THE NON-FARM SECTOR AS A CATALYST FOR POVERTY REDUCTION IN THE NIGER-DELTA REGION, NIGERIA

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Abstract

The Niger-Delta region is the home of oil exploration in Nigeria. Over the years, the exploration of oil in the region has created several environmental problems. The increasing level of environmental degradation in the region has brought about pollution of water bodies and land which are the most important livelihood assets of the people. Thus, crop production and fishing which are the main livelihood activities of the people can no longer sustain the domestic needs of most rural households in the region. The quality of life in these communities has worsened as large numbers of the subsistent farmers are now edged out of the production circuit. To supplement income from the farm sector since the rural households must survive, this study therefore, assesses the role of the non-farm sector in the sustenance of the rural households. The survey research design was adopted. One state (Delta state) in the Niger-Delta was randomly selected for the study. The study covers two Local Councils in the state (Isoko North and South). Nineteen rural wards were purposively used for the study out of the twenty-four wards in the two councils. One community each was randomly selected from each ward. Both primary and secondary sources of data were utilized. The systematic sampling with a random start and a sampling interval of five was used in selecting the final respondents. Respondents are basically household heads. The main instruments of data collection were questionnaires and Focus Group Discussion. The results indicate that the non-farm sector is playing significant roles in poverty reduction as households now diversify into the non-farm sector in response to poor yield from farming. The study reveals a total of 33 different non-farm activities being undertaken by respondents. The result also shows that rural households participating in the non-farm sector enjoy a higher quality of life than households engaged in only farm activities. The findings have far reaching implications for policy. It recommends the review of Land Use Act to cater for people who have lost their main means of livelihood due to loss of their lands to oil exploitation and exploration. It also recommends that government should develop micro-credit schemes to assist the poor households who lack collateral to access credit to diversify their sources of income.

Keywords: Non-farm Sector, Catalyst, Poverty Reduction, Niger-Delta, Nigeria.

Introduction

Petroleum resources sustain the Nigerian economy; industrial activities in the sector have been known to be associated with substantial environmental degradation and social crises, posing a potential threat to sustainable development in the Niger Delta, where the bulk of the country's petroleum resources are located (Orubu *et al.,* 2004). In 1956, crude oil was discovered in large commercial quantity at Oloibiri, Bayelsa State consequent upon which Nigeria joined the rank of oil producing nations of the world. Today, oil production in the Niger-Delta accounts for 95 per cent of the country's foreign exchange earnings and about 25 per cent of Gross Domestic Product (Okonta and Douglas, 2001). Besides its great mineral wealth, the Niger-Delta also has fertile agricultural land, forests, rivers, creeks and coastal waters teeming with fish and sundry water creatures. Yet, in spite of its considerable natural resources endowments, the area is one of the poorest and most undeveloped parts of the country. The majority (70%) of the inhabitants live in rural areas, underdeveloped, subsistent existence characterized by total absence of such basic facilities as electricity, pipe-borne water, hospitals, proper housing and motorable roads, resulting to debilitating poverty, malnutrition and diseases (Okonta and Douglas, 2001).

Prior to the discovering of oil in 1956, agriculture was the backbone of the Nigerian economy. From the 1960s up to the mid-1970s, it employed almost 75 per cent of the labour force, accounted for half of the Gross Domestic Product (GDP) and was the main source of revenue. Cocoa, palm produce and rubber from the south, and cotton, groundnuts and livestock produces from the north formed the major cash crops in Nigeria. In the south and in the Middle Belt, root crops such as yam and cassava were dominant (Iliya, 1999). With the discovery of oil in the Niger-Delta and the attendant huge revenue that accrued into the Nigerian economy, the importance of agriculture began to decline in relative terms. Presently, it accounts for less than 30 per cent of the GDP, employs about 55 per cent of the labour force and contributes less than 5 per cent of revenue generated (Iliya, 1999). This scenario has remained the same as revealed in Figure 1.

