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MODELLING FARMERS' CHOICE ON CHILD LABOUR AND EXCLUSIVE SCHOOLING IN COCOA SECTOR: EVIDENCE FROM SEFWI WIAWSO MINICIPALITY IN GHANA.

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ABSTRACT

This paper investigates the determinants of farmers' choice on child labour and schooling in cocoa sector and activities performed by their children on cocoa farms. The study used multinomial Logit model to consistently estimate the likelihood of the farmers' to use the labour of their children at the expense of exclusive schooling.

The results showed that, income of farmer, farmer's education, age of farmer, and number of children of farmer are statistically stronger determinants influencing the probability of a farmers exploiting the child's labour on farm against exclusive schooling and were statistically significant at 0.001, 0.001, 0.05, and 0.001 levels respectively.

The study also found out that, children belonging to cocoa farmer engage in activities including: land clearing (40%), gathering pods (78%), weeding (49%), planting (53%) felling (0.2%) cutting peg (0.6%), carrying seedlings (34%), carrying fermented beans (47%), and carrying dried cocoa beans for sale (2.9%) .

The study therefore recommends that Policy makers take into consideration the aforementioned factors when designing appropriate education and labour policies especially in cocoa producing communities.

KEY WORDS

Child Labour, Multinomial Logit, Maximum Likelihood, Ghana,

1. INTRODUCTION

The exploitation of child labour has become a worrying phenomenon and has received an unprecedented condemnation worldwide. A study from ILO (2008) estimated that at approximately 250 million children from age of 5 -14 years are involved in child labour instead of education. Among this estimated number, about 30% come from sub-Saharan Africa and these children work in mostly agriculture including cocoa farming. The issue of child labour has always been sensitive and controversial as well. An independent work by Okyere, (2013), discovered that, using children in economic activities tends to interfere with their education and the attainment of the Millennium Development Goals especially the achievement of universal primary education (Goal 2). Even though, there is a growing consensus globally that, all children need to be educated to become productive adults and that child labour jeopardizes their development. Consensus is also growing that education plays a key role in economic development, and that investment in education, in particular primary education and education for girls, gives a high return. There are many reasons adduced explaining why children are not in school but in the workplace. Some of these reasons according to (ILO, 2000), include the fact that, basic education in most countries is not free and in most developing countries schooling is not available for all children. Even in the situation where schools are available, the quality of education is often poor and the content is not relevant. In situations where education is not affordable or parents see no value in education, parents send their children to work, rather than to school (ILO, 2000). Notwithstanding the tenets surrounding child labour in cocoa production, cocoa as economic commodity serves as a live wire to the economy of Ghana and many other developed and less developed economies. Amoah (2008), found that in Ghana, cocoa has been the backbone of the economy for a century and plays a major role in employment, foreign exchange earnings, government revenue, education, infrastructural development amongst others. These numerous benefits accrued from cocoa have indeed contributed a lot to the deployment of children’s labour since they constitute cheap labour. Studies in Ghana by the International Institute of Tropical Agriculture (IITA) and Ghana`s Ministry of Manpower, Youth and Employment (MMYE) revealed that majority of the children employed on cocoa farms were members of farm households (IITA report, 2002; MMYE, 2008 and MMYE, 2007). In Ghana, it is reported that about 60% of children in the western region are engaged in agriculture mostly in cocoa farming (GSS, 2003).

Empirical studies conducted indicate that, the formulation of policies that are effective in curbing child labour requires an analysis of the key determinants of parents’ choice on the use of these children and identification of variables that have a significant effect on child labour exploitation (Puhkar, 2000). Countries like Ghana, has received increased attention in recent times on child labour in cocoa sector and finding pragmatic solutions to this social enemy. Previous empirical studies conducted have only been based on an idea of the incidence and determinants of child labor at one point in time, and silent about the dynamics and decision of parents to engage their children on their cocoa farms instead of school (Khanam, 2004).

However, an important question usually asked is whether or not working on farm means that the child is unable to attend school as well. If indeed it is true that farmers can concurrently use children on farm as well as in school as reported by many researchers such as Adekunle & Henson, (2007), then the factors influencing their choice need to be examined. Research has also shown that understanding the participative behavior of the farmers in the choice of whether to send a child to school and/or to work could help in designing more appropriate child labour interventions, education and labor policies. In spite of these overwhelming facts, only few studies have empirically tried to identify the factors influencing the choice of these farmers on child labour and schooling. It is against this background that this study attempts to investigate the choice of farmers on the use of their children in farm work and schooling as well as the factors influencing their choice.

