

CHILD FARM LABOUR PREFERENCE DECISIONS AMONG ARABLE CROP FARMERS IN IKOT EKPENE AGRICULTURAL ZONE, AKWA IBOM STATE, NIGERIA

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Abstract

This study analyzed the socio-economic factors influencing child farm labour preference among farmers in Ikot Ekpene Agricultural Zone, Akwa Ibom State, Nigeria. A multistage random sampling technique was employed in selecting the respondents. Data were collected with the aid of well-structured questionnaires to elicit information from Ninety one (91) respondents and analyzed using both descriptive and inferential statistics. Result showed that majority (52.75%) of the respondents were female, married (83%) with a mean household size of 6 persons and a mean age of 49.58 years. Majority (97%) had at least one year of formal schooling. The mean farm size was 1.27 ha, while the average years of farming experience was 11.26 years. Also, there was a high level of children involvement in farm activities. Overall, the results of the multinomial logit confirms the importance of socio-economic characteristics such as age of the farmers and farming experience in positively influencing child labour preference decisions, while gender, membership of social organizations and educational status had negative and significant influence on child farm labour preference decisions. It is recommended that for effective policy formulation to reduce child farm labour in Akwa Ibom State, all these important variables must be taken into consideration. In addition, loan with very low interest rate should be given to farmers to improve their welfare.

Keywords: Child labour, Choice decision, Farm Households, Multinomial logit, Nigeria.

Introduction

Globally, child labour is currently one of the biggest problems. Reasons behind this are the fact that children are under the workload or left in an effective work life without completing their personal and mental development. Similarly, child workers are unable to develop adequate level of social and educational aspects because of that they are far from the usual life-flow and environmental conditions (International Labour Organization, 2012). These, over a long term, constitute a problem individually and socially.

There is high prevalence of child labour utilization among farmers, particularly smallholder farmers in rural areas, and this has been a consistent phenomenon in Nigeria. For instance, report from National Bureau of

Statistics showed that about 50.8% of Nigerian children, ages between 5 and 17, are involved in child labour (Agbo, 2017). Whilst child labour has been defined variously in literature, it entails a work that is mentally, physically, socially or morally dangerous and harmful to children and deprives them of opportunities for schooling and development. According to the International Labour Organization (ILO), a United Nations Agency concerned with the interests of labour, child labour is defined as; “work that children should not be doing because they are too young to work, or if they are old enough to work because it is dangerous or otherwise unsuitable for them”. Child labour is said to occur when labour is furnished by persons below their official minimum employment age, which is 15 (ILO, 2002). Interestingly, not all forms of work undertaken by children are considered child

labour under ILO standards. Light work that does not interfere with education is permitted from the age of 12 years, and also work by children 15 years and above that is not classified as hazardous (ILO, 2011).

In most developing countries including Nigeria, several children have been exposed to child labour, as they are sent out to do various jobs such as street hawking, begging, prostitution, engaging in illicit activities such as drug trafficking, stealing and armed robbery; as sales boys and girls, street vendors, shoe shiners, apprentices (mechanics, carpenters, vulcanisers, tailors, barbers, and domestic servants), scavengers, and so many others (United States Department of Labour, 2011).

Agriculture is one of the three most hazardous work sectors along with mining and construction in terms of work-related deaths and injuries, and this is especially true for children, whose lack of experience or training and still-developing bodies make them particularly vulnerable (ILO, 2011). "Some agricultural activities such as mixing and applying pesticides, using certain types of machineries are so dangerous that children should be clearly prohibited from engaging in them." According to ILO statistics, half of all fatal accidents occur in agriculture (ILO, 2006). Also, the number of working children in Nigeria is estimated at 15 million and child workers display poor educational achievements (UNICEF, 2004).

Although we have laws prohibiting child labour in Nigeria, child labour still continues to exist as these laws are not properly enforced, and perpetrators of child labour do not face the wrath of the law. Several children have become victims of child labour, they have been exposed to the unpleasant sides of life. Major causes of child labour are widespread poverty, rapid urbanization, breakdown in extended family affiliations, high school dropout rates (Agbo, 2017), and lack of enforcement of legal instruments meant to protect children. Traditionally, children have worked with their families, but today children are forced to work for their own and their family's survival. The money earned by child family members has become a significant part of poor families' income.

These children who work suffer from fatigue, irregular attendance at school, lack of comprehension and motivation, improper socialization, exposure to risk of sexual abuse, high likelihood of being involved in crime (United States Department of Labour, USDL 2011).

