



Socio – economic determinants of child labour among female headed household cassava farmers in some selected States of South - South, Nigeria: A Post Covid-19 Experience

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ABSTRACT

The study was conducted in South – South, Nigeria with particular reference to three (3) states that were randomly selected. Data required for the study was collected using a well-structured questionnaire (primary source). Secondary source of data was generated from review of previous work. Oral interview and field observation was used to augment information sort for by the questionnaire. Analysis of the result revealed that farmers were relatively young and well experienced. Literacy level was high and household size was small. Determinants of supply of child labour include: rural urban migration of adults, population, wage rate and change in income. The logistic regression model was used to estimate the social – economic determinants of child labour in the study area. Logistic regression analysis established that coefficient of age (0.039) and education (0.068) were positive determinants of child labour. It also indicated that the coefficients of the variables marital status (-0.151), number of children (-0.015), farming experience (-0.457), household size (-0.413), age of child (-0.0779) and farm size (-1.264) were negatively and inversely related to use of child labour. It was recommended that government at all level should embark on rural and agricultural developmental policies, projects and programmes. Government should also put in place policies that will provide social security programme and services. Use of conditional cash transfer should be expanded. Governments should formulate policies that will discourage child labour but improve access to qualitative education in the study area. Intensification of sensitization campaign against child labour should be carried out.

BACKGROUND TO THE STUDY

In Nigeria, the agricultural sector dominates the general sector of the economy (Kaine and Ume 2017). It has been documented that the agricultural sector is the most important sector of the economy that ensure food security and enhance economic growth and development (Audu, 2017; Adeoye *et al* 2017 and Kaine, 2018a). Adeoye *et al* (2017) reported that the Nigerian agricultural sector is characterized by small land holdings and use of child labour. They further reported that the use of child labour in agricultural production was adopted as a means of reducing the cost of production.

Child labour in this context is used to refer to all activities carried out in the farm by children of school age that interferes with schooling. However, the International Labour Organization (ILO) reports (2013) noted that where child labour does not have negative effect(s) on the schooling of the child, health status, physical and mental development, it is generally not regarded as child labour. The claim was further exemplified and stated that where a child is used to look after the siblings at home, working to earn pocket money after school hours and during holiday cannot be regarded as child labour.

Alao *et al* (2013) reported that about 186 million child labourers are used all over the World. From the estimated population it was stated that about 111.3 million of the children used, work in harmful environments. It was also reported that at least 120 million of the world's children labourers who are engaged on full time basis ranges between the ages of 5 and 14 years and work for more than 10 hours a day.

The effect(s) of child labour has been documented to include but not limited to: fatigue, waste of talent and energy, academic waste, high rate of school dropout among others (Ofuku *et al* 2014). Determinants of child labour have been identified to include: poverty, high fertility rate with a consequent increase in household size, cultural and family tradition as well as lack of access to affordable and quality education (Etim and Udofia, 2013 and Glory and Nsikak – Abasi, 2013).

Kaine and Ume (2019) and Kaine and Ume (2017) regarded household size as individuals or people occupying the same building or a house and its occupants. The authors further opined that household size is the number of people living under the same roof and feeding from the same pot. The household is either headed by a male or a female (adult or youth) who provides the needs of the family. Where the female takes charge of the entire needs of the family, it is regarded as female headed household.

It has been documented that Nigerian farmers make use of family labour majorly made of children and do not often hire children outside their households (Ofuku *et al* 2020). Although, various studies have been conducted to examine various level and nature of children's involvement in farming activities, it is not certain that studies have been carried out with respect to determinants of child labour among female micro

cassava farming households in South – South agro – ecological zone in Nigeria. It is against this background that this study was carried out to examine the socio – economic characteristics of the farmers, ascertain the factors that determine the supply of labour and estimate the socio-economic determinants of child labour.

