. The results showed that most farmers are females, 39% of respondents fell within 41-50 years of modal class age. The high proportion (84%) is literate and the oil prospective oil multinational firms' extension services were in touch with about 73%. The aid programs of the oil multinational firms were adequate for the farmers. The t-test indicates that farmers had increased income, productivity and farm sizes after benefiting from the oil multinational firms assistance projects. Regression results showed a statistically significant effect of 1% and 5% likelihood of farmers output in the oil multinational firms region, on farming experience, chemical expenditure, farm size, value of oil multinational firms aid, age of farmers and educational level. The results implies that oil multinational firms has made significant contributions in the study area. However, payment of compensation was inadequate which could result to unquantifiable damage. It is recommended that oil multinational firms should pay compensation to affected communities to create a conducive environment for her business transaction.

Keywords: Oil multinational firms, Exploration, Farmer, Production, Communities

***Corresponding author:** Department of Agricultural Economics and Extension, Delta State University Asaba Campus. PMB 95074, Asaba, Nigeria

E mail: gbigbitheophilusmiebi@yahoo.com (T.M. GBIGBI)

Theophilus Miebi GBIGBI  <https://orcid.org/0000-0002-1335-7231>

Cite as: Gbigbi TM. 2020. Impact of multinational oil firms' corporate social responsibility on agricultural development in host communities in Nigeria. *BSJ Agri*, 3(2): 146-154.

1. Introduction

The people of Nigeria have a prosperous economy in the region, with approximately 90% of the people engaged in productive economic activities, as craftsmen, fishermen, matt fabrics makers, local gins distillers, boat builders,

palm wine tapers, among others, before the advent of the crude oil discovery and development (Omofonmwan and Odi, 2009). At this time, agricultural growth is related to a growing rural economy. On the other hand, the discovery of oil in industrial quantities in Oloibiri in the present state of Bayelsa in 1956 had a negative impact on

the environment and on the once prosperous economy of the host communities. These are all the results of the oil sector that have dominated Nigeria's economy since the mid-1970s.

Nevertheless, the country's rural economy still remains basically agriculture. Agriculture has important linkages and inter-relationships with the rest of the economy, as such, its performance remains critical to the overall development and growth of the economy. Oil multinational firms are Nigeria's largest oil and gas exploration and production company. It is a joint venture oil producer in which Nigerian National Petroleum Corporation holds 55% shares; Shell 30%, Elf 10%, and Agip 5%. The role of these oil firms is to support the development of new skills, techniques and technologies for small-scale farmers in increasing their production levels and improving livelihood, especially in the areas in which they search for crude oil and natural gas.

Oil multinational firms is influential in the context of Nigeria's development as the need to develop the country has been entirely depended on funds from the oil industry over the years. With the discovery of oil in commercial quantity in 1956 at Oloibiri and its subsequent boom in the 1970s, Nigerian communities have undergone a remarkable systemic change in the form of rapid urban development. In affirmation Ugoh and Ukpere (2010) posited that Nigeria has benefited enormously from oil, both the federal and the state governments basically depend on oil resources from the Niger Delta. According to Nweze and Edame (2016) reported in their findings that the proceeds from oil production accounts for 95% of Nigeria's export earnings and over 80% of her revenue which is spent to drive the economy. The argument from various quarters is that the huge revenue generated by the Niger Delta region is not commensurate with its human and infrastructural development; rather it is plagued with environmental degradation, health problems, conflicts and poverty (Nwankwo, 2015). Akujuru (2014) argued that the degradation of the natural environment and livelihood sources of local people who rely on the land and the Delta Rivers for their survival are the result of all stages of oil-related activities, from exploration and drilling to transport. As a result of this intrusion into the local economy, economic activities have decreased and the production of fish and crops has decreased and the rural economy has declined.

As part of their Corporate Social Responsibility, the multinational oil firms say that they have implemented a number of projects in the host communities in order to address farmers' welfare to reduce poverty by encouraging economic empowerment initiatives aimed at creating jobs because they are adversely affected. The CSR comprises the building of hospitals, roads and classrooms, portable water supply, electricity, funding, scholarships and health support initiatives.

The objective is to make social investments to promote the sustainable development and economic independence

of the citizens of the Niger Delta and to create a peaceful and stable atmosphere for their business. The Niger Delta is the core business of Nigeria's annual revenues of more than 80 percent (Karl and Gary, 2003).