Despite decades of research on the negative effects of child farm labour, resource poor farmers who lack access to adequate and qualified labour still resorts to using under aged children and family members for their production activities. If policy interventions are to be directed at reducing child farm labour utilization, a better understanding of child labour preference decisions by rural farm households is required. This paper aims to contribute in this regards by analyzing the child farm labour preference decisions of farm households in Ikot Ekpene agricultural zone of Akwa Ibom State, Nigeria.

Methodology

The Study Area

This study was conducted in Ikot-Ekpene Agricultural Zone which consists of five local government areas namely; Essien Udim, Ikot Ekpene, Ikono, Ini and Obot Akara. The climate of the area is tropical and with a high relative humidity all year round. It has a mean annual rainfall between 2000mm and 2500mm. It has a land area of about 125km² or 48square miles and a population of about 225,000 (NPC, 2006). Ikot Ekpene is also experts of palm produce especially palm oil, kernels, raffia products including raffia fibers and its sweet wine. Some of the common food crops grown in the area are; cassava, plantain, waterleaf, fluted pumpkin, white yam, cocoyam, maize and banana.

Sampling Procedure and Data Collection

Multi-stage sampling technique was used in selecting the respondents for this study. From the five local Government Areas in the zone namely; Ikot Ekpene, Obot Akara, Ikono, Essien Udim, and Ini. In the first stage, three (3) Local Government Areas were randomly selected from the zone namely; Ikot Ekpene, Ikono and Obot Akara Local Government Areas. Secondly, two (2) communities were randomly selected from each of the Local Government areas making a

total of six (6) communities. Thirdly, twenty (20) farming households were randomly selected from each of the communities, given a sample size of 120 farmers. Data analysis was done on 91 respondents. Primary data were used mainly for this study. Data collection focused on; socio-economic characteristics of the respondents such as age, gender, level of education, household size, membership of organization, preference decision on child farm labour and sources of farm activities undertaken by the respondents.

Method of Data Analysis

Multinomial Logit Model (MNL)

Considering the categorical nature of the dependent variable (Preference decision on child farm labour), Multinomial Logit Model (MNL) was used to estimate the influence of socio-economic characteristics of the farmers on their preference decision on child farm labour utilization in the study area. Choice decisions which determine the odds of a farmer using child labour was determine in one of the four categories of their preference/ decisions as very high (VH), high (H), low (L) and very low (VL). The multinomial logit model can be estimated with a set of coefficients $\beta^{(1)}$, $\beta^{(2)}$, $\beta^{(3)}$ and $\beta^{(4)}$ as follows:

$$Pr(Z = 1) = \frac{1}{e^{X\beta(1)} + e^{X\beta(2)} + e^{X\beta(3)} + e^{X\beta(4)}} \dots (1)$$

$$Pr(Z = 2) = \frac{e^{X\beta(2)}}{e^{X\beta(1)} + e^{X\beta(2)} + e^{X\beta(3)}} \dots (2)$$

$$Pr(Z = 3) = \frac{e^{X\beta(3)}}{e^{X\beta(1)} + e^{X\beta(2)} + e^{X\beta(3)}} \dots (3)$$

$$Pr(Z = 4) = \frac{e^{X\beta(4)}}{e^{X\beta(1)} + e^{X\beta(2)} + e^{X\beta(3)}} \dots (4)$$

Multinomial logit model is a choice between three or more alternative response (Kartels, Boztug and Muller, 2000). The model however is unidentified in the sense that there is more than one solution to $\beta^{(1)}$, $\beta^{(2)}$, $\beta^{(3)}$ and $\beta^{(4)}$ that lead to the same probabilities for $Z = 1$, $Z = 2$, $Z = 3$ and $Z = 4$. To identify the model, one of the $\beta^{(1)}$, $\beta^{(2)}$, $\beta^{(3)}$ and $\beta^{(4)}$ will be arbitrarily set to 0.