RESEARCH OBJECTIVES

This paper seeks to :

I. examine the socio-demographic characteristics of farmers (sex, age, educational level,) that influence their choice to engage their children in school, on farm, or both

II. examine household characteristics of farmers such as (household income level household size, number of children) that influence choice to engage their children in school, on farm, or both.

III. ascertain the activities undertake on cocoa farms?

:

2.0 RESEACH METHODOLOGY

2.2 Source of data

The research data was obtained from both primary source using semi – structured questionnaires, supported by focus group discussion, key informant interviews and other participatory Rural Appraisal tools . Qualitative and quantitative were both gathered for the analysis in other to achieve the stated objectives

2.3 Sampling procedure

A multistage sampling procedure was employed. The first stage involved a simple random procedure where the western region was chosen from the five major cocoa producing regions in Ghana.. In the second stage, Sefwi Wiawso District was selected through a random sampling procedure. In the next stage, a stratified sampling method was adopted to categorise the district to zones (North, south, east and west). Again iterative random procedure was embarked on to select twenty respondents in each stratum. This was done by writing the words 'IN' and 'OUT' on pieces of papers in a container where each farmer to be interviewed was allowed to pick from the lot. Any farmer who picked a paper with inscription 'IN' was interviewed. This sampling method gives every farmer the chance to be interviewed. This successfully led to the selection of 100 respondents (cocoa farmers), after a a vigorously pretesting the strength of the questionnaire.

EMPIRICAL MODEL

2.5 The Random Utility Model

The discrete choice model is based on the principle that the decision-maker chooses the outcome that maximizes the utility.

Let decision-maker *i* choose from a set of mutually exclusive alternatives, $j = 1; \ldots\ldots J$.

The decision-maker obtains a certain level of utility U_{ij} from each alternative. It is not possible to observe utility gain, but some attributes of the alternatives as faced by the decision-maker can be observed. Hence, the utility is decomposed into deterministic V_{ij} and random part ε_{ij}

$$U_{ij} = V_{ij} + \varepsilon_{ij}$$

Since ε_{ij} is not observed, the decision-maker's choice cannot be predicted exactly. Instead, the probability of any particular outcome is derived. The unobserved term is treated as random with density $f(\varepsilon_{ij})$. The joint density of the random vector $\varepsilon_{ij} = \varepsilon_1 \ldots\ldots\ldots \varepsilon_{ij}$ is denoted $f(\varepsilon_{ij})$. Probability that decision-maker *i* chooses alternative *j* among *J* alternatives is

$$p_{ij} = \Pr(U_{i1} > U_{ij}), j \neq 1$$

This implies that, the decision maker only chooses the alternative that yield the highest utility to him.

In the analysis of binary response, two main parametric models thus, (logit and probit models), dominate in practice (Green, 2008, and Maddala, 2001).

2.6 Binary Probit Model

In order to explain the behavior of dichotomous dependent variable, there is the need to use a suitably chosen cumulative Distribution Function (CDF). In some applications the normal CDF has been found useful.

Now assuming *H* is the random variable, and then the probability density function of this variable is given as:

$$\Phi(h) = \frac{1}{\sqrt{2\pi}} e^{0.5u^2} \qquad 2.1$$

The probit function is then derived by taking the integral expression of 2.1 as indicated in 2.2 below:

$$\Phi(h) = P[H \leq h] = \int_{-\infty}^{h} \frac{1}{\sqrt{2\pi}} e^{0.5u^2} du \text{ , } [\ h = \beta_0 + \beta_1 x\ ] \qquad 2.2$$

This integral expression above indicates the probability that a standard normal random variable falls to the left of point h whiles the function $\Phi(.)$ is a commonly used notation for the standard normal distribution Hill *et al (*2011). Probit model is a non linear probability model used to predict choice probabilities with two possible outcomes. If *q* represents two categories of choices, *q* = (if event occurs = 1, and if an event does not occur = 0), then the probit model can be expressed for the outcome of *q* = 1 as:

$$\text{P} = \Phi\ (\beta_0 + \beta_1 x) \qquad 2.3$$

The results from probit model can be interpreted using the estimated marginal effect or average marginal effect. This is derived by taking first order derivative of the function in 1.3 above.

