# Determinants of Child Labour and Schooling in Rural Farming Households in Ogun State, Nigeria

[1]A. S. Coster and [2]M. I. Adekoya

[1] Department of Agricultural Economics, University of Ibadan, Ibadan, Nigeria
[2] Department of Agricultural Education, Tai Solarin College of Education, Ogun State
*Corresponding author email: lekecoster {at} yahoo.co.uk*

**ABSTRACT—** *The paper examines the determinants of child labour participation and schooling choice of children aged 5-14 years. Using data from two hundred and twelve rural households randomly selected through multistage random sampling technique from ten rural communities in Ogun State, Nigeria. Data were analyzed using descriptive and inferential statistics. Results show that about 50% of the child's mother had no formal education which invariably had detrimental effects on child schooling participation. Majority (52.8%) of the sample households are low income earners which may push children to work to supplement household income. The study shows that child labour participation is gender sensitive and that child labour and schooling increases with age. Male children of different age categories were more in schooling only than their female counterparts. Even though children work to supplement family needs, they are likely to be at receiving end because of early entry into labour force which may affect their health. Using bivariate probit modelling technique to test the interdependence of child labour and schooling choices, it was observed that there is trade off between child labour and schooling. The results reveal that parent, child, household and community characteristics determined child labour and schooling choices of children. Findings from this study affirmed the relationship between child labour and poverty. Policies aimed at improving household welfare, free education for children and adult literacy programmes are effective way to reduce child labour in rural Nigeria.*

**Keywords—** Child labour, Schooling, Poverty, Rural, Nigeria

## 1. INTRODUCTION

Child labour and low school attendance is a pervasive problem throughout the world, especially in developing countries. African and Asia together account for over 90 percent of total child development. This is especially prevalent in rural areas where the capacity to enforce minimum age requirements for schooling and work is lacking. Children work for a variety of reasons, the most important being poverty and the induced pressure upon that to escape from this plight. Developing economy are characterized by low level of human capital development, which not only impedes present but also future productivity. Glicks and Sahn (2000) reported that the elimination /reduction of human capital development impediments is a sure way of promoting economic growth and the elimination of poverty in developing countries. The absence of high technical input (human knowledge and technologies), which is a major precursor of low productivity has been described as that outcomes of promoting child labour at the detriment of educational development.

The issue of child labour has attracted increasing attention in the past decade from policy makers, advocates and researcher. Child labour is a persistent problem, found throughout most of developing worlds and to a lesser extent in developed countries. The availability of detailed and reliable child labour statistics and their analysis on a continuing basis are particularly important for establishing policy priorities and targets, formulating and implementing interventions and monitoring policies, regulations and program aimed not only at the minimization of the negative consequences of child labour in the short term, but most importantly at the eventual elimination of the practice (Obayelu and Okoruwa, 2007).

According to the last world estimation of the incidence of child labour carried out by the International Labour Organisation (ILO, 2005), more than 246 million children are working in the world. The Sub-Saharan Africa has the highest proportion with almost $^1/_3$ under 14 years old children carrying out an economic occupation. Most of the countries have adopted laws and regulations to prevent child labour or to impose rigorous restrictions on it. The main part of these laws and regulations is inspired and guided by the norms adopted by the ILO. Despite all these efforts, child labour continues to be widespread all over the world.

In rural setting in developing countries more than 70 percent of child labour is rural (ILO, 2002). The hazard associated with the involvement of children in the labour market are enough to hypothesis that child labour use persists in inverse relation to the degree of economic advancement of a society (Partrinos and Psacharopoulos, 1994). Basu (1998),