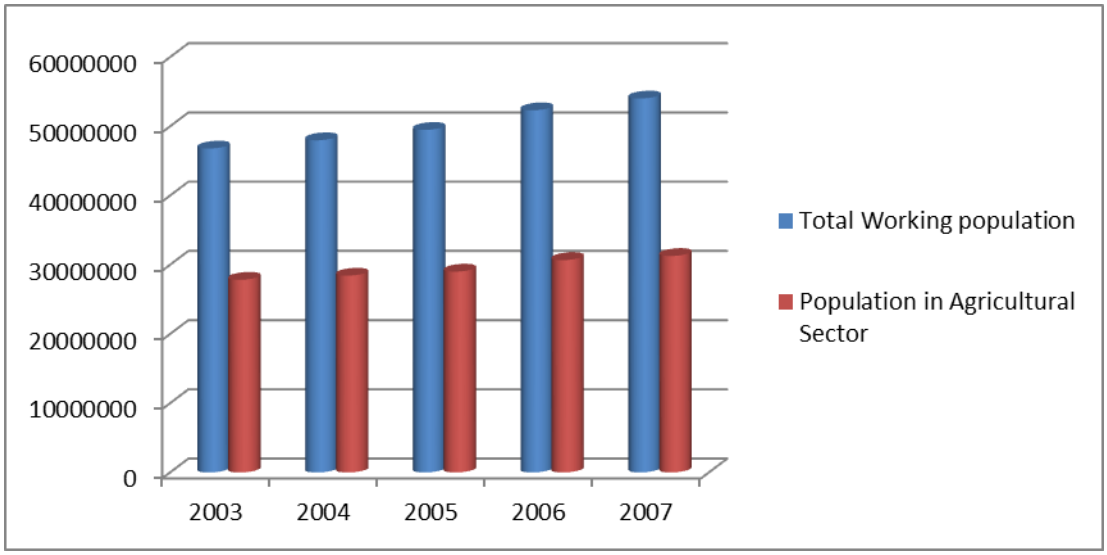

Figure 1: Total Working Population and Population in Agricultural Sector in Nigeria

Source: NBS, NISER, 2009

Source: Fieldwork, 2008

However, for more than three decades, petroleum production in Nigeria has contributed enormously to the country's economic growth and, on the other hand, has left profound adverse impact on the natural environment. The economic benefit of crude oil exploration and production in the Niger-Delta, both onshore and offshore have been so overwhelming that until quite recently, the adverse socio-economic impact, ecological devastation and environmental deterioration on oil communities were overshadowed. Put differently, fertile land and water bodies which are the most important livelihood assets of the people have been destroyed due to crude oil spillages and conversion of these assets for crude oil exploration related activities. Between 1976 and 1997, there have been 5334 reported cases of crude oil spillages releasing about 2.8 million barrels of oil into the land, swamp, estuaries and coastal waters of Nigeria (Dublin-Green et al. 1998). This figure has been on the increase in recent times in the region. Consequently, rural livelihoods in many parts of the region are under considerable stress and poverty is endemic. The need for alternative sources of livelihoods particularly in the non-farm sector is now being explored by stakeholders since the rural households must survive.

Statement of the Research Problem

Globally, there is a considerable interest in gaining a better understanding of how the rural non-farm sector contributes to economic growth and what specific roles it plays in rural development (Lanjouw and Shariff, 2002). The rural non-farm sector is a poorly understood component of the rural economy and relatively little is known about

its role in the broader development context. In fact until recently, a commonly held view has been that the rural non-farm sector is a low productivity sector producing low quality goods. For instance, Nafziger (1994) views the rural non-farm sector as a transient phenomenon. As a result, it was expected to wither away as a country developed and income rose, and its withering was seen as positive rather than a negative occurrence. More recently, opinion has swung away from this view and there are a number of arguments, which suggest that the neglect of the sector would be mistaken (Lanjouw and Lanjouw, 1995). In many developing countries including Nigeria, a large number of the population resides in rural areas, and this population continues to grow at a substantial rate. Given the limit to arable land, such growth rates in the rural labour force will not be productively absorbed in the agricultural sector. (Marsland *et al*., 2000). This puts the spotlight on the rural non-farm sector as a potential vehicle for rural development.

In the study area, it is quite evident that agriculture alone cannot achieve the much-desired rural transformation in the quality of life of rural farmers in the region. This is due to rapid population growth, the continuous conversion and loss of agricultural land for oil exploitation and exploration activities and incessant crude oil spillages and gas flaring in the region. As a result, the micro-climatic condition of soil and water bodies have been altered making them unsuitable for agricultural production (Delta State Agricultural Development Programme, ADP, 1996). Several studies (Omuta, 1985; Moffat and Oloff, 1995; Eteng, 1997; Ashton *et al*., 1999; Anyankwe, 2000; Okonta and Douglas, 2001; Adebanwi, 2001; Okecha, 2003; Ikhuoria, 2005; Osuji and Ezebuiro, 2006; Osuji and Nwoye, 2007) conducted in the region have confirmed the degradation in environmental quality especially pollution of water bodies and land, which are the most important resources of local communities who are primarily engaged in subsistence agriculture. This phenomenon has attracted the attention of national governments, States, Local Governments as well as local and international donor agencies who are now involved in one development project or the other in the region. Surprisingly, only very little impact have been made by these bodies on the quality of life of the people. The continuous increase in hostility in the local communities and the agitation for resource control in the region are only an indication of the failure of the programmes and dissatisfaction of the local people with this developmental approach. What is of paramount importance in this regard is an integrated approach, which can enhance the capacity and ability of local communities to diversify their livelihoods into the rural non-farm activities in the face of the dwindling agricultural potentials of the region. However, little or no study has been conducted in this area to assess the potentials of the rural non-farm sector in enhancing the livelihoods of the people as a way of improving their income and employment generation.