The marginal effect is given as:

$$\frac{dp}{dx} = \frac{d\Phi(z)}{dz} . \frac{dz}{dx} = \Phi\ (\beta_0 + \beta_1 x)\beta_1, where\ z = \beta_0 + \beta_1 x \qquad 2.4$$

The average marginal effect (AME) is derived as:

$$\text{AME} = \frac{1}{N}\sum_1^N \Phi\ (\beta_0 + \beta_1 x)\beta_1 \qquad 2.5$$

The marginal effect measures the effect of one unit change in x on the probability that q =1.

2.8 Maximum likelihood function of binary response models

Considering the model with success probability F(**x'β**) and independent observations leads to likelihood function, where **X** represents [**x**i]$i = 1, \dots, n$.

Prob$(Y1 = y1, Y2 = y2, .. , Yn = yn$ |**X**) $= \prod_{yi=0}[1 - F(x'\beta) \prod_{yi=1} F(x'\beta)$ 2.14

The likelihood function for a sample of *n* observations is therefore written as:

$$L(\beta/data) = \prod_{i=1}^{n}[(F(X_i{}'\beta)]^{yi}[1 - F(X_i{}'\beta)]^{1-yi} \qquad 2.15$$

Taking the log of 2.15 gives the function:

$$\sum_{i=1}^{n}\{y_i lnF(X_i{}'\beta) + (1 - y_i)ln\ (1 - F(X_i{}'\beta)\} \qquad 2.16$$

The maximum likelihood equation for binary response model is derived as by taking the first order derivative of 2.16 (see Green, 2008) :

$$\frac{\partial lnL}{\partial\beta} = \sum_{i=1}^{n}[\frac{y_i f_i}{F_i} + (1 - y_i)\frac{-f_i}{1-F_i}]X_i = 0 \qquad 2.17$$

The log likelihood function for normal distribution or probit is intuitively written as:

$$\sum_{y_i=0} \ln\,[1 - \Phi\,(X_i{}'\beta)] + \sum_{y_i=1} \ln\ \Phi\,(X_i{}'\beta) \qquad 2.18$$

To maximize the likelihood function, first derivative of the function is taken, and this becomes:

$$\frac{\partial lnL}{\partial\beta} = \sum_{y_i=0}\frac{-\Phi_i}{1-\Phi_i}X_i + \sum_{y_i=1}\frac{\Phi_i}{\Phi_i}X_i = \sum_{y_i=0}\lambda_i 0 X_i + \sum_{y_i=1}\lambda_i 1 X_i \qquad 2.19$$

The maximum log likelihood equation for the logistic regression is derive from equation 2.17

$$\frac{\partial lnL}{\partial \beta} = \sum_{i=1}^{n}[\frac{y_i f_i}{F_i} + (1 - y_i)\frac{-f_i}{1-F_i}]X_i = 0$$

But prob. $(Y = 1/x) = \frac{e^{X_i{}'\beta}}{1+e^{X_i{}'\beta}} = \Lambda(X_i{}'\beta)$ 2.20

Taking total derivative of 2.20, the function becomes:

$$\frac{d\Lambda(X_i{}'\beta)}{d(X_i{}'\beta)} = \frac{e^{X_i{}'\beta}}{1+e^{X_i{}'\beta}} = \Lambda\,(X_i{}'\beta)[1 - \Lambda[(X_i{}'\beta)]] \qquad 2.21$$

The Logit model therefore has a maximum likelihood equation equivalent to:

$$\frac{\partial lnL}{\partial \beta} = \sum_{i=1}^{n}(y_i - \Lambda_i)X_i = 0 \qquad 2.22$$

2.9 Multinomial Logit Model

The multinomial Logit (MNL) model, invented by McFadden in 1974, is obtained by the assumption that each random component ε_{ij} in the utilities (1) is distributed independently. Multinomial logistic regression is a simple extension of binary logistic regression that allows for more than two choice categories of the dependent variable. Suppose now the dependent variable is such that more than two outcomes are possible, where the outcomes cannot be ordered in any natural way, binary probit and Logit models are ill suited for modeling data of this kind. Multinomial logistic regression is often considered an attractive analysis because; it does not assume normality, linearity, or homoscedasticity. Multinomial logistic regression does have assumptions, such as the assumption of independence among the dependent variable choices. This assumption states that the choice of or membership in one category is not related to the choice or membership of another category (i.e., the dependent variable). The multinomial model is specified as:

$$Prob(Y_i = j) = P_{ij} = \frac{e^{\beta'_j x_{ij}}}{1+\sum_{j=0}^{q} e^{\beta'_j x_{ij}}} \ , \ j = 0, 1, \ldots, q. \qquad 2.23$$

