Abstract. In a bid to strengthen the agricultural sector in Nigeria, the Kwara State Government invited thirteen Zimbabwean farmers to participate in agricultural production in Kwara State in 2004. The main objective of this study therefore was to examine the effect of the activities of these foreign farmers on local farmers’ poverty status. A questionnaire was administered on the heads of farming households. A total of 240 respondents were used for the study, which was comprised of 120 contact and 120 non-contact heads of farming households. The analytical tools employed included descriptive statistics and the Foster, Greer and Thorbecke method. The result indicated that the non-contact farming households are poorer than the contact farming households. Using the disaggregated poverty profile, poverty is most severe among the age group of above 60 years. The intensity of poverty is also higher among the married group than the singles. Based on the education level, poverty seems to be most severe among those without any formal education. It is therefore recommended that a minimum of secondary school education should be encouraged among the farming households to prevent higher incidence of poverty in the study area.

Key words: foreign farmers, rural farming households, poverty, Kwara state

INTRODUCTION

The Nigerian economy during the first decade after independence could reasonably be described as an agricultural economy because agriculture served as the engine of growth of the overall economy (Ogen, 2003). From the standpoint of occupational distribution and contribution to the GDP, agriculture was the leading sector. During the period, Nigeria was the world’s second largest producer of cocoa, largest exporter of palm kernel and largest producer and exporter of palm oil. Nigeria was also a leading exporter of other major commodities such as cotton, groundnut, rubber and hides and skins (Alkali, 1997). The agricultural sector contributed over 60% of the GDP in the 1960s and despite the reliance of Nigerian peasant farmers on traditional tools and indigenous farming methods, they produced 70% of Nigeria’s exports and met 95% of its food needs (Lawal, 1997). However, the agricultural sector was neglected during the hey-days of the oil boom in the 1970s. Ever since then Nigeria has been witnessing shortages in basic food items and poverty in all dimensions. Historically, the roots of these crises in the Nigerian economy lie in the negligence of agriculture and the increased dependence on a mono-cultural economy based on crude oil (Olabugbaju and Falola, 1996). In view of its large size and economic importance, various policy
reforms were quite visible in the agricultural sector, several large scale agricultural development initiatives were established (Fasipe, 1990). These policies turned out to be a mirage mainly because of official corruption and lack of commitment on the part of those saddled with the responsibility of implementing them and it is heartrending to note that as a result of this, as from the mid-70s, Nigeria has become a net importer of various agricultural products. These lapses have really increased the poverty level in the country (Chemingu and Thabet, 2005). The failure of the attempted programmes enabled the Federal government to involve foreign farmers in the agricultural sector with the claims supported by international organizations such as the Food and Agriculture Organization (FAO), the International Fund for Agricultural Development (IFAD) and the International Food Policy Research Institute (IFPRI) (Dessy et al., 2012). These organizations agreed that large areas of suitable land in any African countries are either unused or under-utilized, which means that leasing or selling them to foreign investors may not lead to massive displacement of peasants. Second, they claimed that even if peasants are displaced, they may simply shift to wage employment, either directly with the foreign companies leasing their farmland, or indirectly through upstream and downstream linkages created by the land investment deals (FAO, 2009). Third, proceeds from farmland leased to the foreign investors could be reinvested in the local community so as to improve the livelihoods of local people (Dessy et al., 2012). The Kwara State government therefore collaborates with some of the foreign partners with the intention to produce enough food for the local population, as well as for export to the rest of the world (Salami, 2008). This Commercial Agriculture Initiative was a group of thirteen farmers relocated to Kwara state from Zimbabwe due to land reforms and redistribution by Mr. Mugabe the President of Zimbabwe (Moyo, 2013). These foreign farmers are currently in Shonga district of Edu Local Government of the state where the state government provided one thousand (1000) hectares of land to each of the thirteen farmers on twenty five (25) years leasehold, renewable for another twenty five (25) years term (Salami, 2008; Makochehanwa, 2012). Basic infrastructure such as roads, boreholes and electricity were provided to the farms, and the foreign farmers were also charged with the responsibility of protecting the interest of the host communities, provide adequate security at the farm house, establishing a Community Trust Fund for provision of social facilities and infrastructure for the welfare of the members of the host communities and establishment of a school to be managed by the foreign farmers to transfer skill and technology to local entrepreneurs (Ariyo and Mortimore, 2011).