However, these well-known community development projects of multinational oil companies appear not to have been recognized in the host communities of the Niger Delta as they persist in their aggressive approach to the companies.

The studies of Oseji (2011), Ozabor and Obisesan (2015) and Olisemauche and Avwerosuoghene (2015) indicate that gas flaring, oil spillage and overall environmental degradation threat the existence of terrestrial and aquatic ecosystem, and the economy of the resources depend on the farm families in the crude oil producing communities. There is no certainty that farm families can improve their farm production and better livelihoods. However, Tawari and Davies (2010) stated that the surfacing of petroleum sector had been of great benefit to the agricultural sector of our economy because of the agricultural developmental activities of multinational oil corporations operating in the country. Oil multinational firms has addressed these issues by increasing spending on community development in order to revive the depressed agricultural sector up to its highest levels in the areas covered by its concessions, through its social responsibility and contribution to corporate social responsibility. The hope is that prospects for growth and jobs will be increased in the communities, thereby contributing to poverty reduction in the Niger Delta (SPDC, 2004).

The involvement of oil multinational firms in community development projects, according to Adams (2014), Okolie-Osemene (2015) includes educational programs through university education grants for elementary schools, skill development programs, water pipeline construction, access roads, the presentation and training on farm equipment usage for farmers and electricity supply within the communities that produce oil. Such ventures have the sole objective of achieving proven objectives, one of which is to encourage and maintain wealth creation activities at the level of micro (small) and medium-size enterprises. The goal of all development projects is, as Nwachukwu (2008) reiterated, to have an impact in terms of human empowerment and infrastructural growth on beneficial communities. The effect on the wellbeing of the Niger Delta and the creation of wealth by oil multinational firms can contribute to a stable business environment for oil multinational firms' exploration of oil and gas extraction activities.

However, Ite (2007) assert that oil multinational firms' strategy has the potential for community empowerment and the development of social capital in host communities. The primary role of oil multinational firms is to help small-holders increase their level of production and thus improve their economic and living standards in the community (Tawari and Davies, 2010). Oil multinational firms has been rendering agricultural

services in her operational zone in Delta State in time past. The extent to which the farmers have benefited from the programme and the resultant impact on production has not been fully studied. This study was therefore designed to fill this important information gap by assessing the contributions of oil multinational firms on farming communities in Delta State. The objectives of the study were to describe the socio-economic characteristics of beneficiaries of oil multinational firms' intervention; ascertain the oil multinational firms' assistance projects and satisfaction level; determine the impact of oil multinational firms' intervention on beneficiaries and estimate the determinants of farmers' output level.

The following hypotheses were tested;

- I. oil multinational firms assistance projects have no significant impact on the farmers' income level
- II. oil multinational firms assistance projects have no significant impact on the farmers' output level
- III. oil multinational firms assistance projects have no significant impact on farm size of the farmers

2. Material and Methods

The study was conducted in Delta State Nigeria being one of the oil exploration and operations bases. A multi-stage random sampling and purposeful selection was used to constitute the samples for the study (Gbigbi, 2018). In stage 1, Delta North, Delta Central and Delta South designated the three agricultural areas. Two local government areas (LGA) were purposively chosen from each district in the second stage. The areas of local government were: Warri North, Burutu, Sapele, South Ughelli, East Ndokwa, and West Ndokwa. In the next point, from each LGAs giving a total of 18 communities, three beneficial communities were also intentionally selected.

In stage 3, the sample size of this study 180 was selected from 328 arable crop farmers who has benefited from oil multinational firms using Taro Yamane sampling method as demonstrated below:

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

where, n : sample size, N : population of the study, e : error estimated at 5%.

$$n = \frac{328}{1 + 328(0.05)^2}$$

$n=180$ approximately.

Ten (10) farmers were selected randomly for a survey of a hundred and eighty participants from each beneficial community for the research. Four questionnaires were, however, discarded because of insufficient information hence 176 respondents were used for the detailed study.

Structured questionnaires were used to gather primary data from respondents.

2.1. Data Analysis Techniques

The data collected were analyzed using descriptive statistics and inferential statistical tools. Descriptive statistics such as mean, percentages, frequency count, pie and bar chart were used to analyze the data to achieve specific objectives. On the other hand, the inferential statistical tools utilized in this study include the regression.