views child labour as a means out of poverty especially for poor household. Basu observed that children contribute as much as one-third of household income in poor families. He stated that such income could not be treated as insignificant in poverty reduction in poor households. It has also been reported in some studies that such income helps the poor families to improve their welfare, thereby enabling them to send their children to school (Patrinos and Psacharopoulos, 1997). However, Nielsen (1998) does not find a positive relationship between poverty and child labour and raises doubts about the claim of poverty being a main determinant of child labour. Emerson and Souza (2006) examine the effect of child labour and child schooling and adult outcomes. Using an instrumental variable strategy, they argue that, even controlling for completed schooling, child labour has a negative effect on adult earnings. Studies by Lloyd and Blanc (1994) and Grootaert (1998) revealed that child, parent and household characteristics as well as school characteristics (i.e., expenditure in school and distance to the school) are important variables affecting whether children participate in economic activities. However, Siddiqi and Patrinos (1995) observed that children in rural areas participate more in the labour market because of larger land holdings. This means that the tendency to engage in child labour increases with farm size. Adekola, et. al., (2005) examined the determinants of child labour using a sequential probit model. The results show that age and gender of the child, the education and employment status of the parents, and the household's poverty status are the factors which affect the decision to supply child labour either by the child or by the household. Okpukpara and Odurukwa (2006) examined the incidence and determination of child labour in Nigeria. Results show that there are structural differences in the choice of child activities option across gender, age, sector, and zone in Nigeria. Although the evidence of a sector gap exists, the participation of children in economic activity particularly increases in rural areas. Adeoti et. al. 2013 investigate the level of child labour participation in cassava production. Results show that more boys were engaged in farming operations than the girls, and that more female children combined schooling with work. Using multinomial logit model to examined the relationship between schooling and labour force decisions, it was revealed that age of the child, biological child, quality of shelter lived, availability of schools and parents' education have a positive significant effect on schooling decision of a child while time spent on farm and cassava farm size have a significant negative relationship on child's schooling decision.

In Nigeria, reports have indentified an increasing incidence of child labour, that comprehensive national analysis of the descriptive and causal factors of the child welfare variables; schooling and work have not been possible until now. This study aimed to fill the research gap in literature by investigating the role of parents, child, household and community characteristics in determining child labour and school participation in rural households in Ogun State, Nigeria. This will afford policy makers of an in-depth understanding of the reality of child labour persisted problems for effective planning, legislation and developmental purposes. Specifically this study sought to: examine the socio-economic characteristics of the farm households; described the levels of child involvement in labour force participation and schooling and analyse the factors that influence child work and schooling decision.

## 2. MATERIALS AND METHODS

### *2.1. Study area*

Ogun state is entirely in the tropics, located in the south west zone of Nigeria with a total land area of 16,409,26 square kilometers. It is bounded on the west by the Benin Republic, on the south by Lagos state and the Atlantic ocean on the east by Ondo state and on the north by Oyo and Osun state. The climate of Ogun state follows a tropical pattern with the raining season, starting about march and ending in November, followed by dry season. The mean annual rainfall varies from 128cm in the southern part of the state to 105cm in the Northern part of the state areas. The average monthly temperature range from $23^{o}C$ in July to $32^{o}C$ in February. The Northern part of the state is mainly of derived savannah vegetation while the central part falls in the rain forest belt. The southern part of the stare has mangrove swamp. The geographical land scope for the state comprises extensive fertile soil suitable for agriculture and savannah land in the north western part of the state, suitable for cattle rearing. There are also vast forest reserves, rivers, lagoons, rocks, mineral deposits and an ocean front. The population of Ogun state during 2006 census was 3,751,140. The state has 20 local government area.

### *2.2. Sampling procedure*

The sampling techniques employed for this study is multi stage sampling technique. Ijebu zone and Yewa zone were randomly selected from the four zones of the Ogun State Agricultural Development Programme (OGADEP) namely Ijebu zone, Egba zone, Yewa zone and Remo zone and used as the sampling frame. In stage two, Odogbolu local government area and Yewa north local government area were randomly selected from each zone respectively and ten rural communities were randomly selected from each of the local government area. Finally, twelve (12) rural farmers were randomly selected from each of the ten rural communities thus make a total of two hundred and forty respondents. However, twenty eight respondents were found unsuitable for analysis and consequently, data from 212 questionnaires were analyzed for the study.