That is if $\beta^{(1)}$ is arbitrarily set = 0, the remaining coefficients $\beta^{(2)}$, $\beta^{(3)}$ and $\beta^{(4)}$ will measure the change relative to the $Z = 4$. In other words, this study compared the case of very low preference decisions (1) for child farm labour with other possible levels of decisions/ preference (2, 3 and 4). Therefore, using four category response as specified in the model for this study and setting $\beta^{(1)} = 0$, the equation will be:

$$Pr(Z = 1) = \frac{1}{e^{X\beta(1)} + e^{X\beta(2)} + e^{X\beta(3)} + e^{X\beta(4)}} \dots (5)$$

$$Pr(Z = 2) = \frac{e^{X\beta(2)}}{e^{X\beta(1)} + e^{X\beta(2)} + e^{X\beta(3)} + e^{X\beta(4)}} \dots (6)$$

$$Pr(Z = 3) = \frac{e^{X\beta(3)}}{e^{X\beta(1)} + e^{X\beta(2)} + e^{X\beta(3)} + e^{X\beta(4)}} \dots (7)$$

$$Pr(Z = 4) = \frac{e^{X\beta(4)}}{e^{X\beta(1)} + e^{X\beta(2)} + e^{X\beta(3)} + e^{X\beta(4)}} \dots (8)$$

The relative probability of $Z = 1$ to the base category is

$$\frac{Pr(Z = 1)}{Pr(Z = 4)} = e^{X\beta(1)} \dots (9)$$

If this is called the relative likelihood and assume that X and $\beta_k^{(1)}$ are vectors equal to (X_1, X_2, \dots, X_n) and $(\beta_1^{(1)}, \beta_2^{(1)}, \dots, \beta_k^{(1)})$ respectively, the ratio of relative likelihood for one unit change in X_i relative to the base category is:

$$\frac{e^{X\beta(1)X_1 + \dots + \beta_1^{(1)}(X_1 + 1) + \dots + \beta_1^{(1)} \frac{xk}{xk}}}{e^{X\beta(1)X_1 + \dots + \beta_1^{(1)}(X_1 + 1) + \dots + \beta_1^{(1)} \frac{xk}{xk}}} \dots (10)$$

Enete (2003) citing Stata Corp (1999) reported that, the exponential value of a coefficient is the relative likelihood ratio for one unit change in the corresponding variable. As pointed out, the dependent variable "child farm labour preference decision" have four (4) possible values; value 1 if the choice decision and/or preference is very low (VL), value 2 if low (L),

value 3 if it is high (H) and value 4 if the preference is very high (VH). An individual farmers' preference and/or decision to use child labour is classified as very low, low, high or very high and is hypothesized to be a function of some socio-economic characteristics of the farmers as explanatory variables for the Multinomial logit model. These hypothesized variables are: **X1** = Gender of the respondents (1 = male, 0 = female)

X2 = Age of the respondents (years)

X3 = Marital status of the respondents (1 = couple, 0 = single)

X4 = Farming experience of the respondents (years)

X5 = Member of social organizations (number or organizations subscribed to)

X6 = Educational status of the respondents (years)

X7 = Farm size of the respondents (measured in hectares)

X8 = Household size of the respondents (number of persons in the household).

Results and Discussion

Socioeconomic Characteristics of the Respondents

As presented in Table 1, majority (52.75%) of the farmers were females while the remaining 47.75% were males. This indicated that farm households in Ikot Ekpene agricultural zone were mainly dominated by female farmers. These agreed with that of Okon, Enete and Amusa (2012) on enterprise combination among farmers in Akwa Ibom State which showed that majority (82.5%) of the farmers sampled for the study were females while the remaining 17.5% were males farmers. Table 1 showed that most (32%) of the sampled farmers fell between 41-50 years age bracket. This was followed by 29% representing farmers between 51-60 years age brackets. 16% of the farmers were above 60 years of age. Also, 15% were in the age bracket of 31-40 years, while only 8% were less than 30 years of age. The mean age was 49.87, an indication that majority of the farmers were still in their economic age brackets. Also, about 83% of the respondents were married while the remaining 17% were single. Most (about 73%) of the respondents agreed that they were not

members of any social organizations, while the remaining 27% were members of social organizations.

In terms of educational qualification, 3% of the sampled farmers had no formal education, while the remaining 97% had formal education at varying degrees. Out of which 48% attended primary school, 35% attended secondary school while 13% had higher education. The average years of formal education by the farmers was 7.95 (about 8) years. The result of this study on the average year of education of the farmers is technically close to that of Chukwuone (2009) who found the average years of education of farmers on a study in southern Nigeria to be 9 years.