2.1.1. How to compute satisfaction level and satisfaction index

The satisfaction level was on a 4-point likert type scale The farmers response categories to satisfaction statements and corresponding weighted values were done as follows: Strongly agree = 4; Agree = 3; Disagree = 2; strongly disagree = 1. The satisfaction index was computed as follows: (i) Computation of the total mean (M) score. This was computed by dividing the total satisfaction scores by the number of respondents involved. (ii) Computation of the grand mean (M) satisfaction score. This was computed by summing all the mean satisfaction scores and dividing them by the number of satisfaction statements captured. (iii) Computation of satisfaction index was done by dividing the grand mean (M) satisfaction score by 4 (i.e. the 4th point of the likert scale)

The t -test was used to analyze the hypotheses as represented below:

$$t = \frac{Q_1 - Q_2}{\sqrt{\frac{SW_1^2}{N_1} + \frac{SW_2^2}{N_2}}}$$

For income, where;

Q_1 : mean income of farmers before oil multinational firms assistance (₦)

Q_2 : mean income of farmers after oil multinational firms assistance (₦)

SW_1^2 : variance of income of farmers before oil multinational firms assistance (₦)

SW_2^2 : variance of income of farmers after oil multinational firms assistance (₦)

N_1 : number of farmers before oil multinational firms' assistance

N_2 : number of farmers after oil multinational firms' assistance

For output, where;

Q_1 : mean output of farmers before oil multinational firms assistance (tons)

Q_2 : mean output of farmers after oil multinational firms assistance (tons)

SW_1^2 : variance of output of farmers before oil multinational firms assistance (tons)

SW_2^2 : variance of output of farmers after oil multinational firms assistance (tons)

N_1 : number of farmers before oil multinational firms' assistance

N_2 : number of farmers after oil multinational firms' assistance

For farm size, where;

Q_1 : mean farm size of farmers before oil multinational firms assistance (ha)

Q_2 : mean farm size of farmers after oil multinational firms assistance (ha)

SW_1^2 : variance of farm size of farmers before oil multinational firms assistance (ha)

SW_2^2 : variance of farm size of farmers after oil multinational firms assistance (ha)

N_1 : number of farmers before oil multinational firms' assistance

N_2 : number of farmers after oil multinational firms' assistance

The regression model was employed to achieve objective (iv). There are four assumptions associated with a linear regression model:

1. Linearity: The relationship between X and the mean of Y is linear.
2. Homoscedasticity: The variance of residual is the same for any value of X .
3. Independence: Observations are independent of each other.
4. Normality: For any fixed value of X , Y is normally distributed

The linearized functional form is expressed explicitly as:

$$TVOF = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + e_i$$

where;

$TVOF$ = Total value of farm output (₦)

X_1 : labour (man-days/ha)

X_2 : farming experience (years)

X_3 : cost of chemicals (₦)

X_4 : farm size (ha)

X_5 : value of oil multinational firms' assistance (₦)

X_6 : age of the farmer (years)

X_7 : educational level of farmer

e_i : error term.

3. Results and Discussion

3.1. Farmers Attributes

The result in Table 1 revealed that 62% were female while male accounted for only 38%. It can be concluded that more females were involved in arable crop farming in the study area. Majority (39%) of the respondents were between ages of 41-50 years followed by those within the

age group of 51-60 years (31%). The next to the group were those between the ages of 31-40 years (16%) followed by those in age group between 61-70 years accounting for 9%. Those in the age group of 21-30 years accounted for 5%. This implies that majority (60%) of those practicing agriculture in the area are young, strong and agile. The age of a farmer affects his ability to adopt new innovation and production techniques in agriculture as well as his working capacity. Ofuoku et al (2006) suggest that as farmers become older, they become risk averse.

It was further shown in Table 1 that most (39%) of the respondents had secondary education, followed by those that had primary education with 27%. Those with tertiary education accounted for 18% while those without education accounted for 16% which represented the lowest percentage of them all. This implies that majority of them were formally educated and this could help to give useful information for policy makers concerning the impact of oil multinational firms in the study area. In addition, education enhances the acquisition and utilization of information on improved technology by farmers which tend to positively influence productivity. Similar empirical finding was reported by Etim and Benson (2016).

The result indicates that the respondents who are married accounted for 74% while those who were single accounted for only 14%. Only 8% and 4% of the respondents were widow/er and separated respectively. The result implies that most of the respondents involved in farming were married and this will amount to availability of labour from household members while those that are single have to supplement their excess labour requirements with hired labour.