The analysis is based on data for children aged 5–14 years living in rural households under their biological parents or guardian. There are 713 children in this age group, although 50 had to be omitted due to missing information on their schooling and working activities. These restrictions result in a usable sample size of 663 children.

### 2.3. Data Collection

Primary data were collected with the aid of well structured questionnaire on household socio-economic characteristics, income, farm size, family labour, hired labour, number of children and their ages, parents education, gender of child and their ages, time spent on labour activities and their earnings, schooling pattern, farm and community characteristics.

### 2.4. Data Analysis

Descriptive statistics which include frequency, percentages, mean, and standard deviation were used to analyze the socio- economic variables of the respondents.

Inferential statistics: Bivariate probit model was employed to test the likelihood of children working and going to school given varied parent, child, household and community characteristics. Bivariate probit model allows for the existence of possible correlated disturbances between two probit equation.

Model specification:

In the bivariate probit model there are two binary dependent variables $Y_1$ and $Y_2$, so there are two latent variables $y_1^*$ and $y_2^*$. It is assumed that each observed variable takes on the value of 1 if and only if its underlying continuous latent variable takes on a positive value:

$$Y_1 = 1 \text{ if } y_1^* > 0, 0 \text{ otherwise} \dots\dots 1$$

$$Y_2 = 1 \text{ if } y_2^* > 0, 0 \text{ otherwise} \dots\dots 2$$

with

$$y_1^* = X_1\beta_1 + \varepsilon_1 \dots\dots 3$$

$$y_2^* = X_2\beta_2 + \varepsilon_2 \dots\dots 4$$

and

$$E[\varepsilon_1] = E[\varepsilon_2] = 0 \dots\dots 5$$

$$Var[\varepsilon_1] = Var[\varepsilon_2] = 0 \dots\dots 6$$

$$Cov[\varepsilon_1, \varepsilon_2] = \rho \dots\dots 7$$

Fitting the bivariate probit model involves estimating the values of $\beta_1, \beta_2 \text{ and } \rho$. To do so, the likelihood of the model has to be maximized. The likelihood function is given as:

$$L = \pi \int_{-\infty}^{\beta_1 x_1} \int_{-\infty}^{\beta_2 x_2} \emptyset_2[z_1, z_2; \rho] dz_2 dz_1 \dots\dots 8$$

Where

$\emptyset_2$= bivariate normal density function

$\rho$= co-efficient of correlation between the two equation

$X_1$ and $X_2$ = vector of exogenous variables

$\beta_1 \text{ and } \beta_2$= associate parameter of the vectors

The co-efficient need to be adjusted to be marginal effects unlike the standard linear regression model.

In this probit model, $E[y] = \emptyset[\beta' x']$ \dots\dots 9

and the marginal effects is given as:

$$\frac{\partial \emptyset[\beta' x]}{\partial x_1} = \emptyset[\beta' x']\beta \dots\dots 10$$

### 2.5. Variables used in the Probit Model

**Dependent variables**

$Y_1$: Labour: 1 if the child worked in the last one week; 0 otherwise

$Y_2$: School: 1 if the child went to school in the last one week; 0 otherwise

**Independent variables**
*Child characteristics*
$X_1$ = gender of the child (male =1, female =0)
$X_2$ = age of the child ( years)
$X_3$ = age of the child square (years)
*Parents' characteristics*
$X_4$ = years of schooling of child's father
$X_5$ = years of schooling of child's mother
*Household characteristics*
$X_6$ = age of household head (years)
$X_7$ = gender of household head ( male = 1, female = 0)
$X_8$ = Household size (number)
$X_9$ = farm size (in hectares)
$X_{10}$ = Farm income per annum (Naira )
*Community characteristics*
$X_{11}$ = availability of primary school in the community (yes = 1 ,  otherwise = 0)
$X_{12}$ = availability of secondary school in the community (yes = 1 ,  otherwise = 0)
$X_{13}$ = distance to school (in kilometer)