The importance of household size in agriculture hinges on the possible availability of labour for production. In this case, number of children available for child farm labour could determine the size of farmland cultivated in a particular production period. Majority (41.76%) of the farmers fell within the household size of 5 to 8 persons, followed by 32.96% of the farmers who fell within the household size of less than or equal to 4 persons. About 25% of the farmers fell within the household size of 9 to 12 persons. The average farm household size was about 6 persons. Farming experience is an important factor in determining both the productivity and the production level, Table 1 showed that majority (45.05%) of the farmers in Ikot Ekpene agricultural zone had between 6-10 years of experience. This was closely followed by 23.09% of the farmers who had between 1-5 years of farming experience. Moreover, 17.58% of the farmers had years of farming experience of between 11 to 15 years while 14.28%. The average years of farming experience was 11.26 years. A cursory look at Table 1 shows that majority (45.05%) purchased their farm land, 32.97% inherited their farm land and 7.96% acquire their farm land through co-operatives. In addition, 8.97% and 5.59% acquired their farm land through leased and community, respectively. In addition, majority (81.32%) of the respondents had farm sizes ranging between 1-2 hectares, 15.38% had farm size less than 1 ha and only about 3.3% had farm size that was above 2 hectares. The mean farm size was about

1.2ha. Suggesting that, most of the respondents were small scale farmers.

Table 1: Frequency and percentage distribution of socioeconomic characteristics of farmers in Ikot Ekpene Agricultural Zone

Socio-economic Characteristics of Farmers	Frequency	Percentage (%)	Mean
Gender of Household Heads			
Male	43	47.25	
Female	48	52.75	
Total	91	100	
Age (years)			
≤30	7	7.69	
31-40	14	15.38	
41-50	29	31.87	
51 – 60	26	28.58	49.58
> 60	15	16.48	
Total	91	100	
Marital Status of Household Head			
Single	15	16.48	
Married	76	83.62	
Total	91	100	
Level of education			
No formal education	3	3.29	
Primary school education	44	48.35	
Secondary school education	32	35.16	7.95
Tertiary institutions	12	13.18	
Total	91	100	
Farm Household Size			
1 – 4	30	32.96	
5– 8	38	41.76	6
9 and above	23	25.28	
Total	91	100	
Years of farming experience			
1-5	21	23.07	
6-10	41	45.05	11.26
11-15	16	17.58	
Above 15	13	14.28	
Total	91	100	
Land acquisition Status			
Inheritance	30	32.97	
Leased	8	8.97	
Purchased	41	45.05	
Co-operative	7	7.69	
Community	5	5.49	
Total	91	100	
Farm Size			
< 1 ha	14	15.38	1.2
1-2 ha	74	81.32	
Above 2 ha	3	3.30	
Total	91	100	

Source: Field survey, 2017

3.2 Socio-economic factors influencing farmers' preference decisions for child farm labour in Ikot Ekpene Agricultural zone.

The determinants of factors influencing farmers' decision/ preference for child farm labour were hypothesized to depend on a number of socio-economic factors. The multinomial logistic regression model was used to estimate these socio-economic factors. This was done by ranking the farmers' preference/ decision into four categories (Very low =1, Low =2, High =3 and Very High =4). The analysis was done by normalizing one category, which is always referred to as the "base or reference category". In this case, the base category was very low (1) preference against which comparison were made in each case.

The MNL results indicate that socio-economic factors such as gender, age, marital status, years of farming experience, educational qualification, farm size and household size influenced farmers' preference for child farm labour in the area. The estimated coefficients of the MNL model along with levels of significance are presented in Table 2. The likelihood ratio (χ^2) statistics is statistically significant at the one percent level, implying that the variables considered jointly exert a very significant influence on the respondents' preference decision for child farm labour. In terms of consistency with *a priori* expectations on the relationship between the dependent and the explanatory variables, the model seems to have behaved well. In addition, the marginal effects from the MNL, which measure the expected change in the probability of a particular level of preference with respect to a unit change in an independent variable was also explained and/or reported.

The coefficient of gender of the farmer was significant ($p < 0.05$) and negatively related to high preference for child labour, but positively related to very high preference for child farm labour in comparison with very low preference. The implication of negative and significant coefficient of gender in high preference for child farm labour as against very low preference could mean that female farmers had higher preference for child farm labour than their male counterparts. Also, the marginal effects showed

that a unit increase in the number of male farmers in the area will decrease their preference for child farm labour by 38.04%, implying that female farmers highly preferred child farm labour than male in the study area. Perhaps because female farmers are less educated than their male counterpart. Okpupara, Chine, Uguru and Nnaemeka (2006) observed that more female than male drop out of school due to poor performance.