The result shows that most (73%) of the respondents had encountered oil multinational firms extension advisers. Those who had no contact with oil multinational firms extension advisers accounted for only 27%. It is clear that most of the respondents benefited from oil multinational firms' extension activities which might have enhance their productivity.

The result shows that 44% of the farmers had 11-20 years farming experience. About 23% of them had 1-10 years farming experience, while 20% and 13% had 21-30 years and over 30 years farming experience respectively. These findings suggest that most of the respondents had been farming for quite a long period of time. Long years of farming experience is an advantage for increased farm productivity since it encourages the acquisition of skills over time.

Table 1. Socioeconomic characteristics of the respondents

Variable	Frequency	Percentages
Gender		
Male	67	38
Female	109	62
Age (years)		
21-30	8	5
31-40	29	16
41-50	68	39
51-60	55	31
61-70	16	9
Educational status		
No formal education	27	16
Primary education	48	27
Secondary education	69	39
Tertiary education	32	18
Marital status		
Single	24	14
Married	130	74
Separated	7	4
Widow/er	15	8
Extension contact		
Yes	128	73
No	48	27
Farming experience		
1-10 years	41	23
11-20years	78	44
21-30years	35	20
Above 30	22	13
Income level		
<50,000	18	10
50,000 – 100,000	21	12
150,001-200,000	28	16
100,001-150,000	34	19
200,001-250,000	23	13
250,001-300,000	17	10
>300,000	35	20
Farm size (hectare)		
0.9 and below	108	61
1.0-2.0	32	18
2.1-3.0	24	14
Above 3.0	12	7

1USD=₦360.

3.2. Oil Multinational Firms Assistance Projects and Satisfaction Level

Table 2 shows the oil multinational firms assistance projects and their level of satisfaction. The table shows that scholarship award ranked highest (mean=3.44), provision of electricity within the communities was ranked second (mean=3.26). The third ranking variable was building of classroom blocks in community development projects (mean=3.15) while vocational

training ranks fourth with mean of 3.01. Provision of laboratory equipment in schools had mean of 2.95 followed by agricultural facilities (men=2.89), construction of boreholes (mean=2.86), provision of adequate health facilities (mean=2.85) and construction of road and bridges (mean=2.68) respectively. With these variables having mean above 2.50, it could be concluded that the communities in oil producing areas actually benefited from the activities of the oil company operations. This indicates that, oil multinational firms CSR programmes for socioeconomic development of her host communities was satisfactory. However, in the area of provision of guest houses (mean=2.42) and payment of compensation (mean=2.03). It can be seen that oil multinational firms has not done enough for their host communities as confirmed by the responses of the farmers. This finding makes it crucial to reevaluate its CSR efforts to compensate for and to supply guest houses to all of its host communities, particularly in the study area, where the host community seems not to be at all happy with the efforts of oil multinationals. The host community's manifest lack of satisfaction with the efforts of multinational oil companies on compensation payment and provision of guest houses cannot be unrelated to their strong expectations from the oil giants in exchange for the environmental degradation over the years. The satisfaction index of 0.72 implies that 72% of the respondents were satisfied with the assistance projects executed by oil multinational firms as parts of their corporate social responsibility. The provision of these facilities by oil multinational firms is expected to create a harmonious relationship between oil multinational firms and her host communities, hence peaceful operations of oil multinational firms. This concurs with findings by Ezeji and Okonkwo (2016).

3.3. Effect of Oil Multinational Firms Assistance Projects on Farmers Income, Output and Farm Size

Table 3 showed the distribution of the respondents by income level, output level and farm size before and after oil multinational firms assistance. Before oil multinational firms assistance 65.9% of respondents earned between ₦50,000-₦100,000, 22.2% of the respondents earned less than ₦ 50000 per annum while just 9.1% of the respondents earned ₦100,001-₦150,000. The result showed that only 2.2% of the respondents earned more than ₦ 150,000 per annum.

However, on becoming beneficiaries of the oil multinational firms assistance, 43.2% of the farmers were able to earn more than ₦200,000 per annum. This was followed by 25% earning between ₦50,000-₦ 100,000 while 38.0% beneficiaries earned between ₦100,001-₦200,000 per annum. Only 2.8% of the respondents earned less than ₦50,000 per annum. The implication is that the oil multinational firms assistance has significantly increased the income of respondents.