# 3. RESULTS AND DISCUSSION

Table 1 shows that majority (59.4%) of the household head were between the age of 31-50 years, 10% were less than 30 years and 30.6% were above 65 years. This implies that majority of the household head were in their productive and active year. About 61.3% of the respondents were married while 17.9% were single/divorcee. Table 1 revealed further that about 58% and 23.1% of child's father had primary and secondary education respectively while 10.4% had no formal education. Contrarily, majority(49.5%) of the child's mother had no formal education while 39.1% and 11.4% had primary and secondary education respectively. Also, majority of the respondents had household size of between 1-3 members with mean household size of 4 persons.

Table 2 shows that about 45.8% of the sample households were small scale farmers, 43.4% were medium scale and 10.8% were large scale farmers. Also, majority (77.4%) of the respondents had less than 2 hectares of farmland and 4.7% had above 3 hectares of land. This emphasized that sample households are subsistence farmers who may engaged their children in farm work . Also, 39.1% of the sampled farmers had less than 10 years of farming experience while 60.9% had above 10 years. Table 2 revealed further that about 23.1% of the respondents earn less than N100,000 per annum, 29.7% earn between N101,000-N200,000, 32.1% earn between N201,000-N300,000 and about 15.1% earn above N300,000 per annum. This ndicate that the sample households are low income earners hence there is possibility of allowing their children into labour force to supplement farm income for farm families sustainability.

Table 3 reveals the child characteristics across age and gender. Among the male children in the study, 60.4% were between the age 5-9 years while 39.6% were between the age 10-14 years. Also, female children aged 5-9 years constitute the majority(62.9%) while 37.1% were between the age 10-14 years. The table also shows that about 75.3% of the male children belonged to biological parents while 24.7% were foster child. However, in the female category, 45.7% were foster child while 54.3% are biological child of the parents. This support the findings of Case and Albeidieger, (2002) that Kinship fostering or guardianship of orphans and other children is a common practice in Africa.

Table 4 shows the level of involvement of children in labour force across age and gender. 55% of the male children aged 5-9years were engaged in domestic work while 70.5% of the female children in the same age category were engaged in domestic work. Also, more female children (52.3%) aged 10-14 years were in domestic chores than their male counterpart (8.7%). This implies that female children were more engaged in domestic chores than male. This is because female children are more frequently engaged in helping parents in the domestic work and taking care of younger children. However, as the children increases in age their level of involvement in domestic chores reduces and they participated more in economic activities to raise money to support their family. The study revealed further that 12.3% of male children aged 5-9 years were involved in farm work than the female (5.6%) of the same age. Similarly, 49.2 % of male children aged 10-14 years were involved in farm activities which is higher than the female children (20.8%) of the same age category. Also, combining domestic and farm work increases for male children than female children across age categories.

Table 6 shows the number of hours spent by different categories of children in domestic chores and economic activities. It is evident from the table that the number of hours increases with the age of children. In domestic chores, female children aged 5-9 years spent an average of 13.5 hours per week while their male counterpart spent an average of 8 hours. In the same vein, female children aged 10-14 years spent average of 22 hours per week while their male counterpart spent average of 10.5 hours per week. However, in economic activities, male children aged 5-9 years spent an average of 3 hours on farm work per week while their female counterparts spent an average of 1.8 hours per week. Similarly, male children aged 10-14 years spent an average of 15 hours per week working on the farm while their female

counterpart spent an average of 9 hours per week. The implication of this is that schooling activities of these children may be jeopardize because a great number of their time are being spent on farm work which may affect their mental capacity.