Furthermore, previous studies in Nigeria (Iziren, 1975; Morley, 1979; Oyebanji, 1980; Famisa, 1981; Mbagwu, 1983; Segynola, 1986; Onokerhoraye, 1999; Iliya, 1999; Chukwuezi, 1999) on the role of the non-farm sector in rural development in Nigeria have continuously been focusing on rural-small scale industries with formal identifiable premises in terms of provision of employment, income and local raw material

generation and utilization, which in most cases is beyond the average farmer. Other vital rural non-farm livelihoods such as off-farm income, public and private employee, wholesale and retail trade, transport, contractors, asset rentals, food and beverages, transfer payments, among others have been relegated to the background. Also, these various studies have been based at the Local Government Headquarters while the bulk of the rural non-farm livelihood activities at the hinterland are often not taken into consideration. The need to fill these gaps is the *raison de etre* for this paper. The following research questions were therefore raised:

- How do households respond to the increasing loss of land, water bodies and soil fertility in Isoko land? What are the various non-farm livelihood activities in Isoko land and what factors are necessary for the expansion of this sector?
- What are the roles of the non-farm sector in employment generation and household income in Isoko land?
- Is there any significant difference in the quality of life of rural households based on non-farm activities as their main sources of income?
- What policy measures are germane in poverty reduction in the Niger-delta region of Nigeria that will enhance rural non-farm activities?

Goal of the Study

The goal of this study therefore, is to assess the role of the rural non-farm sector in poverty reduction among communities in Isoko land.

Justification of the Study

Given the strategic importance of the Niger-Delta to the socio-economic development of Nigeria, this study forms a major contribution to the understanding of the situation and level of development in local communities of Isoko land in particular and Niger-Delta at large. The results of the study will be of immense benefit to development planners and other stakeholders involved in rural development in the Niger-Delta region as the results will provide a framework for mainstreaming rural non-farm livelihood activities into development projects in the study area.

Another significance of the study also emanates from the fact that in many parts of the world, the number of poor people in rural areas exceeds the capacity of agriculture to provide sustainable livelihood opportunities (Gordon and Craig, 2001). Whilst there are potentials for out migration, urban centres cannot be assumed to be capable of providing adequate livelihood opportunities for all those unable to make a living in agriculture (Marsland *et al*., 2000). This indicates a potentially important role for the rural non-farm sector as an alternative means of livelihood for the rural poor. This study will therefore help in exploring the potentials of the rural non-farm sector in empowering rural peasants in agriculturally constrained environment such as the study area. Thus, the study will be particularly relevant to African rural communities where information on rural non-farm sector is needed for the development of the sector but are generally lacking.

Literature Review and Conceptual Framework

Rural non-farm sectors are increasingly expanding in the rural economy of most developing countries. This situation is not unconnected with the dwindling trends in agricultural production in most of these countries rural economies. One of the corollaries of this in most rural economies is the diversification of livelihood by most rural people (Onwuemele, 2008). Most rural households now earn their living from multiple sources. Thus, social scientists and other scientists have focused a special attention on this sector in the last two decades. Several conceptual issues lurk beneath the surface of the rapidly growing literature on the rural non-farm sector. Okafor and Onokerhoraye (1994) defined non-farm as those economic activities which cannot be classified as primary production activities. This they classified into 3 main categories namely:

(a) Secondary activities
(b) Small scale distribution and
(c) Tertiary activities