Table 2. Oil multinational firms assistance projects and satisfaction level

Assistance projects	Highly satisfactory	Satisfactory	Unsatisfactory	Highly unsatisfactory	Total	Mean	Remark
Guest houses	14	78	52	32	426	2.42	Unsatisfactory
Compensation payment	6	38	88	44	358	2.03	Unsatisfactory
Laboratory equipment	56	68	40	12	520	2.95*	Satisfactory
Boreholes	24	112	32	8	504	2.86*	Satisfactory
Electricity	84	66	14	12	574	3.26*	Satisfactory
Road	18	100	42	16	472	2.68*	Satisfactory
Scholarship	116	34	14	12	606	3.44**	Satisfactory
Health facilities	44	82	30	20	502	2.85*	Satisfactory
Classroom blocks	56	96	18	6	554	3.15*	Satisfactory
Agricultural facilities	54	70	30	22	508	2.89*	Satisfactory
Vocational training	56	80	26	14	530	3.01*	Satisfactory
Total						31.54	

Above 2.50 = satisfactory, Below 2.50 = unsatisfactory.

Grand satisfaction mean = 2.87.

Satisfaction index = 0.72.

Table 3. Distribution of respondents' income, output and farm size before and after oil multinational firms intervention

Variables	Before oil multinational firms intervention (F)	After oil multinational firms intervention (F)
Income (N)		
<50,000	39(22.2)	5(2.8)
50,000-100,000	116(65.9)	44(25.0)
100,001-150,000	16(9.1)	36(20.5)
150,001-200,000	2(1.1)	15(8.5)
>200,000	2(1.1)	76(43.2)
Output(metric, tons)		
0-2.0	134(76.1)	3(1.7)
2.1-4.1	37(21.0)	58(33.0)
4.2-6.2	5(2.8)	24(13.6)
>6.2	0	91(51.7)
Farm size (hectares)		
<1.0	74(42.0)	5(2.8)
1.0-2.0	81(46.0)	26(14.5)
2.01-3.0	11(6.3)	21(11.9)
3.01-4.0	10(5.7)	82(46.6)
>4.0	0	42(23.9)

Figures in parenthesis are percentages 1USD=₦360.

Majority (76.1%) of respondents had output of 2 tons and below before oil multinational firms assistance, 21% of them had between 2.1-4.1 tons while just 2.8% had 4.2-6.2 tons. However, before oil multinational firms assistance, none of the farmers had outputs of above 6.2 tons. However, on becoming beneficiaries of oil multinational firms assistance, 51.7% of the farmers had above output of 6.2 tons while 33% had output of 2.1-4.1 tons. About 13.6% of respondents had between outputs of 4.2-6.2 tons. Only 1.7% of the respondents had output of 2 tons and below. Oil multinational firms provision of inputs and resources resulted in this increase in output. This indicates that oil multinational firms aid has greatly increased the recipients' agricultural output. The result shows that before oil multinational firms assistance 46%

of the farmers were cultivating 1-2 ha of land. About 42% of the farmers cultivated less than 1 ha of land. Only 12% of the farmers cultivated 2.01-4 ha of land. None of the farmers had farm size of above 4ha. After oil multinational firms assistance, majority (46.6%) of the farmers cultivated between 3.01 and 4 ha of farmland. About 23.9% of the farmers cultivated above 4 ha of farmland, 26.4% of the respondents cultivated between 1 and 3ha farmland. Only 2.8% of the respondents cultivated less than 1 ha farmland. The oil multinational firms assistance provided to farmers could be attributed to this, for neither of them financed their production out of their personal savings. This will enable them to acquire more land for food production.

3.4. T-test on Impact of Oil Multinational Firms' Intervention on Farmers

Before the oil multinational firms intervention the mean annual farm income of the beneficiaries was N78,442.04 while after the intervention the mean income was N248220.45. This result signified that after the intervention the farm income of the beneficiaries had considerably increased. This is because there was increase in the average annual farm income of the beneficiaries by N 169778.41. This means they lived on N472 per day which is equal to \$1.31 per day. This also implies that after the oil multinational firms' intervention, the living standard of the beneficiaries has gone above the poverty line (i.e above \$1 dollar per day). This is an indication that oil multinational firms has contributed positively to the mean annual income of the beneficiaries. Thus we reject the null hypothesis (Ho) that oil multinational firms assistance projects have no significant impact on the income of the farmers and alternative accepted.