Table 7 shows the children earnings in farm activities excluding domestic work. This is because domestic work are not strictly income generating activities. The table shows that there is differential in earnings of male and female children in farm work activities across age categories. Male children aged 5-9 years earn N900 per week while female children in the same age category earn N525 per week. Also, male children aged 10-14 years earn N2,800 per week while their female counterpart earn N1,620 per week. This may be as a result that male children put many hours into farm works than female children. These earnings will commensurate with improved household welfare giving the facts that majority of the sampled households were poor. The income if well utilized can be used to offset schooling expenses for the child. As indicated in table 6, earnings increases with age and children are likely to suffer the consequences of early entry into labour force. This is so because male children who began working at aged 5-9years earn 67.9% less than male children who began working at aged 10-14 years. Similarly female children who began working at aged 5-9 years earn 71.1% less than their contemporary who began working at aged 10-14 years.

Table 8 indicate that male children were more in school only category than female children. The results reveals that 42.9% of the male children aged 5-9 years were in school only while 28.8% of the female children of the same age were in school only. This implies that male children entered the school earlier than female children. This may be attributed to preferential treatments given to male child among rural households in Nigeria. Similarly, 38% of the male children aged 10-14 years were in school only which is higher than female (29.3%) of the same age category. Also, male children in different age categories combined schooling with work than their female counterpart. The results revealed further that female children (48.2%) aged 5-9 years were in idling category than their male (20.2%) counterpart. Similarly, only 2.2% of the male children aged 10-14 years were neither in school nor work category(idling) compared to female children (15.4%) of the same age category. This may be connected to delayed enrolment, disability or lack of interest in education, which are important variables that determine child participation in schooling (Okpukpara and Odurukwa, 2006). As evident from this study, sample households attached more importance to male child education than female child. This result supports the findings by Adeoti et. al. (2013) that parents attached more importance to male child education in rural Nigeria society thus put the female children at disadvantaged.

# 4. ESTIMATION RESULTS

The bivariate model enables us to test the interdependence of labour force participation and schooling choices in the household context. A significant negative relationship of the rho (-0.60)*** indicates that there is trade off between the labour force and schooling choices and they compete with each other as opposing choices.

The result in table 8 are based on total sample combining all communities, gender and age group together. Results shows that parent, child, household and community characteristics determined child labour and schooling choices of children.

## 4.1. Parents characteristics

Education of the child's father has a negative and significant effect on the child work. Increase in the education status of the child's father decreases the probability of child participation in labour force by 0.396 unit. This result supports the findings by Canagarajah and Coulombe (1998), Okpukpara and Odurukwa, (2006) and Adeoti et. al. (2013) that parent level of education negatively affects the likelihood of child labour. However, father education has a positive and significant relationship with schooling choice of children. This implies that educated father will be more predisposed towards child education than working. This result corroborates the findings by Nkamleu and Kielland (2006) that farmer education had a positive effect on child schooling as the only alternative at 1% level of significance. Contrarily, results shows that mother's education positively and significantly influence child participation in economic activities. On the other hand, in the schooling equation, there is a negative marginal effect on schooling participation. This is not surprising, given that in our sample households about 50% of the child's mother had no formal education. In line with the findings by Andvig, Canagarajah and Kielland(2001) educational background of a child's mother is imperative to the schooling decision of such a child in an African settings. Also, Grootaert(1998) opined that parental education should be used as a targeting variable for intervening in child labour issues.

## 4.2. Child's characteristics

Child's age has a positive and significant relationship with work. This implies that older children are more likely to be engaged in economic activities than the younger children. The marginal effect for age square is negative implying that participation in economic activities becomes weaker in the younger age groups. In the schooling equation, child's age is negatively significant with schooling choice. This implies that younger children get into school earlier rather than working. However, as the child grow older there is increasing likelihood of participating in schooling activities as shown in the positive sign of child age square.

Gender of the child has a positive and significant relationship with work. This implies that male children has a higher likelihood of participating in economic activities than female. Studies have shown that boys are more likely to be involved in the labour market than girls (Patrinos and Psacharopoulos, 1994; Okpukpara and Odurukwa, 2006 ).