Secondary activities comprise traditional crafts such as blacksmithing, carving, weaving and wood working. They also include modern crafts, such as tailoring, shoemaking, welding, watch repair, radio repair, auto-repair, vulcanising, dyeing and printing (Okafor and Onokerhoraye, 1994). The small-scale distribution comprises all trading activities whether in wholesale or retailing activities, while the tertiary activities include enterprises such as transport operators, house owners, restaurants, domestic services, laundering etc (Ibid). In Asian studies, Chaldha (1993) and Metha (2002) have attempted to identity the characteristics of the rural non-farm sector; they opined that the rural non-farm sector comprises a wide range of activities which are directly or indirectly associated to and supporting to various agricultural and non-agricultural related economic activities, excluding activities related to agricultural production, performed in rural areas. These include traditional and modern manufacturing activities, mining and quarrying, construction, trading, transport, storage and communication, hotelling and personal services. Most attempts by scholars to capture the characteristics of the rural non-farm sector have been solely activity based (wage work or self-employment) un-earned income (remittances), social payments (pensions, social insurance), which are an integral part of the rural economy have often been neglected. In Nigeria, the study of the rural non-farm sector focuses on the analysis of small-scale industries (Iziren, 1975). In 1980, Oyebanji studied the rural non-farm sector. However, he focused on rural small-scale industries. Similarly, Mbagwu's (1978) attempt to capture the characteristics of the rural non-farm sector concentrated on traditional industries using local materials found in the rural areas. Only recently, Onokerhoraye (1999) notes that rural non-farm activities are diverse and hence called for a disaggregated approach towards research and action. Again, in his study, emphasis was placed on rural small-scale industries. This only shows that researchers and scholars in Nigeria have viewed non-farm sector in terms of rural small-scale industries. Thus, this present study is aimed at studying the totality of the non-farm sector from the household livelihood perspectives with a view to filling the above research gap.

Two main reasons have been identified why rural households diversify their livelihoods into the rural non-farm sectors (NRI, 2000). These are:

(a) Demand -Pull Motivation

In rural areas, many households take advantage of opportunities in the rural non-farm economy, taking into consideration the wage and risk differentials associated with each type of involvement. Households may diversify into the non-farm sector to enhance their assets, typically with the option to reverse their decisions (Swift, 1998). When returns to rural non-farm sector are higher and less risky than farming, "pull" factors are at work (FAO, 1998). Ellis (2000) notes that factors that increase return to time spent on farm activities would tend to reduce the motivation to diversify.

(b) Distress-Push Motivation

Conversely, when farm income is inadequate and opportunities for consumption smoothing such as credit and crop insurance are missing, and the household needs cash to pay for farm inputs, household may be pushed into the rural non-farm sector. Poverty induced participation in the non-farm sector may indicate that the rural non-farm sector is absorbing a residual for surplus labour that cannot be employed on-farm. Factors that lead to distress-push participation in the rural non-farm sector include successive droughts that depress income and hence the need for alternative sources of income, usually through low-skill jobs (Islam, 1997).

The capacity of households or individuals to participate in the rural non-farm sector is not uniform (NRI, 2000). Reardon *et al.'s* (2000) analysis of 100-farm households found that: "In sum, the evidence tends to show a rough pattern: a positive relationship between non-farm income share and total household income and/or landholding in much of Africa, a negative relation in much of Latin America, and a very mixed set of results in Asia" (Reardon *et al*., 2000). Scoones (1998) identifies one major factor, which enhances household's capacity to participate in the non-farm sector, which is "capital assets". This is further broken down into five different types of capital, namely, human capital, social capital, physical capital, financial capital and natural capital. Similarly, Ellis and Hussein (1998) consider six factors that enhance household's capacity to participate in the non-farm sector. Five of these factors are individual or household –specific- health and nutrition, household composition, access to finance, education, and social capital-and one is region specific-infrastructure.

A number of studies have investigated the effect of non-farm sector on household income (Reardon *et al.,* 2000; Chukwuezi, 1999; Mehta, 2002). However, in the area of study, which is Isoko land in Delta State, little or no study has been conducted in the area to explore the potential role of the rural non-farm sector taking into consideration the decreasing agricultural production in the area. Hence, this paper is directed at meeting these research needs in the area. However, it is pertinent to state that the various studies reviewed so far have provided a useful insight into the

potentials of the rural non-farm sector in rural development and provide a springboard on which further studies such as this could be undertaken, particularly in hitherto neglected areas.

Materials and Methods

The cross sectional survey research design was adopted. The population of the study consists of selected household members present during the questionnaire administration whether they are engaged in the rural non-farm sector or the farm sector. The inclusion of all households head irrespective of the nature of livelihood activities undertaken is to facilitate the study's attempt at estimating the proportion of the rural households engaged in the non-farm sector, comparison of income and expenditure pattern of household engaged in the non-farm sector. Both primary and secondary data were employed. The secondary data covered data collected by other researchers and organizations, which were utilized in this study. The primary data include all data that were collected by the researcher during field studies. The primary data were collected through Focus Group Discussions (FGD) and questionnaire survey. The study involved a multi-stage sampling technique. Isoko land was divided based on the existing 24 wards of the two Local Government Areas. All State Capitals and Local Government Headquarters in Nigeria are legally and administratively designated as urban centres and are therefore expected to perform urban functions (Omuta and Onokerhoraye, 1994). Consequently, the five political wards located at the two Local Governments Headquarters including Ozoro 1, Ozoro 2, Ozoro 3 and Oleh 1 and Oleh 2 were excluded from the study. Hence, a total of 19 wards were used for the study. Next, streets were selected from the selected communities using the random sampling technique. Finally, households were selected in each selected street using systematic sampling technique with a random start and a sampling interval of five. 992 questionnaires were administered while 779 were retrieved from the respondents. Table 1 shows list of the 19 selected wards.