Where the probability of the baseline category is given by:

$$Prob(Y_i = j) = P_{ij} = \frac{1}{1+\sum_{j=0}^{q} e^{\beta'_j x_{ij}}}, \ j = 0, 1, \ldots, q. \qquad 2.24$$

In the expression, Y_i represents the probability the decision maker chooses a specific alternative. The alternative outcomes are represented by *j* whilst x_{ij} represents a vector of explanatory variables, (Nkegbe *et al*, 2012). The econometric model representing the multinomial Logit multiple regression is therefore specified as:

$$P_{ij} = x_{ij}\beta_i + \varepsilon_{ij} \qquad 2.25$$

where P_{ij} is a limited depended variable representing the probability of ith farmer choosing alternative j; work and schooling choice (j = child working and schooling; child schooling only; child working only; child not working and not schooling, indexed J=1,2,3,4). The error term is assumed to be normally distributed with mean zero and unity variance. The X vector contains exogenous factors including farmers' characteristics such as age, sex, education; household characteristics such as income level of household head, household size, and number of children of farmer.

The coefficients in this model are difficult to interpret hence the easiest way to interpret is the use of the marginal effects (Green, 2008). The marginal effect of the multinomial model is given by taking the first order derivative of the equation 2.23 thus:

$$\frac{\partial p_{ij}}{\partial x_i} = p_{ij}\left[\beta_j - \sum_{j=0}^{q} p_j\beta_j\right] = p_{ij}(\beta_j - \bar{\beta}) \qquad 2.26$$

Where $\bar{\beta}$ represents probability weighted average of the β_j Like binary logistic regression, multinomial logistic regression log likelihood estimation to evaluate the probability of categorical membership and this is given by:

$$lnL = \sum_{i=1}^{N} \sum_{j=0}^{q} n_j lnp_{ij} \qquad 2.27$$

Where n_j is the number of individuals who choose outcome *j*.

Most researchers such as apply multinomial Logit model due to the marginal probabilities being computationally easier to obtain. Again, one significant characteristic feature of multinomial Logit model is that, there is a single explanatory variable that describes the cocoa famers, not the alternatives that the farmers are to choose (Green, 2008).

2.10 Data analysis tools

The study used STATA to analyze the data using the multinomial Logit regression model, and the descriptive statistics were presented in mean, frequencies, percentages and graphs .

3.0 RESULTS AND DISCUSSION

Table 3.1: Descriptive Statistics of farmers

Variable			Frequency	Percentage
Choice of farmer	**predicted probabilities**			
School only	(0.235)		26	26
School and work	(0.677)		57	57
Work only	(0.079)		13	13
None	(0.008)		4	4
Sex of farmer				
Male			80	80
Female			20	20
Educational status of farmer				
Nonformal			17	17
Primary			33	33
JHS/ middle / O' level /A' level/Voc. Tech			26	26
Tertiary			7	7
	Max	**min.**	**Mean**	**Standard deviation**
Age of farmer	70	19	47.500	11.597
Income of farmer(GH¢)	18000	7800	12498.63	2363.641
Number of children of farmer	5	1	2.320	1.000
Household size	10	3	5.470	1.514

The table 3.1 above shows that, majority of the farmers from the study prefer combining their children on both farm and schooling representing fifty seven percent (57%) with a predicted probability of 0.677. It also shows that while only thirteen percent (13%) of the respondents prefer to engage their children exclusively on farm, 26% respondents engage their children in exclusive schooling.

It is also evident from the table 3.10 that, cocoa farming is predominantly males accounting for about 80% while females also constitute 20% of the total sample size used for the analysis.

This can be attributed to the fact that cocoa farming is labour intensive and therefore requires much physical strength and this makes cocoa farming less attractive to females who rarely have such physical composure. This outcome is also evidence of the outcome found by Ghana statistical service in the population and housing census in 2010 which indicates that there are more males in the Sefwi Wiawso municipal than females.

The results from the table 3.10 also indicates that cocoa farming on the average is operated by people within the active age group of approximately 48years even though the oldest farmer encountered was 70 years and the youngest was 19years. Cocoa farmers on the average earn GH¢12498.00 as their per annual income as shown in the table 3.10 . The analysis of this study reveals that majority of the farmers encountered in the study have had primary education constituting of about 33%, while only 7 farmers were identified to have completed their tertiary education. This outcome strongly contradicts the old popular notion that cocoa farming is mostly practiced by illiterate. The descriptive statistics of farmers from the study show that the maximum household size is ten and a minimum of three, with the average size of three.