### 4.3. Households' characteristics

Results shows that age of the household head has positive and significant effect on child labour force participation. This implies that as the household head aged there is increasing probability of child participating in economic activities to earn income that will supplement family needs. This result supports the finding by Grootaert and Kanbur, (1995) that an advance age farmer tends to be weak in performing laborious farm activities and then delegate the younger members of the household to perform such activities. The result also agreed with the findings by Okpukpara and Odurukwa, (2006) that older parents may have lesser opportunities gaining employment that is needed to pull their children from economic activities. On the other hand, in the schooling equation, age of household head has a negative and significant relationship with schooling decision. This result was contrary to the findings by Grootaert (1998) that the older the household head, the more likely it is that a child will be attending school and not working.

Household size has a positive and significant relationship with child labour. A unit increase in the number of household increases the probability of child working in economic activities by 0.214 unit. As argued by Patrinos and Psacharopoulos (1997) children from larger households are more likely to work, as a consequence of resources per person being smaller in larger households. Contrarily, an additional unit to household number reduces the probability of child participation in schooling by 0.247 unit. This is because in a large household, parents in general cannot afford to send all children to school and hence some children attend school at the expense of others (Llyod and Gage-Brandon, 1994). As affirmed by Nkamleu and Kielland, (2006) a large household has more problems to solve (sickness, diseases, shelter and food) which leaves them with insufficient capital to send all the children to school.

Farm size proxy wealth of a household has a positive and significant relationship with child labour. This implies that as the farmer land holding increases the probability of child engaging in economic activities increases by 0.007 unit. On the other hand, in the schooling equation, increase in the land holding decreases the probability of child participating in school activities, though the effect is weak. This result supports the findings by Kedebe et. al.(1990) that as farm size increases, farmers need more labour inputs. The result also agreed with that of Chamarbagwala (2004) who reported that household ownership of land, especially in rural areas, could increase a child's likelihood of working because children are more likely to be engaged in agricultural activities (seasonal or full time) if their parents own and cultivate land.

Farm income proxy for household wealth has a negative and significant relationship with child labour force participation. Implying that as household income increases the likelihood of child participating in economic activities reduces. Also, in the schooling equation, increase in household income increases the probability of child schooling activities. This implies that an household that has its welfare improved by way of increased income will pull their children from economic activities to schooling. This result established that child labour is poverty induced.

Another wealth proxy, quality of the house has a negative and significant relationship with child labour while it is positively related to schooling choice though not significant. This implies that quality of the house lived by the child reduces the likelihood of child labour while it increases child schooling participation. This result agreed with Nkamleu (2006) that house quality wealth proxy reduces child labour.

Availability of primary school has a negative and significant relationship with child labour while it has a positive and significant relationship with child schooling. This implies that establishment of primary school in the rural area discourages child labour force participation while it encourages child schooling participation. Similarly, availability of secondary school has a positive and significant relationship with child schooling participation. This result supports the findings by Moyi (2010) and Adeoti et. al. (2013) that establishment of a school in the rural settings will improve the school entry of children in such area.

Distance to school has a positive and significant relationship with child participation in school activities while it is negatively associated with child labour participation though not statistically significant. This implies that the nearer the school to the village the more the children are encouraged to participate in school activities while the farther the farm to the village discourages child labour force participation. This result corroborates the findings by Andvig, (1997) that the distance and location of a school positively influence a child to opt for school rather working on the farm. It also agreed with the findings of Blunch and Verner (2001) that distance to the nearest primary school is significantly correlated with child labour for rural children.