The result of the t-test showed a mean output of 1,4352 tons and 2,7739 tons with a mean difference of 1.34 tons for the farmers before and after the oil multinational

firms aid. The difference was statistically significant at 1%, which indicates that the production of farmers before and after oil multinational firms assistance was important. The results show that the support provided by oil multinational firms had a positive impact on farmers' livelihoods. We therefore reject the null hypothesis (Ho) that oil multinational firms initiatives have no major influence on the farmers' production and accepted the alternative.

The t-test showed (Table 4) further that the average farm size for the farmers was 1,0920 ha and 3,0375 ha before and after the oil multinational firms aid, with a mean difference of 1,95 ha. The disparity was statistically significant at 1% point, which indicates that the farmers before and after the oil multinational firms aid varied considerably. This findings show that oil multinational firms support has a positive impact on farmers' livelihoods. The null statement (Ho) that oil multinational firms ventures do not have an important impact on the farmers' farm size and agreed alternative, is therefore rejected.

Table 4. T-test on impact of oil multinational firms intervention on farmers

Variables	Mean	Std. Dev.	Mean diff.	T	Sig.
Annual income before oil multinational firms intervention (N)	78,442.04	162,486.06	169,778.41	5.697	0.000
Annual income after oil multinational firms intervention (N)	248,220.45				
Output before oil multinational firms intervention (tons)	1.4352	2.16	1.34	8.209	0.000
Output after oil multinational firms intervention (tons)	2.7739				
Farm size before oil multinational firms intervention (tons)	1.0920	2.13	1.95	12.104	0.000
Farm size after oil multinational firms intervention (tons)	3.0375				

1USD=₦360.

3.5. Determinants of Farmers Productivity

The result of the linearized model is shown in Table 5. It was chosen on the basis of the magnitude of R² and the significance of the overall regression as calculated by the F-ratio and the significance of the individual coefficients. The outcome of the regression was important at 5% and the coefficient of determination (R²) was 0.6440. This means that the variables included have been able to explain about 64 per cent of the total variation in the farm output value of the farmers.

Farming experience had a positive coefficient (0.843) and was significant at 5% level suggesting that an output of farmers increases as the number of years spent in farming increases. This result conforms to the findings of Onwuka (2005). The coefficient of cost of chemical (0.631) was positive and significant at 5% level of probability, implying that an increase in the quantity of this input by the farmer will lead to an increase in the output of farmers. Farm size had a positive coefficient (2.652) and

is significant at 1% probability level. The implication is that an additional increase in hectare of land used for farming will lead to a corresponding increase in the output of farmers. Ezeh (2006) affirmed that the larger the farm size the more quantity of farm products to be realized. The sign of the oil multinational firms assistance was positive, which showed that a unit increase in the oil multinational firms assistance will increase the total value of farm output of the farmers by 3.965. The sign of the age of the farmer gave positive result. This implies that a unit increase in the age of the farmers in these communities will increase total value of farm output of the farmers by 0.540. One possible reason for this is that experience goes with age.

This result concurs with the findings of Nwaobiala (2010) where age was reported as proxy for experience enhancing farming initiative and efficient use of resources. Educational level had a positive coefficient (1.218) and significant at 1% probability level. This

means that as the level of education of the farmers increases the total value of farm output of the farmer will equally increase because the farmer was able to adopt

new innovations, thereby increasing the productivity level.

Table 5. Determinants of farmers productivity

Variable	Coefficient	Standard error	T-value
Labour	0.226	0.383	0.590
Farming experience	0.843	0.341	2.472*
Cost of chemical	0.631	0.245	2.576*
Farm size	2.652	0.584	4.541**
Value of oil multinational firms assistance	3.965	0.358	11.075**
Age of farmer	0.540	0.232	2.328*
Educational level	1.218	0.166	7.337**
Constant	3.372	1.351	2.570*
R2	0.6440		
F- ratio	22.75		

*: Significant at 5% ; **: Significant at 1%.