Age has significant influence on the decision making process with respect to use of child farm labour. Age of the farmers was positively and significantly related to high ($p < 0.10$) and very high ($p < 0.01$) preference for child farm labour in comparison to low child farm labour preference. The marginal effects indicated that a unit increase in farmers' age will increase their preference for child farm labour use by 0.1% and 0.2% for high and very high preference, respectively. However, the coefficient of marital status was not statistically significant in all the categories of child farm labour preference.

In comparison with low preference for child farm labour, the coefficient of farming experience was positive and statistically significantly related to high ($p < 0.05$) and very high ($p < 0.10$) preference for child farm labour, respectively. The marginal effects showed that an increase in years of farming experience among the farmers will more likely increase their preference for child farm labour by 0.3% and 0.1%, respectively, for high and very high preference. The implication of this result is that more experienced farmers preferred using children as laborers in their farm, possibly to minimize cost of production. This findings lend credence from that of Walters & Briggs (1993), who noted that farmers used child farm labour because of low cost.

The coefficient of membership of organizations was negative and statistically significantly ($p < 0.10$) related to high preference for child farm labour in comparison with very low preference. The marginal effects showed that a unit increase in the number of organizations the farmers subscribed to, will more likely decrease their preference for child farm labour by 36%. A plausible explanation here is that, farmers who are members of many organizations may not

prefer child farm labour, probably due to their exposure and knowledge of the negative implications of child farm labour on the future of the affected children.

Educational qualification had a negative and statistically significant ($p < 0.10$) coefficient in relation to both low and high preference for child farm labour in comparison with very low

child farm labour preference. The marginal effects indicated that a unit increase in the years of formal schooling will decrease the preference for child farm labour by 0.1 and 0.3%, respectively, for low and high child farm labour preference. The implication of this result is that the highly educated farmers made little or no preference for child farm labour.

Table 2: Parameter Estimates of the Multinomial Logit (MNL) Analysis of Socio-economic factors influencing Farmers' preference/decision to use child labour for farming.

Explanatory Variables	Coefficients					
	Low (2) / Marginal Effects		High (3)/ Marginal effects		Very High(4)/ Marginal Effects	
Gender	-0.1827 (0.6581)	-0.1339	-2.1456** (0.9058)	0.3803	0.7008 (0.9373)	0.7753
Age	0.04271 (0.0424)	0.0084	0.1092* (0.5635)	-0.1127	0.2685*** (0.0734)	0.0163
Marital Status	-1.2604 (0.9865)	-0.1505	-1.2728 (1.3063)	0.1097	0.2544 (2.1127)	0.0647
Farming Exp.	0.0329 (0.0743)	0.0142	0.1820** (0.0778)	0.0385	0.1550* (0.0827)	0.0067
Memb. of Org.	-0.2017 (0.7874)	0.1644	-1.8336* (1.002)	-0.3614	-0.4213 (1.2936)	0.0220
Education	-0.1626* (0.0973)	-0.0129	-0.1901* (0.1120)	-0.1620	-0.2292 (0.1432)	-0.2292
Farm Size	0.7246 (0.5504)	0.1520	0.2076 (0.6905)	0.2076	-0.1104 (0.7464)	0.0339
Household size	-0.2080 (0.1492)	-0.0256	-0.1384 (0.1853)	-0.0002	-0.3239 (0.2391)	0.0149
Intercepts	0.5603 (1.9229)		-2.1223 (2.4433)		-12.7926*** (4.2597)	
No. of observations	91					

Source: Field survey, 2017.

Note: Very low preference (1), is the base category.

*** denotes significant @ 1 percent level, ** denotes significant @ 5 percent level, * denotes significant @ 10 percent level. Figures in parenthesis are standard errors.

Conclusion

Eliminating the worst form of child labour in rural areas will only be possible if efforts are made to reduce child labour in agriculture. This paper makes an important contribution to the empirical literature on child farm labour. From the outcome of this research, the respective socio-economic characteristics such as gender, age of the farmers, farming experience, membership of organizations and educational status of the farmers had significant influence on their preference for child farm labour in the

study area. For example, aged, female and more experienced farmers had high preference for child farm labour, whereas educated farmers as well as farmers who are members of social organizations had low preference for child farm labour in the study area. It is expedient that public awareness be increased to reduce child farm labour in the area. Also, credit facilities should be given to farmers as it could assist them in financing most farm activities including hiring adult as farm workers in the area.

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