## 5. CONCLUSION AND RECOMMENDATION

The study revealed that child labour participation is gender sensitive, as more male children were engaged in farm activities, majority of the female children were involved in domestic chores. Children spent a great number of their time in labour activities which may jeopardize their schooling. The study observed that larger percentage of female children aged 5-9 years were neither in school nor work category(idling). This delayed in school enrolment result in loss of human capital formation, thus put the female children at disadvantaged. Bivariate probit model was employed to test the interdependence of labour force participation and schooling choices. It was observed that there is trade off between the labour force and schooling choices. The effects of wealth proxies have opposite effects on child labour participation,

while farm size increases child labour which probably may be due to higher marginal returns to child labour, farm income and quality of the house reduces child labour and increases schooling participation. This suggests that there is relationship between child labour and poverty.

Policy that will improve the welfare of the farmer and his family should be an important focus in the rural areas in order to stem the tide of child labour force participation. This can be channelled through improved agricultural productivity such as subsidies, credit provision, improved seed, affordable irrigation schemes, extension delivery services, etc. Also, government intervention on sensitization of rural communities on the need for child education most especially the female children should be given a priority. Policy aimed at improving parents' child education through adult education programme should be given urgent attention to forestall using children as adjusted farm labour.

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## Socio-economic Characteristics of Rural Households

| Table 1 | Parent Characteristics | |
|---|---|---|
| **Variables** | **Frequency** | **Percentages** |
| **Age of Household head (years)** | | |
| < 30 | 21 | 10.0 |
| 31 – 40 | 80 | 37.7 |
| 41 - 50 | 46 | 21.7 |
| > 65 | 65 | 30.6 |
| **Gender of Household head** | | |
| Male | 130 | 61.3 |
| Female | 82 | 38.7 |
| **Marital Status** | | |
| Married | 174 | 82.1 |
| Single | 38 | 17.9 |
| **Educational level of Child's Father** | | |
| No formal education | 22 | 10.4 |
| Primary school | 123 | 58.0 |
| Secondary school | 49 | 23.1 |
| Post secondary school | 18 | 8.5 |
| **Educational level of Child's Mother** | | |
| No formal education | 105 | 49.5 |
| Primary school | 83 | 39.1 |
| Secondary school | 24 | 11.4 |
| **Household size ( number)** | | |
| 1 – 3 | 123 | 58.0 |
| 4 – 6 | 74 | 34.9 |
| 7 – 10 | 15 | 7.1 |

Source: Field Data, 2013

| Table 2 | Farm Characteristics | |
|---|---|---|
| **Variables** | **Frequency** | **Percentages** |
| **Type of Farm Enterprise** | | |
| Small scale | 97 | 45.8 |
| Medium scale | 92 | 43.4 |
| Large scale | 23 | 10.8 |
| **Farm size (Hectare)** | | |
| 0.1 - 0.9 | 85 | 40.1 |
| 1.0 - 1.9 | 79 | 37.3 |
| 2.0 - 2.9 | 38 | 17.9 |
| > 3.0 | 10 | 4.7 |
| **Farming Experience (years)** | | |
| 1 - 5 | 27 | 12.7 |
| 6 - 10 | 56 | 26.4 |
| 11 - 15 | 83 | 39.2 |
| > 15 | 46 | 21.7 |
| **Farm Income (Naira)** | | |
| < 100,000 | 49 | 23.1 |
| 101,000 - 200,000 | 63 | 29.7 |
| 201,000 - 300,000 | 68 | 32.1 |

| | | |
|---|---|---|
| > 300,000 | 32 | 15.1 |

Source: Field Data, 2013

**Table 3** **Children Characteristics**

| Age of child (years) | Male | Female | All |
|---|---|---|---|
| 5 - 9 | 218(60.4) | 190(62.9) | 408(61.5) |
| 10 - 14 | 143(39.6) | 112(37.1) | 255(38.5) |
| **Parent -Child relationship** | | | |
| Non biological child | 89 (24.7) | 138 (45.7) | 227 (34.2) |
| Biological child | 272 (75.3) | 164 (54.3) | 436 (65.8) |