Table 1: List of 19 Wards and their Respective Communities

Wards	Communities	Number of Communities
Iyede 1	Otor-Iyede. Ulli-Iyede, Oghenerurie, Ewhisigba, Alagba, Iwride	6
Iyede 2	Ekiugo-Iyede, Okpaigie-Iyede, Oghara-Iyede, Oteri-Iyede, Ogewo-Iyede, Eboh-Iyede	6
Ellu	Ellu, Idoni, Aradhe, Ovrede	4
Ofagbe/ovrode	Ofagbe, Ovrode, Egwe, Ogwo,	4
Ohwologbo	Ohwologbo,	1
Otibio	Otibio, Erawha, Otie, Eniagbedhi.	4
Owhe/akiewe	Akiewhe, Otor-owhe, Canaan Village, Edhomoko.	4
Emevor	Emevor, Ivrogbo, Egbahe, Ujewe, Ofagbe, Oghrerhe.	6
Okpe-Isoko	Okpe-Isoko, Ige, Itebiege.	3
Oyede	Oyede, Bethel.	2
Aviara	Aviara, Ukpude, Ukpawha, Araya, Aberuo, Ewokpaka, Okpawa, Otoka, Ikpa	9
Uzere	Uzere, Uheri, Abale, Ekrigbesi, Uweye, Otegeloma	6

Emede	Emede, Okromoro, Okpohro, Adazare, Etivie	5
Olomoro	Olomoro, Oviri, Ikiagbodo, Iwride, Okpe, IKiakutu	6
Igbide	Igbide, Owodokpokpor, Oteri, Ororo, Egbo, Otoko, Aladja.	7
Umeh/Erowa	Umeh, Erohwa	2
Enhwe/okpolo	Enhwe, okpolo	2
Irri 1	Irri	1
Irri 2	Irri,, Ada, Ivrogbo, Idheze, Orie, Ikpide, Ivori, Utue, Uro.	9

Source: Fieldwork, 2013, and INEC, 2013

Both descriptive and inferential statistics were employed in the analysis of the data collected. Descriptive statistics namely, tables, frequencies, percentages were used to present and describe information sought by the study.

Results and Discussions

Analysis of data revealed that the majority (56.6%) of the respondents were males. The majority (64.6%) of the respondents are married, while 27.6 per cent were single. The analysis also shows that 45.1 per cent of the respondents were head of their respective families. The study also revealed an average household size of 6.7 persons. Further analysis shows that 25.6 per cent of the respondents earn below N5000 Naira per month. It also revealed that 34.6 and 36.0 per cent of the respondents spend below N5000 Naira and between N6000-N10, 000 Naira respectively. Table 2 shows the educational qualification of the respondents.

Table 2: Educational Background of the Respondents

Educational Qualification	No. of Respondents	% of Respondents
No formal education	79	10.2
Primary education	171	22.0
Secondary education	389	50.0
Tertiary education	139	17.9
Total	***779***	**100.0**

Source: Fieldwork, 2013

Table 2 shows that the majority (50.0%) of the respondents had secondary education as their highest educational qualification, 22.0 per cent had primary education, while 17.9 per cent had tertiary education. However, 10.2 per cent of the respondents are illiterates, with no formal education. From the above analysis, the study area can be described as a fairly literate population. The high literacy level of the study area may be attributed to the significant encouragement in school enrolments associated with the Universal Primary Education (UPE) programme of 1976-1977, and the free education programme of Ambrose Alli's government, which encouraged the establishment of secondary schools in many rural communities (Onokerhoraye, 1995).

Response Pattern to Increasing Loss of Land, Water Bodies and Soil Fertility

As earlier stated, there are increasing trends in the loss of land, water bodies occasioned by crude oil exploitation in the region. Thus, we sought to determine the respond pattern among rural households in the region. In rural areas in Nigeria including the study area, agriculture is the dominant source of income for the people. Table 3 shows the main sources of income of respondents in the study area.