3.2 RESULTS FROM THE MULTINOMIAL LOGISTIC REGRESSION

This section reports the results of applying the multinomial Logistic regression to the data, explaining the decision of cocoa farmers to choose the children's work and/ or school options and the various factors influencing their choice across the four categories.

TABLE 3.20: MULTINOMIAL LOGISTIC REGRESSION FOR FARMERS CHOICE

CHOICE	**School and work**	**School only**		**Work only**		**Neither school nor work**	
Variable	Marginal eff.	Marginal eff.	coefficient	Marginal eff.	Coefficient	Marginal eff.	coefficient
Constant			-5.759*** (2.2038)		3.4495 (2.7584)		-13.4157* (4.3396)
Sex of famer	0.2069 (0.1389)	-0.0668 (0.1317)	-0.6094 (0.6876)	-0.1345 (0.0176)	-1.4983* (0.5068)	-0.0056 (0.0195)	0.9376 (1.6837)
Age of farmer	-0.0002 (0.0045)	0.0072** (0.0030)	0.0378** (0.00131)	0.0136 (0.00263)	-0.0084 (.0362)	-0.0009 (0.0009)	-0.1062 (0.0665)
Farmer's income (GH¢)	-0.0579 (.00002)	0.0005*** (0.00002)	0.003** (0.0001)	-0.0038*** (0.00001)	0.0005** (0.0002)	0.0094 (0.00000)	0.006* (0.00032)
Farmer's education	0.1127 (0.0428)	0.0700*** (0.0324)	0.3829*** (0.01251)	-0.0160* (0.002298)	-0.1166 (0.3280)	0.0004 (0.0049)	0.5967 (0.5575)
Number of children of farmer	0.113** (0.01489)	-0.114*** (0.0527)	-0.769** (0.2112)	0.0286 (0.02682)	0.1942 (0.2479)	0.00403 (.0095)	-0.1123 (0.7743)
Household size	-0.0050 (0.0354)	-0.1418 (0.0394)	0.2137 (0.1831)	-0.0012528 (0.1085)	0.2523 (0.3575)	4.18e-06 (0.00592)	1.2762** (0.5639)

Number of observation = 100
LR chi2 (18) = 45.64
Prob > chi2 = 0.000
Pseudo R2 = 0.631
*Statistically significant at the 10% level.
**Statistically significant at the 5% level.
***Statistically significant at the 1% level, while figures in parenthesis are standard errors.

In the model, the choice outcome ((a) school and work (b) school only (c) work only (d) none) was treated as categorical limited dependent variable. In addition, some socio-demographic and household characteristics of cocoa farmers including age, sex, education level, income, household size, number of children) were used as explanatory variables.

The choice category where the child attends school and works, thus combines schooling with farm work, was used as the baseline category for normalization. The corresponding marginal effects, the coefficients and their various standard errors are also presented in Table 3. 20.

The results from the multinomial Logistic regression analysis show that most farmers are more likely to engage their children on both farm and in school which forms the base outcome for the analysis. The variables age and education of farmer, number of children of farmer and farmer's income, were found to be statistically significant . These factors therefore have significant impact on the choice of farmers in terms of using the labour of their children in comparison with schooling as shown in the table 3. 20

3.3 DETERMINANTS OF FARMERS' CHOICE ON CHILD LABOUR AND SCHOOLING

3.3.1 Education of Farmer

The results from the multinomial logistics analysis in table 3.20 show that Parents with relatively high level of education have a significant and positive influence on the likelihood of the child schooling only and significant negative influence on the likelihood of the child working only compared to combinignboth work and school. The results indicate that a unit increase in parent's education increases the probability of the child to attend school exclusively by 0.72 as compared to combing school and work. Therefore, it is expected that, household heads who have had formal education would have positive effect on the households decision to allow the child to attend school only and not to engage him or her in farm work only. In the other hand, the education of household head also negatively and significantly affects their choice of engaging their children in farm work only as compared to combining school and work option. The analysis indicates that as farmers' educations advances, the probability of farmers choosing work only reduces by (-0.16). This finding is consistent with that of Canagarajah and Nelson, (2001) who use multinomial Logit model and found out that as parents' education increases the probability of choosing schooling option increases at the expense of employing the labour of the children in farm work. Research by Leme and Wajman (2000) also studied the link between school and work and confirmed that in the decision of just studying, the most important variables is parents' education. Khanam (2004) also confirms this findings where incidence and determinants of child labour and school attendance were analyzed using a multinomial Logit model which allows a joint estimation of the determinants of schooling and working, combining schooling and work, or doing nothing for 5-17 year old children. The empirical findings from Khanam (2004) provide evidence that the education of parents significantly increases the probability that a school-age child will specialize in study this also confirms the findings in this study that farmers' education has a significant influence on their decision to use children on farm and in school.