4. Conclusion

The study examined the corporate social responsibility of multinational oil companies in host communities in terms of agricultural development. It has demonstrated that oil operations have a beneficial impact on the environment and the lives of host communities. The findings showed that within the available resources from oil multinational firms to farming communities there was significant increase in the income, output and farm size of the farmers as expected through its community agricultural development programme. Despite substantial attempts by international oil companies to develop agriculture, it remains clear that the payment of compensation to host communities is not commensurate with the negative impact of oil exploration and mining operations on the region. Multinational oil firms should re-strengthen their agricultural development approach to enhance the opportunities for wealth creation, efficiency and sustainability of wealth opportunities. This will have a significant impact on people's livelihood activities, given the multinational oil companies' goal of reducing poverty to create a peaceful business environment, while lack of it could lead to the opposite. There is therefore a call for the formulation of policies geared towards achieving the desire of oil multinational firms in community assistance programme to their host communities for both to benefit. This will create a conducive environment for business transaction.

Conflict of interest

The author declared that there is no conflict of interest.

References

Adams A. 2014. Patterns and trend analysis of violence in oil production and oil distribution in Nigeria, from 2006 – 2014. Nigeria watch project, IFRA Nigeria e-papers series, no. 36, November, 1 – 28.

Akujuru V. 2014. A Framework for determining the compensable value of damages due to contamination of wetlands in the

Niger Delta of Nigeria. A thesis submitted in partial fulfilment of the requirements for the award of the degree of doctor of philosophy of the University of Salford, School of the Built Environment.

Ezeh CI. 2006. Socioeconomic determinants of output and profit levels of smallholder rice production systems in Abia State, Nigeria. *J Res in Agric*, 3(3): 44-60.

Ezeji CE, Okonkwo ON. 2016. Corporate social responsibility: A study of oil transnational corporations in Nigeria. *Int J Busin and Law Res*, 4(2):1-9.

Etim NA, Benson DN. 2016. Willingness to pay for organic fertilizer by resources poor vegetable farmers in the humid tropic. *J Agric and Ecol Res*, 62: 1-11.

Ite EU. 2007. Changing times and strategies: Shell's contribution to sustainable community development in the Niger Delta, Nigeria. *Sust Develop*, 15(1): 1-14.

Nwachukwu I. 2008. Planning and evaluation of agricultural and rural development projects. Umuahia, Lamb House Publishers, Nigeria.

Nwankwo BO. 2015. The politics of conflict over oil in the Niger Delta region of Nigeria: a review of the corporate social responsibility strategies of the oil companies. *American J Edu Res*, 3(4): 383-392.

Nwaobiala CU. 2010. Economic analysis of swamp rice production in Ebonyi southern agricultural zone of Ebonyi State, Nigeria. *J Agric and Social Res (JASR)*, 6(2): 157-166.

Nweze PN, Edame CE. 2016. An empirical investigation of oil revenue and economic growth in Nigeria. *European Sci J*, 12(25): 271-294.

Ofuoku AU, Uzokwe UN, Ideh V. 2006. Comparative analysis of cooperative and non-cooperative fish farmers in central agricultural zone of Delta State, Nigeria. *Ext Farming Sys J*, 2(1): 97-102.

Okolie-Osemene J. 2015. Oil companies and lethal violence in Nigeria: patterns, mapping and evolution (2006 – 2014) Nigeria watch project, IFRA-Nigeria e-papers series, No. 44.

Olisemauche OO, Avwerosuoghene OP. 2015. The effect of gas flaring on agricultural production of Okpai, Ndokwa east local government area, Delta State, Nigeria. *Standard Sci Res and Essays*, 3(9): 266-272.

Omofonmwan SI, Odin LO. 2009. Oil exploitation and conflict in the Niger-Delta region of Nigeria. *J Human Ecol*, 26(1): 25-30.

Oseji OJ. 2011. Environmental impact of gas flaring within Umutu-Ebedei gas plant in Delta State, Nigeria. *Scholars*

- Research Library; Archives of Appl Sci Res, 3(6): 272-279.
- Ozabor F, Obisesan A. 2015. Gas flaring: impacts on temperature, agriculture and the people of Ebedei in Delta State Nigeria. J Sust Society, 4(2): 5-12.
- Shell Petroleum Development Company (SPDC). (2004). The new approach: sustainable community development SPDC: Lagos, Nigeria.
- Tawari C, Davies CC. 2010. Impact of multinational corporations in fisheries development and management in Niger Delta Nigeria. Agric and Bio J North America, 1(2): 146-151.
- Ugoh CS, Ukpere IW. 2010. Oil politics and the Niger Delta Developmental Conundrum. African J Bus Mgt, 4(6): 1166-1174.