Table 3: Main Sources of Income of the Respondents

Main Sources of Income	No. of Respondents	% of Respondents
Farm only	139	17.9
Non-farm only	300	38.5
Farm and non-farm	340	43.6
Total	**779**	**100.0**

Source: Fieldwork, 2013

Table 3 shows that out of the 779 respondents used for the study, 340 representing 43.6 per cent of them are engaged in both farm and non-farm livelihood activities. Another 38.5 per cent of the respondents are engaged in non-farm livelihood activities only while only 17.9 per cent of the respondents are engaged in farming activities only. One obvious inference that can be generated from the above analysis is the fact that rural households in the study area are now diversifying their sources of income from farming to enable them cope with the dwindling agricultural fortunes. Thus, livelihood diversification is the main response strategies of households to loss of land and water bodies. This explains why Ellis (1998), noted that one common characteristic of most rural households in degraded environment is the diversification of livelihood activities as a way of reducing risks, or as a survival strategy to cope with environmental uncertainty and agricultural failures. Table 4 shows the rural non-farm activities in Isoko land.

Table 4 Rural Non-Farm Activities

S/N	Non-farm Livelihood Activities	No. of Respondents	% of Respondents
1	Civil servant	80	12.5
2	Shoe making	8	1.2
3	Trading/business activities	195	30.5
4	Oil worker	3	0.4
5	Agricultural produce processing	28	4.4
6	Hair dressing	32	5.0
7	Furniture maker	13	2.0
8	Motor mechanic	29	4.5
9	Pastor	5	0.7
10	Transporting	44	6.9
11	Barbering	10	1.6

12	Nurse	9	1.4
13	Plumbering	5	0.7
14	Bicycle repairer	14	2.2
15	Artist	1	0.2
16	Medicine selleing	15	2.3
17	Tailoring	46	7.2
18	Vulcanizer	13	2.0
19	Welder	16	2.5
20	Telephone repairer	1	0.2
21	Daily wage labourer	13	2.0
22	Grinding machine operator	2	0.3
23	Electrician	4	0.6
24	Musician	5	0.7
25	Banker	2	0.3
26	Brick layer	6	0.9
27	Hotelier	7	1.1
28	Gsm operator	1	0.2
39	Radio/tv repairer	3	0.5
30	Herbalist	1	0.2
31	Painter	2	0.3
32	Photographer	1	0.2
33	Security services	1	0.2
	Total	**640**	**100.0**

Source: Fieldwork, 2013

Rural non-farm livelihood activities are vital survival strategies offering some form of income to most rural households to supplement agricultural income or vice versa. From the study sample, it is evident that there is a high level of non-farm activity in the study area. Table 4 reveals a plethora of various non-farm livelihood activities being carried out by the people. The most dominant non-farm livelihood activity in the area is trading (30.5%) along the main roads, kiosks and open shades. Another major non-farm livelihood activity in the area is civil service. About 12.5 per cent of the respondents are civil servants either with the Local Government Authority or with the State Service. Transportation, tailoring and hair dressing also feature prominently as dominant non-farm activities with 6.9 per cent, 7.2 per cent and 5.0 per cent respectively. Surprisingly, of the total 640 respondents that are engaged in the non-farm activities, only 3 representing 0.4 per cent of them were employed in the oil industry, a factor which may have contributed to the hostilities between host communities and oil companies in the region. The focus group discussants maintained that there has been a geometric increase in non-farm activities in their respective communities. Thus, we sought to further determine the factors responsible for this increase. Table 5 shows the factors responsible for the expansion of non-farm activities in the area of study.

TABLE 5 Factors Responsible For the Expansion of Non-Farm Livelihoods

Reasons	No. of Respondents	% of Respondents
Soil fertility declined	131	17.4
Decline in fish catch	20	2.7
Decline in crop yield	91	12.1
Gas flaring	14	1.9
Oil spillage	10	1.3
Forest loss	24	3.2
High income yield	454	60.2
Less strenuous	10	1.3
Total	**779**	**100.0**

Source: Fieldwork, 2013

Table 5 indicates that the major factor influencing the expansion of non-farm livelihood activities in the study area is the high-income yield from the sector. The majority (60.2%) of the respondents stated that the high-income return from the sector is responsible for the expansion of the sector in the study area. Another 17.4 per cent of the respondents identified soil fertility decline while 12.1 per cent identified decline in crop yield 3.2 per cent, 2.7 per cent and 1.3 per cent of the respondent identified gas flaring, oil spillage and less strenuous respectively as the factors responsible for the expansion of non-farm livelihood activities in the study. The factors responsible for the expansion of non-farm livelihood activities also feature prominently during the focus group discussion. Mr. Emmanuel Umudide from Otor – Iyede stated that their forefathers carried out farming as their main occupation without success and hence they are not ready to follow suit. Supporting the above view, Mr. Francis Omowo from Oyede maintained that the living conditions of their fathers who were farmers do not encourage them to participate actively in farming activities. Buttressing the fact that the non-farm sector yields higher income than the farm sector, Mr. Paul Egbo, a shoemaker at Otor – Iyede described the non-farm sector as "wait and take sector". According to him, the money in the non-farm sector comes immediately unlike the farm sector where individuals must wait till the produces are harvested.