MATERIALS AND METHODS

The Study Area

The study was conducted in South – South agro – ecological Zone of Nigeria. Three (3) randomly selected states was used for the study. South – South comprises of six States which include: Akwa – Ibon, Balyasa, Cross River, Edo, Delta and River States. The zone has a total population of twenty one million, and forty four thousand and eighty one (21,044, 081) people. This population is made up of ten million, seven hundred and five thousand, five hundred and thirty three (10,705,533) male. The female population was recorded to be ten million, three hundred thirty eight thousand, five hundred and forty eight (10,338,548) (National Population Commission, 2006). Total projected population figure with a growth rate of 3.2 percent as at 2022 was estimated to be thirty four million, nine hundred thirty three thousand, one hundred and seventy four (34,933,174) people with seventeen million, seven hundred and seventy one thousand one hundred and eighty five (17,771,185) male. The female projected population was estimated to be seventeen million, one hundred and sixty one thousand, nine hundred and ninety (17,161,990). Akwa Ibom, Delta and Edo were the three (3) randomly selected States that were used for the study. Total population of these States was eleven million, two hundred and forty seven thousand, seven hundred and sixty two (11,247,762) people (Census, 2006). The total projected estimated figure was eighteen million, six hundred and seventy one thousand, two hundred and eighty five people.

Sources of Data

Data required for the study was collected using both primary and secondary sources of data. A well-structured questionnaire (primary source) was used to collect the required data for the study. Secondary source of data was generated from review of previous work.

Sampling Procedure

Multi – stage random sampling technique was used for the study. The first stage involved selection of three (3) States out of the six (6) States in the zone. The second stage involved the selection of two (2) agricultural zones from each of the selected States. Thirdly, three (3) Local Government Areas was randomly selected from the three (3) selected States. Thereafter,

four (4) communities each was selected from the randomly selected Local Government Areas. The sample frame consist of five (5) female headed household cassava farmers selected from the thirty six (36) communities given a total sample size of one hundred and eighty (180) respondents.

Enumerators that could read and write in English and Local Language of the selected communities were recruited, trained and assigned to the selected communities with the assistance of the Assistant Chief Agricultural Officers (ACOA), Local Government Agricultural officers and resident Agricultural Extension Officers in the selected Local Government Areas as well as the village heads and chiefs were used for effective data collection exercise.

Data analytical technique

Descriptive statistics, and the logistic model were used for data analysis.

Model Specification

Logistic Model

The model is expressed as

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + U_i$$

Where Y_i = Dummy variable which takes the value of unity "1" if the household engages in child labour and zero "0" if otherwise.

The independent variables include:

- X_1 = Age of the household head (years),
 - X_2 = Household size (Number)
 - X_3 = Educational level of the household head (years),
 - X_4 = Farm size (ha),
 - X_5 = Household income (N),
 - X_6 = Number of male children,
 - X_7 = Number of Female Children,
 - X_8 = Number of Female Children
- U_i = Error term, $\beta_1 - \beta_8$ = Parameters.

RESULTS AND DISCUSSIONS

Socio – economic characteristics of female headed household cassava farmers

Socio – economic characteristics of female headed household cassava farmers in the study area was studied, determined and presented in Table 1. The result of the variable: age indicated that the farmers were relatively young. Thirty (30) (20.68%) of the farmers were within the age bracket of 20 – 30 years, thirty nine (39) (26.89%) were within the age bracket of 31 – 40 while seventy six (76) (54.40%) were within the age bracket of 41 and above. The result of the marital status studied

showed that one hundred and six (106) (73.10%) of the farmers were single while only thirty nine (39) (26.909%) of them were married.

Household size examined revealed that majority (108) (74.48%) of the respondents in the study area had household size within the range of 0 – 4. The result indicated that majority of the farmers had small household size. Analysis of the educational attainment studied showed that literacy level of the farmers in the study area was high. The result revealed that one hundred and fourteen (114) (74.48%) of the farmers had formal education while thirty one (31) (21.38%) had informal education.

The variable farming experience determined showed that the farmers were well experienced in cassava production. Majority of the farmers (124) (85.52%) had a farming experience of over ten (10) years. The result of the farm size revealed that farmers in the study area were small holder farmers. A detailed analysis of the farm size indicated that sixty eight (68) (46.90%) of the farmers had a farm size range of 0 – 1 hectare, forty nine (49) (33.79%) had a farm size range of 2 – 4 hectares while twenty three (23) (15.86%) and twenty three (15.86%) had a farm size range of 4 – 5 and 6 and above respectively.