Source: Field Data, 2013

**Table 4. Distribution of Children Participation in Labour Activities (Percentages)**

| | Male | | Female | | All | |
|---|---|---|---|---|---|---|
| Age group | 5-9yrs | 10-14yrs | 5-9yrs | 10-14yrs | 5-9yrs | 10-14yrs |
| Domestic work only | 55.0 | 8.7 | 70.5 | 52.3 | 62.1 | 41.9 |
| Farm work only | 15.3 | 49.2 | 8.6 | 20.8 | 16.9 | 32.8 |
| Domestic & Farm work | 26.6 | 41..4 | 15.9 | 29.4 | 24.2 | 37.8 |

Source: Field Data, 2013

**Table 5. Hours Spent Working by Children Per Week (hours)**

| | Male | | Female | | All | |
|---|---|---|---|---|---|---|
| Age group | 5-9yrs | 10-14yrs | 5-9yrs | 10-14yrs | 5-9yrs | 10-14yrs |
| Domestic work only | 8 | 10.5 | 13.5 | 22 | 10 | 17.5 |
| Farm work only | 3 | 15 | 1.8 | 9 | 2 | 13.6 |
| Domestic & Farm work | 5 | 12 | 4.5 | 8.2 | 3.8 | 19.2 |

Source: Field Data, 2013

**Table 6. Distribution of Child's Earnings Per Week (Naira)**

| Age group | Male | Female | All |
|---|---|---|---|
| 5 - 9yrs | 900 | 525 | 630 |
| 10- 14 yrs | 2,800 | 1,620 | 2,150 |

Source: Field Data, 2013

**Table 7. Schooling Pattern of Children Aged 5-14 years (Percentages)**

| | Male | | Female | | All | |
|---|---|---|---|---|---|---|
| Age group | 5-9yrs | 10-14yrs | 5-9yrs | 10-14yrs | 5-9yrs | 10-14yrs |
| School only | 42.9 | 38.0 | 28.8 | 29.3 | 45.7 | 31.3 |
| School and work | 36.1 | 46.5 | 25.2 | 37.8 | 33.3 | 48.7 |
| Idle | 20.2 | 2.2 | 48.2 | 15.4 | 32.4 | 9.6 |

Source: Field Data, 2013

**Table 8. Estimation Results of Work and Schooling of Children Aged 6-15 years**

| Model | **Bivariate Probit Regression Model** | | | |
|---|---|---|---|---|
| **Dependent Variable** | **Work** | | **School** | |
| Explanatory variable | Marginal Effect | p-value | Marginal Effect | p-value |
| Father's education | -0.396** | -2.61 | 0.420*** | 3.18 |
| Mother's education | 0.437** | 2.71 | -0.388*** | -2.90 |
| Child age | 0.231** | 2.27 | -0.250** | -2.78 |
| Child age square | -0.004 | -0.06 | 0.031*** | 4.64 |
| Gender of child | 0.599*** | 3.05 | -0.179* | -1.35 |
| Gender of household head | 0.041 | 0.14 | -0.305 | -1.38 |
| Age of household head | 0.066** | 2.64 | 0.067*** | 3.20 |
| Household size | 0.214** | 2.35 | -0.247*** | -3.03 |
| Farm size | 0.007** | 2.32 | -0.036 | -0.41 |

| | | | | |
|---|---|---|---|---|
| Farm income | -0.010* | -1.80 | 0.138* | 1.64 |
| Type of house lived | -0.175* | -1.60 | 0.101 | 1.15 |
| Avail. pry. school | -3.079*** | 5.11 | 0.661*** | 3.58 |
| Avail. sec. school | 0.711 | 1.34 | 0.186*** | 3.04 |
| Distance to school | - 0.026 | -1.22 | 0.002** | 2.25 |
| /athrho | -0.696 | -3.08 | | |
| rho | -0.602 | | | |
| Log likelihood | -172.68 | | | |
| Wald chi$^2$(30) | 120.60*** | | | |
| Number of observations | 212 | | | |

*** Significant at 1%, ** significant at 5%, * significant at 10%

Source: Computed from Field Data, 2013