Pattern of Income Distribution among Farm, Farm /Non-Farm and Non-Farm Households

A review of the pattern of income distribution among the households representing the three categories of main livelihood activities in the study area is presented in this section. This is vitally important, as it will provide a clear picture of the relative importance of each of the sectors in terms of their total contribution to household economy. Table 6 shows the pattern of income distribution among the three main livelihood categories in the study area.

TABLE 6 Pattern of Income Distribution among Farm, Non-Farm/Farm And Non-Farm Households

Income per month for Groups of Households (₦)	Main Sources of Income			Total
	Farm only	Non-farm only	Farm & non-farm	
Below ₦ 5000	65 (47.1%)	82 (20.7%)	72 (21.2%)	199 (25.6%)
₦5, 000 – ₦10, 000	29 (21.0%)	72 (24.1%)	94 (27.7%)	195 (25.1%)
₦11, 000 – ₦15, 000	15 (10.9%)	46 (15.4%)	59 (17.4%)	120 (15.5%)
₦16, 000 – ₦20, 000	10 (7.2%)	37 (12.4%)	42 (12.4%)	89 (11.5%)
₦21, 000 – ₦25, 000	6 (4.3%)	34 (11.49%)	20 (5.9%)	62 (7.7%)
₦26, 000 – ₦30, 000	7 (5.1%)	22 (7.4%)	20 (5.9%)	49 (6.3%)
₦31, 000 – ₦40, 000	3 (2.2%)	13 (4.3%)	19 (5.6%)	35 (4.5%)
Above ₦40, 000	3 (2.2%)	13 (4.3%)	13 (3.8%)	29 (3.7%)
Total	**45 7.0%)**	**299 (100.0%)**	**339 (100.0%)**	**776 (100.0%)**

Source: Fieldwork, 2013

From Table 6, one obvious observation is the fact that as income rose from below N5000 per month to above N40, 000 per month, the number of households for each of the income group also decreases. The implication of this is that there are more households in the lower income groups than the higher income groups in the three categories of sources of income. For example, while there are 65 households representing 47.1 per cent in the farm households earning below N5000 per month, there are 82 households representing 20.7 per cent in the non-farm households earning below N5000 per month. Similarly, there are 72 households representing 21.2 per cent in farm and non-farm households earning below N5000 per month.

On the other hand, while there are only 3 households representing 2.2 per cent in the farm only households earning above N40, 000 Naira per month, there are 13 households representing 4.3 per cent of households earning above N40, 000 per month in the non-farm only household. Similarly, there are 13 households representing 3.8 per cent of households earning above N40, 000 per month in the farm and non-farm households. Another important observation from Table 6 is the fact that there are more farm only households earning below N5000 per month than the remaining two categories of sources of income. About 47.1 per cent of farm only households earn below N5000 per month, while 20.7 per cent and 21.2 per cent of non-farm only and farm / non-farm households earn below N5000 per month respectively. The implication of this is that the non-farm sector is contributing more income to the households than the farm sector. It also implies that households that have diversified into the rural non-farm sector earn more income to their households than others that have not diversified. Income is a major determinant of quality of life. Therefore, it is expected that higher

income levels translate into higher quality of life *ceteris peribus*. Since the above analysis reveals that the non-farm sector is contributing more income to households, it can be inferred that households engaged in the rural non-farm sector enjoy a higher quality of life than others in the farm sector only.

Another important observation from the table is the fact that there are more households in the farm and non-farm categories of sources of income. Specifically, while there are 139 representing 17.8 per cent of households earning their income from farming activities only, there are 230 representing 29.5 per cent of households' earning their income from non-farm only and 340 representing 43.6 per cent of households earning their income from both farm and non-farm activities. This only helps to depict the importance rural households attach to the non-farm sector and hence its role in the totality of their economy.

Contribution of Farm and Non-Farm Incomes to Household Sustainability

In this paper, it was established that the non-farm sector is playing significant roles in the rural economy of the study area. Thus, it becomes vital to determine in monetary terms the relative contribution of the 3 categories of the sources of income of the respondents to household income. Table 7 shows the mean income from the 3 categories of sources of income of respondents in the study area.