A number of studies have been carried out on the effect of the foreign partners in agriculture. Some were positive while there still exist some adverse effects of the foreign farmers. Ariyo and Mortimore (2011) observe that commercial agriculture has substantially increased the demand for labour that should generate a significant income multiplier effect on the local economy. They further stated that the main visible impact the commercial farmers have had on local practices is the wide adoption of soybeans by Nupe farmers and better crop management, especially keeping to the right seed population and timely weeding. Makochehanwa (2012) in his studies also identified the positive impact without leaving out the negative ones. He explained that unlike other land appropriations, financial incentives were used by the state to manage local resistance to land appropriation in Shonga District to those who gave up some of their lands under cultivation, or fallow lands, or both, to accommodate the commercial farms. Following the commercialization of the farms, Nigeria’s imports especially of powdered milk from Holland and China have declined as the new farmers have been producing and supplying the same products on the local market. The negative impacts of these foreign farmers are that most local farmers lost their farm land through appropriation to the new commercial farmers. Abdulkarim (2012) revealed that there is no significant difference between average monthly income before and after the coming of the Zimbabwean white farmers. However, the white farmers show concern when there is any occupational hazard or if any of their employees is reported sick. The workers are given first aid before taken to the clinic in Shonga. In addition, some of the employees are given accommodation in the farms especially in the cattle ranch. The study carried out by Adewumi et al. (2013) indicated that farm size per farmer decreased significantly (p < 0.05) from 4.02 ha to 2.14 ha after the arrival of white farmers. The cost and returns analysis explained that before the arrival of white farmers, the cost of group labour was about 81.83% of the total cost of the farm’s input per hectare for the farmers within the white farmers’ area. This paper therefore attempts
to explain the disaggregated effect of the cross-border investment on the poverty status of farming households.

AGRICULTURAL PRODUCTION AND POVERTY REDUCTION: THE THEORY

There have been several issues on the impact of agriculture on the economic development and poverty reduction of a nation. This has generated enormous literature concerning both theoretical and empirical issues. Much of this literature focuses on the process of structural transformation of economies, from the least developed in which economic activity is based largely on agriculture, to high-income countries where industry and services sectors dominate (Cervantes-Godoy and Dewbre, 2010). A declining share for agriculture in national employment and GDP is an inevitable consequence of economic progress (Byerlee et al., 2009; Cervantes-Godoy and Brooks, 2009; Timmer, 1988). This is largely due to higher income flexibility of demand for non-agricultural goods and services. As their incomes grow, consumers increase their consumption of manufactured goods and services faster than their consumption of food. Paradoxically, the process is usually accompanied by rising incomes and a lower incidence of poverty among those who depend on agriculture for a living (Cervantes-Godoy and Dewbre, 2010).

Among the earliest development economists was Lewis (1955) who explained the economic development as a process of relocating factors of production from an agricultural sector characterized by low productivity and the use of traditional technology to a modern industrial sector with a higher productivity. Lewis’s theory was interpreted as advocating industrialization and used to justify government policies that favoured protection for domestic industries and, explicitly or implicitly, taxed the agricultural sector (Kirkpatrick and Barrientos, 2004). That theory and its implications for policy have been largely debunked by later work and the degree to which economic policies of developing countries discriminate against agriculture has lessened dramatically in recent decades (Anderson and Valenzuela, 2008).

A paper produced by DFID (2005) emphasizes the close correlation between different rates of poverty reduction over the past 40 years and differences in agricultural performance – particularly the rate of growth of agricultural productivity. The authors see links between agriculture and poverty reduction as being possible through four ‘transmission mechanisms’. The channels include: direct impact of improved agricultural performance on rural incomes; impact of cheaper food for both urban and rural poor; agriculture’s contribution to growth and the generation of economic opportunity in the non-farm sector; and agriculture’s fundamental role in stimulating and sustaining economic transition, as countries (and poor people’s livelihoods) shift away from being primarily agricultural towards a broader base of manufacturing and services. They went on to note that the potential for future poverty reduction through these transmission mechanisms depends on the extent to which agricultural productivity can be increased where most needed.

RESEARCH METHODOLOGY

The study was carried out in the Kwara state, Nigeria. Primary data were collected through the administration of a well-structured questionnaire to the heads of selected households through the assistance of well-trained enumerators.

The population for this study comprises all of the farming households in Edu Local Government Area. Farming households within the enclave of the foreign farmers were regarded as contact farming households and the ones outside the enclave as non-contact farming households used for the study. The contact farming households are households that live and have their farms in the Shonga district, where the foreign farmers are settled. There are thirty-three communities, whose farmlands have been displaced by the foreign farmers and have been relocated to another farmland (buffer zones and other farm lands). The non-contact households on the other hand comprise farming households outside the Shonga district in the same Local Government Area. A two-stage sampling technique was used for this study. In the first stage, ten villages each for the contact and noncontact farming households were randomly selected. The second stage required a random selection 12 farm families from each selected village. Thus a total of 240 respondents were used for the study.