Table 1. Socio – economic characteristics of the farmers
 $\sum n = 145$

Characteristics	Frequency	Percentage
Age (Categories)		
20 – 30	30	20.68
31 – 40	39	26.89
41 – 50	63	43.44
50 and above	13	8.96
Marital Status		
Married	39	26.90
Single	106	73.10
Household Size		
0 – 4	108	74.48
5 – 9	21	14.48
10 – 14	9	6.21
15 and above	7	4.83
Education attainment		
Informal	31	21.38
Formal	114	78.62
Farming Experience		
1 – 5	11	7.58
6 – 10	10	6.90
11 – 15	63	43.45
16 – 20	18	12.41
20 and above	43	29.66
Farm Size		
0 – 1	68	46.90
2 – 3	49	33.79
4 – 5	23	15.86
6 and above	05	3.45

Source: Computed from field survey, 2023

Factors that determine of supply of child labour in the study area

The result of the determinants of supply of child labour in the study area was determined and presented in Table 2. The result revealed that majority: one hundred and seven (107) (73.79%) of the respondents indicated wage rate as a determinant of supply of child labour. Rural urban migration was established as a determinant of supply of child labour. This was indicated by ninety eight (98) (67.59%) of the respondents. Population (63) (43.45%), substitution effect (31) (21.38%), efficiency (93) (64.14%) and change in income (51) (35.17%) were proven by the farmers to be determinants of child labour in the study area.

Table 2. Determinants of supply of labour

Variables	Frequency	Percentage
Rural urban migration of adults	98	67.59
Wage rate	107	73.79
Population	63	43.45
Substitution effect	31	21.38
Efficiency	93	64.14
Changes in income	51	35.17

Source: Computed from field survey, 2023

Socio-economic determinants of child labour use among respondents (logistic regression)

The logistic regression model was used to decide or estimate the social – economic determinants of child labour in the study area and the result was presented in Table 3. It was revealed that the coefficient of age (0.039) was a positive and significant determinants of child involvement in cassava farming at 0.202 probability level. This result was in consonance with the result of Alao *et al* (2013) who found a positive relationship between age of farmer and the use of children in the farm. A positive relationship between age and child labour that was observed in this study implied that as the household head is aging, the higher the likelihood of using child labour in the farm. This is in line with the *a priori* expectations that aged farmers are associated with more lassitude that make them to be exhausted easily. Oladimeji and Edun (2018) who observed a positive relationship between age and child labour also reported that older farmers were more likely to involve more children in the farm than the younger farmers. This the authors stated that it is expected because the older people tend to be less productive. Iheke (2010) on the other hand observed a negative relationship between age and child labour.

The variable marital status was considered, determined and presented in Table 3. It was revealed that the coefficient (-0.151) of marital status was negative

but significant determinant of child labour at probability level of 0.878. A similar result was obtained by Oladukun *et al* (2017). The authors reported that a negative result coefficient found implied that single headed household were less likely to employ the use of child labour in farming activities. However, this result was not in consonance with that of Adeoye *et al* (2017) who reported a positive relationship between marital status and use of child labour.

Education, another important variable that was determined in this study. The result showed that the coefficient of education (0.068) had a positive relationship with the engagement of child labour among the farmers. It implied that education was a positive and significant determinants of child labour in the study area at a probability level 0.837. Empirical studies carried out by Ume *et al* (2018), Iheke, (2010) and Ume and Okoye (2007) revealed that literacy level of farmers affect the use of child labour in the farm. Okpukpara and Chukwuone (2007) also established a positive relationship between educational level of farmers and the use of child labour. This is in line with the findings of this study. The authors opined that the more educated the household head is, the lower the likelihood of involving children in the farm. The positive coefficient of education found in this study is not in line with the result of the study carried out by Oladokun *et al* (2020), Adeoye *et al* (2017) and Aloe *et al* (2013). A negative relationship between education and child labour use was reported by the authors. According to the authors, a negative coefficient of education influences farmers to the use child labour in the farm. The authors further stated that the less educated the farmers, the higher the propensity to employ child labour in the farm. This is in consonance with the *a priori* expectation that illiterate farmers often use children and household labour to work in the farm without considering the benefits of education on human capital development.