TABLE 7 Mean Monthly Income of Respondents According to Livelihood Activity

Livelihood Activity	Total Sum (Naira)	No. of Respondents	Mean (Naira)
Farm only	₦ 1,295,500	138	₦ 9,387.68
Non-farm only	₦ 4,291,500	299	₦ 14,352.84
Farm & Non-farm	₦ 4,560,500	339	₦ 13,452.80
Total	**₦ 10,147500**	**776**	**₦ 37,193.32**

Source: Fieldwork, 2013

Table 7 indicates that the non-farm only respondents earn higher monthly income of ₦14, 352.84 per month followed by farm / non-farm households with mean monthly income of ₦13, 452.80. The farm only households earn the least monthly income of ₦9, 387.68 per month. This justifies our earlier statement that the non-farm only respondents tend to be more stable financially than the other categories of respondents. From the above table, it can be seen that the non-farm sector is contributing significantly more to household income than the farm sector in the study. The average income of households that participate in non-farm activities is higher than that of households that only participate in farm activities. Non-farm activities are therefore playing significant roles in improving the rural standard of living in the study area. The implication of the above analysis becomes clearer when this average monthly income is compared with the average family size of the households. Thus, with average monthly income ranging from ₦9000 to ₦14, 000 per month, it is obvious that the majority of the respondents will be living below the poverty line. If poverty is defined

globally as living below the equivalent of $1.00 per capita / day, then given an average household size of 6.7, the average family will need to earn about N30, 150 to live above the poverty line. The implication of this is that the people in the study area are living below the poverty line. This may partly explain the high level of restiveness and agitation for resource control in the region. In the light of the important contributions that the rural non-farm sector is making in the rural households, it then becomes germane for the sector to be mainstreamed into the existing development framework of the area. This will not only enhance the capacity of rural households to participate in the sector, but will help in the long run in improving household incomes and their quality of life.

Quality of Life Measurement

Oyebanji (1984) noted that the concept of quality of life belongs to the family level of living concept. Hence, the concept is interchangeably used with other indices of life such as social well-being, standard of living, level of satisfaction, level of living etc. One of the corollaries of this is that different scholars over the years have adopted different indicators in the measurement of quality of life. Thus, while Oyebanji (1982) adopted five criteria including prosperity, environment, education, health and social order in the measurement of quality of life, Okafor (1985) adopted seven social indicators including nutrition, shelter, health, education, employment, leisure and security in measuring rural development. However, in this study, the emphasis is not on spatial variations in the quality of life, rather, emphasis is on the variations in the quality of life of individual households living in the same ward but engaged in different livelihood activities. Thus, in measuring quality of life in this study, emphasis will be placed on individual specific indicators rather than area specific indicators.

The measures of quality of life adopted by the study for this purpose are:

(a) Income of households head
(b) Health status of household head
(c) Educational qualification of household head
(d) Sources of water supply
(e) Type of toilet facility

These five measures form the dependent variables while the independent variable is the main sources of income for household. The statistical technique employed is the Analysis of Variance (ANOVA). The ANOVA result is presented in Table 8.

TABLE 8: Analysis of Variance Table

Source of Variation	Sum of Squares	D.f	Mean Square	F	Sig.
Between Groups	356.466	18	19.804	5.580	0.000
Within Groups	2686.565	757	3.549		
Total	**3043.031**	**775**			

Source: Fieldwork, 2013

The above ANOVA Table shows the sum of squares and the mean sum of squares for the two tests: the between group and within group variances. These are presented in columns 2 and 4 respectively. The degrees of freedom are presented in column 3 while the F– value and significant level are presented in columns 5 and 6 respectively. The F-value of 5.58 is significant at 0.05 level of significance. This implies that there are significant differences in the quality of life of households engaged in the farm sector and others that are engaged in both farm and non-farm sector. Households engaged in the non-farm sector generate more income than farm only households; hence they enjoy a higher quality of life.

Conclusion

This study was designed to assess the role of the non-farm sector in rural development in the Niger-Delta region of Nigeria. The study becomes necessary in the light of the dwindling agricultural potentials of the region occasioned by rapid environmental degradation. A cross- sectional survey of rural households in the area reveals that rural households are now diversifying their livelihoods into the non-farm sector. The reason for this is the high-income yield from the non-farm sector. Thus, rural households that have diversified into the non-farm sector enjoy a higher quality of life than others in the farm sector. Non-farm activities are therefore, vitally important for the livelihoods of rural households and hence, should occupy a central point in the policies aimed at addressing the developmental problems of the study area. However, farming is still playing significant roles in household economy in the study area. The development of the farm sector will depend increasingly on the availability of fertile land. Consequently, the Land Use Act should be reviewed to cater for people who have lost their main means of livelihood due to loss of their lands to oil exploitation and exploration and this must be accompanied with appropriate relevant policies that will promote non-farm activities in the rural communities in the study area. It is suggested that government should develop micro-credit schemes to assist the poor households who lack collateral to access credit to diversify their sources of income.

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