

**IDENTIFYING THE FACTORS AFFECTING CHILD LABOUR
IN AGRICULTURAL SECTOR
IN POLONNARUWA AND MONARAGALA DISTRICTS OF SRI LANKA**

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INTRODUCTION

The Research and Survey Unit of Social Policy Analysis and Research Centre (SPARC) of Faculty of Arts, University of Colombo, Sri Lanka in collaboration with International Labour Organization (ILO) conducted a survey on child labour in agricultural sector using 300 households each in *Polonnaruwa* and *Monaragala* districts of Sri Lanka in year 2008. The sample from each district was selected using multi-stage sampling method and personal interviews were conducted to collect the data. This paper is written with the objective of identifying the factors affecting child labour in agricultural sector using above survey data.

METHODOLOGY

In consultation with ILO, 'child labourer/working child' is defined as a child in the age group 5-17 years who was engaged for 1 hour or more in the reference period of the past 7 days in an economic activity. This activity is defined as an activity in which the child engaged in receiving payment and/or family gain. In the analysis, a logistic model was fitted followed by *goodness-of-fit* of the model. Then, *odds ratios* were interpreted to observe the degree of association of the levels of the factors.

RESULTS AND DISCUSSION

According to the results, the number of actual cases of child labour found is 18 out of the total sample size 600. Table 1 demonstrates that the main reason for child working is not being able to afford schooling followed by family needs income. Thus, it is clearly evident from the results that around three fourth of the child workers, the primitive reason of working is insufficient family income. This result is confirmed when they were asked to state the conditions to stop child working. It can be seen that in Table 2, the highest response is enough income for family.

Reason for child working	Frequency
Cannot afford schooling	8
Family needs income	5
Bad quality schools	2
Lack of transportation	2
No land for agriculture	1
Total	18

Table 1: Reasons for child working

Condition to stop child working	Frequency
Enough income for family	13
Good quality schools	2
Good transportation	2
Enough land for farming	1
Total	18

Table 2: Conditions to stop child working

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In accomplishing the objective, a *logistic* model (Agresti, 2002) was fitted to the binary response variable 'Child labourer' with 2 levels – 'Yes' and 'No' – along with the important explanatory variables (filtered from a large set of variables, by using univariate analysis). The *forward selection* procedure was used to perform the model selection. The best model is,

$$\text{logit}(p) = \alpha + \beta_i^{\text{inc}} + \beta_j^{\text{sch}} + \beta_k^{\text{gen}} + \beta_l^{\text{age}} \quad (1)$$

where inc = whether monthly family income (without child income) sufficient, sch = whether the child has stopped schooling, gen = gender of the child, and age = age group of the child; $i = 1(\text{Yes}), 2(\text{No})$; $j = 1(\text{Yes}), 2(\text{No})$; $k = 1(\text{Male}), 2(\text{Female})$; and $l = 1(5\text{-}13\text{years}), 2(14\text{-}17\text{years})$.

Then, *Hosmer-Lemeshow* test was performed to examine the *goodness-of-fit* of the fitted model with the hypothesis, H_0 : The model fits the data well vs H_1 : The model does not fit the data well. The results obtained show a Chi-Square value of 1.656 with 6 degrees of freedom ($p=0.948>0.05$), suggesting that the model (1) fits the data well at 5% significance level.

Afterwards, in order to interpret the model parameters, *odds ratios* were interpreted. Parameter estimates and *odds ratios* associated with each level (relative to the last level) of factors of model (1) are given in Table 3. The results obtained from these odds ratios are as follows. The odds of being a labourer for a child from a family with insufficient income is around 31 times (1/0.032) higher. For a child who has stopped schooling, the odds of being a labourer is about 30 times (1/0.033) higher. Male child has approximately 17 times (≈ 16.628) higher odds of being a labourer than his counterpart. The odds of being a labourer for an elder child in 14-17 years is around 11 times (1/0.088) higher than a younger child in 5-13 years. It should be noted that since the actual cases of child labour found is a low value, the wide confidence interval is obtained for the factor 'gen'.

Factor	Factor level	d.f.	Parameter Estimate	Effect	Odds Ratio Estimate	95% Wald Confidence Limits for Odds Ratio Estimate
intercept	-	1	-0.8175	-	-	-
inc	1	1	-3.4443	1 vs 2	0.032	[0.004,0.282]
sch	1	1	-3.4073	1 vs 2	0.033	[0.007,0.151]
gen	1	1	2.8111	1 vs 2	16.628	[2.401,115.141]
age	1	1	-2.4355	1 vs 2	0.088	[0.014,0.533]

Table 3: Results of the parameter and odds ratio estimation of the model (1)

CONCLUSIONS/RECOMMENDATIONS

The results of the survey in two districts have raised many issues for consideration regarding the problem of child labour in agricultural sector. The factors that have significant influence on the child labour in agricultural sector are family income, schooling, gender, and age. In-depth interviews reveal that many of the families with working children faced some crisis such as death of one of the parents, separation or disability. The aspects that influence loses of interest in schooling are the lack of teachers & facilities in schools and unable to send money to school for various activities. Further, lack of transportation and far distance discouraged some children from seeking higher education. Hence, although Sri Lanka has a free education policy and support in terms of text books and uniforms, poverty is still a factor in determining access to education and causes to child labour.

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