The analytical methods employed include descriptive statistics and Foster, Greer and Thorbecke method. Descriptive statistics involves the use of measure of central tendency and measure of dispersion including mean, median, mode and standard deviation. This was used
to describe the socio-economic characteristics of the farming household heads. Foster, Greer and Thorbecke method was used to analyse the objective to examine the poverty status of contact and non-contact farming households. The method was used to determine the incidence, depth and severity of poverty of the farming households and it makes use of the aggregate values of the poverty indices – poverty headcount, poverty gap, and squared poverty gap. The analysis of poverty was based on the mathematical model developed by Foster et al. (1984), known as the FGT model of poverty decomposition. The use of the FGT measures required the definition of a poverty line, which was calculated on the basis of aggregated data on household income. The FGT measure, which measures the absolute poverty as used by Baiye-gunhi and Fraser (2010) is expressed as:

$$P_d = \frac{1}{n} \sum_{i=1}^{m} \left( \frac{z - y_i}{z} \right)^{\alpha}, \alpha \geq 0$$  \hspace{1cm} (1)

Where:
- $Z$ – poverty line
- $m$ – number of households below poverty line
- $n$ – number of households in the reference population/total sampled population
- $y_i$ – per adult equivalent income of $i$th household
- $z$ – poverty aversion parameter
- $z - y_i$ – poverty gap of the $i$th household
- $\frac{z - y_i}{z}$ – poverty gap ratio.

The headcount index was obtained by setting $\alpha = 0$, the yield poverty gap index when $\alpha = 1$, and squared poverty gap index when $\alpha = 2$. Three poverty lines were compared for this study. These poverty lines are 1.25 USD per day, 2 USD per day and two-third mean household expenditure (Ravallion et al., 2009). Using the three measures of poverty line, any household member whose daily estimated income falls below the estimated measures are considered poor and those whose income falls above are non-poor. Finally, the per capita poverty status was categorized to be poor, becoming poor and non-poor. Generally, an individual who is poor based on all the measures is considered poor, while those who are poor based on one or two measure(s) are said to be becoming poor, and those that are non-poor based on all the measures are said to be non-poor. Adult equivalents were generated following Nathan and Lawrence (2005):

$$AE = 1 + 0.7 (N_1 - 1) + 0.5 N_2$$  \hspace{1cm} (2)

Where:
- $AE$ – adult equivalent
- $N_1$ – number of adults aged 15 years and above
- $N_2$ – number children aged less than 15 years.

For the purpose of this study, 1 USD has the equivalent of ₦ 150.

RESULTS AND DISCUSSION

Socio-economic characteristics of contact and non-contact farming households

Most of the respondents in the study areas are married constituting 90% of the contact farming households and 80% of non-contact farming households. Farming households heads in the two categories are well-experienced in agriculture, with the modal class of 16–30 years. The result reveals that most of the contact and non-contact farming household heads (51% and 41%, respectively) had just primary education. About 30% of the contact farming households have their household sizes ranging from 11 to 15 members (per a household), which constitute the highest percentage while that of the non-contact farming households is between 5 and 10 constituting about 46%. This might be due to a temporary increase in income of the contact farmers because of labour works done on the foreign farmers’ farm. The mean available land is 5.2 hectare and 5.4 hectare for the contact and non-contact farming households, respectively, although more than half of the respondents (both contact and non-contact farming household heads) possess more than 2.99 hectares of land for cropping purposes. Thus the household heads who are non-contact possess larger farm size than the contact ones.

Poverty profile of contact and non-contact farming households

The poverty profile of contact farming households that have been disaggregated based on three parameters (Table 1). The parameters are age group, marital status and education level.

The result reveals that only 18.0% of the contact farming household heads above fifty do not experience poverty. The respondents who fall below 30 years of age constitute the largest proportion of the contact farming households who have the least poverty incidence (0.29).
Therefore poverty is very severe among the older farmers who are not strong enough to do strenuous works unlike the youth who are agile and in the prime of their life.

However, poverty is more severe among the married group of the contact farming households (0.07) than among the singles (0.02) who are also contact farmers. This could be the result of a bigger number of children and other dependants (aged parents and relatives) as the earlier findings depicted.

Based on the education level, Table 3 indicates that poverty seems to be severe among the contact farming households with no formal education, in which only 33% of them are above the poverty line. On the other hand, contact farming household heads with tertiary education have a relatively lower poverty severity (0.03). It is noteworthy that on the average secondary education is needed to tilt above poverty line in the community.