Household size was another important variable that was studied and discussed. The result established that household size (-0.413) was a negative but statistically significant determinant of child labour use among the farmers. The variable was statistically significant at 5% level of significance. A negative coefficient of household size according Oladokun *et al* (2020), implied that an inverse relationship exist between household size and use of child labour. This result is in line with *a priori* expectation that with a lower number of household size, it is anticipated that family expenditure on feeding, clothing and other social services will be lesser. Hence the higher propensity to use child labour in the farm. On the other hand, Omeje *et al* (2020) and Alao *et al* (2013), found a positive relationship to exist between household size and use of child labour.

A further analysis of the social economic determinant of child labour use with respect to the variable experience established that coefficient of experience (-0.457) had a negative sign. This implied an inverse relationship with the variable and this might predispose the farmers to the use of child labour.

Farm size was studied and determined. The result showed a negative coefficient (-1.264) that was statistically significant at 5% level of significance. This implied that the variable was a significant determinant of child labour. A negative coefficient of farm size observed in this study is not in consonance with that observed by Alao *et al* (2013). The authors established a positive relationship between farm size and use of child labour.

The authors stated that the larger the farm size the more the farming activities that will be required and will predispose the household heads to use children on the farm to cultivate the large expanse of land.

Age of child also showed a negative coefficient (-0.779). This result is in line with that observed by Ogunwande *et al* (2016).

Table 3. Socio – economic determinants of child labour

Parameter	Coefficient (b)	Wald Chi – Square	Prob. Level
Constant	5.570	11.41	0.001
Age	0.039	1.62	0.202
Marital status	-0.151	0.02	0.878
Education	0.068	0.04	0.837
No of children	-0.015	0.01	0.928
Household size*	-0.413*	8.77	0.003
Experience	-0.457	0.98	0.322
Farm size*	-1.264*	8.02	0.005
Age of child*	-0.779*	13.25	0.000

Source: Computed from field survey, 2023

*Significant at 5%;

Likelihood ratio test: $\chi^2 = 90.03$; $p < 0.05$ (Compares the fitted model against the intercept-only model); *Goodness-of-fit test:* $\chi^2 = 94.66$; $df = 46$; $p > 0.05$

Dichotomous response variable (use of child labour):
Don't use = 63.9%; Use = 36.4%

CONCLUSION AND RECOMMENDATION

The study revealed that farmers in the study area were relatively young and well experienced in farming. Literacy level was recorded to be high, household size was small and the result also indicated that farmers in the study were small holder farmers. The result of the determinants of supply of child labour was established to include but not limited to rural urban migration of adults, population, substitution effect, wage rate and change in income among others. The logistic regression model was used to estimate the social – economic determinants of child labour in the study area. Analysis of the result indicated that coefficient of age and education were positive determinants of child labour. It also established that the coefficients of the variables marital status, number of children, farming experience, household size and age of child were negatively and inversely related to use of child labour.

Since the study established that rural urban migration of adult was a determinant of supply of child labour in the study area, it was recommended that government at all level should embark on rural and agricultural developmental policies, projects and programmes. This will not only make rural life meaningful but will discourage rural urban migration. Wage rate and changes in income were also identified as determinants of supply of child labour in the study area. It was recommended that the government should put in place policies that will provide social security programmes and services. This should be considered as strategic caution

against adverse effects of wage rate and changes in income. Use of conditional cash transfer should be expanded. Education was also reported to be a determinant of child labour use in the study area. Since access to education is one of the basic right of a child, it is imperative for Federal, States and Local Governments to formulate policies that will discourage child labour but improve access to qualitative education in the study area. Intensification of sensitization campaign against child labour should be carried out. This will help to increase awareness and change attitude of people towards supply of child labour.

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