3.3.2 Age of farmer

Farmer's age was found to be statistically significant at 5% level and has positive relationship with school only choice at the expense of school and work options (see table 3.20). The results show that as farmer's age increases, the likelihood of his child attending school only also increase comparative to combining school and work. This can be attributed to the fact that as farmers grow they become conscious about the returns on education especially when the fertility of their lands has been diminished and their productivity has also declined. They tend to invest in the education of their children. This founding also confirms a Studies in Cote d'Ivoire, where it was found that, the older the head of the household, the more likely it is that a child will be attending school and not indulge in farm work (Nkamleu and Kielland, 2006).

3.3.3 Farmer's income

The income of household head was found to be statistically significant at 1% level and positively affect the probability of farmer choosing school only as compared to combining school and work choice as indicated in table 3.20. This implies that as farmer's income increases the probability of their child attending school exclusively also increases but the probability of their child combing both school and work however reduces. This results support the findings of Khanam, (2006) who found out that children belonging to poor households have a significantly higher probability of attaining the worst outcome (work only).

3.3.4 Number of children of farmer

Results from table3.20 **(**multinomial logistic regression results) disclose that the more farmers kids increase in number, the likelihood of his children attending school exclusively decreases compared to combing school and work. This was found to be statistically significant at 1% level. The analysis also revealed that as the number farmer's children increases, the probability of engaging children in both school and work increases. This outcome is also consistent with that of Owusu *et al* (2008) who found out that the more the children of farmer the less likely that the children will attend school exclusively.

3.4 Activities performed by Children on Cocoa Farm

The role of children on cocoa farms is both an important tradition and a challenge in this contemporary society. In West Africa, where nearly 70 percent of the world's cocoa is grown, children help out on the family farm, much as they do in many other countries, for many other crops. The involvement of younger family members in farming tasks is one of the first steps in transitioning responsibility for the family farm. The study found out the children who help on cocoa farms engage in activities including: land clearing (40%), felling (0.2%), stumping (2%), cutting peg (0.6%), planting (53%) , carrying seedlings (34%), weeding (49%), fertilizer application (0.4%), plucking pods (0.3%), application of insecticides (3%), gathering pods (78%), fermentation of cocoa beans (5%), carrying fermented beans (47%), drying of beans (4.3%), and carrying dried cocoa beans for sale (2.9%). The findings indicate that majority of children are involved in pod gathering, planting of cocoa seeds and seedlings, while only few children are involved in chemical application on cocoa farms.

CONCLUSION

The study has shown that in reality children are engaged in child labour in cocoa farms as well as schooling concurrently in the area. This paper demonstrated the usefulness of the multiple choice model for modeling farmers' choice on child labour and schooling. The differences in predicted probabilities support also for some plausible decision making. For instance, being highly educated increases the probability of a farmer enrolling his child in exclusive schooling and reducing the likelihood of the child working on farm only.

The policy implication is that elimination of child labour on cocoa farm depends strongly on income of household, education of farmer, number of children of farmer and age of framer. Policies such as social intervention programs including conditional child cash transfers, giving loans to farmers at minimum interest rates, free education policies would help motivate the government ant other organizations to fight against child labour in cocoa farming. The results indicated that the more farmers kids increase in number, the likelihood of his children attending school exclusively decreases compared to combing school and work. This was found to be statistically significant at 1% level. The analysis also revealed that as the number farmer's children increases, the probability of engaging children in both school and work increases. This implies that if a family planning program is effectively practiced in the cocoa growing communities, child labour would be reduced to the barest minimum. Farmers incomes can be boosted via training, farmer organization, and crop diversification. The government and non governmental agencies as well as developmental practitioners must come together to assist especially intervene in the activities performed in the farming processes. Ensuring that children are not exposed to unsafe farm tasks and improving access to higher quality education would all go a long way to help fight against child labour in cocoa sector and enhance the education of children.

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