Based on the estimated value of Gini coefficient, income spread is closer to zero than to one. The value
of the coefficient of variation is lower than one. This indicates that there is low variance among the farmers’ income. The value of Gini coefficient indicates that the level of inequality is not high and it tends to being equal.

The result of non-contact farmers is similar to that of the contact areas for the age group, where poverty is very severe among the age group above 60. The married respondents also have severity of 0.24 and the divorced of 0.21. This might be as a result of the aforementioned reasons for the contact farmers, where the married farmers have many dependants. The level of inequality among the non-contact is high considering all the measures employed (Dillon and Hardaker, 1993).

Table 2. Disaggregated Poverty profile of non-contact farming households

<table>
<thead>
<tr>
<th>Group</th>
<th>Sample size</th>
<th>Number of poor</th>
<th>Incidence</th>
<th>Depth</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤30</td>
<td>49</td>
<td>19</td>
<td>0.39</td>
<td>0.19</td>
<td>0.13</td>
</tr>
<tr>
<td>31–40</td>
<td>43</td>
<td>24</td>
<td>0.56</td>
<td>0.35</td>
<td>0.26</td>
</tr>
<tr>
<td>41–50</td>
<td>19</td>
<td>7</td>
<td>0.37</td>
<td>0.24</td>
<td>0.18</td>
</tr>
<tr>
<td>51–60</td>
<td>6</td>
<td>2</td>
<td>0.33</td>
<td>0.21</td>
<td>0.16</td>
</tr>
<tr>
<td>&gt;60</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>0.67</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Parameter: Age group – Parametr: Grupa wiekowa

| Parameter: Marital status – Parametr: Stan cywilny
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>20</td>
<td>3</td>
<td>0.15</td>
<td>0.03</td>
</tr>
<tr>
<td>Married</td>
<td>96</td>
<td>50</td>
<td>0.52</td>
<td>0.32</td>
</tr>
<tr>
<td>Divorced</td>
<td>3</td>
<td>1</td>
<td>0.33</td>
<td>0.26</td>
</tr>
</tbody>
</table>

Parameter: Education level – Parametr: Wykształcenie

| No formal      | 33          | 23        | 0.70  | 0.40     | 0.31     |
| Primary        | 41          | 19        | 0.46  | 0.30     | 0.21     |
| Quranic        | 3           | 2         | 0.70  | 0.62     | 0.58     |
| Secondary      | 31          | 11        | 0.35  | 0.16     | 0.11     |
| Tertiary       | 11          | 4         | 0.36  | 0.26     | 0.20     |

Inequality measures: relative mean deviation: 0.4474, coefficient of variation: 1.2806, standard deviation of logs: 1.2749, Gini coefficient: 0.5749.


Miary koncentracji: średnie odchylenie względne: 0,4474, współczynnik zmienności: 1,2806, odchylenie standardowe logarytmów: 1,2749, współczynnik Giniego: 0,5749.

Based on the estimated value of Gini coefficient, income spread is closer to one than zero. The coefficient of variation has value above one. This indicates that there is high variance between the farmers’ income. The value of Gini coefficient indicates that the level of inequality is higher than the contact farmers. This is in consonance with the findings of Dillon and Hardaker (1993), who defined Gini coefficient as the rate of the area between the curve and the 45-degree line to the area under the 45-degree line, which is also a measure of inequality. They concluded that Gini-Coefficient greater than 0.35 is high indicating inequitable distribution.

Comparatively, married group among the non-contact farming households are poorer (severity = 0.24) than the married among the contact farmers (severity = 0.07) despite the larger family size of contact farmers relative to that of the non-contact farmers.

**CONCLUSIONS AND RECOMMENDATIONS**

It can be concluded from the study that married group among the noncontact farming households are poorer (severity = 0.24) than the married among the contact farming households (severity = 0.07) despite the larger family size of contact farming households relative to that of the non-contact farming households. Among the contact farming households, the poverty severity increases as the age of farming household heads increases and those whose farms are far from the foreign farms tend to have their poverty incidence reduced. Among the non-contact farming households, poverty increases as household size increases and has a positive link with physical and social distance to foreign farmers.

It is recommended from the study that minimum of secondary school education should be encouraged among the farming households to prevent higher incidence of poverty in the study areas. Also more buffer zones of the foreign farmers’ farms should be allocated to local farmers since those having their farms closer to foreign farmers have lower incidence of poverty.

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ZDEZAGREGOWANE POMIARY UBÓSTWA WŚRÓD GOSPODARSTW ROLNYCH W STANIE KWARA W NIGERII


Słowa kluczowe: rolnicy zagraniczni, wiejskie gospodarstwa rolne, ubóstwo, stan Kwara

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