

Determinants of Poverty in Tea Estate Workers in Nuwara Eliya District

K. M. D. L. Wijerathne, R. A. P. I. S. Dharmadasa *Faculty of Animal Science and Export Agriculture, Uva Wellasa University of Sri Lanka and*

H. W. Shyamalie, B. M. N. C. Karunarathna and H. M. C. G. Pilapitiya
Tea Research Institute, Talawakelle, Sri Lanka

Introduction

As a developing country, poverty is a major issue in Sri Lanka. The poverty or poor is expressed as lack of access to basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education etc. The poverty line specifies the minimum standard of living condition in the society to which everybody should be entitled. However, income level and other facilities available to people in the different sectors may vary. Also, the household living standard has a strong relationship with the poverty of the people. NuwaraEliya district is one of the major tea growing areas in Sri Lanka. Of the total population in NuwaraEliya district (706,588), 53.6 % of the population is belonged to estate sector (Central Bank, 2013). Knowing the socio-economic factors which affect to poverty in estate sector is vital to find the strategies for improving their living conditions. Therefore, this study attempts to identify the determinants of poverty in estate sector. The results of the study will be useful to make policies and suggestions to improve their living conditions of estate workers in NuwaraEliya district.

Methodology

The present study was conducted in tea growing locations of NuwaraEliya district. There are five District Secretariat (DS) divisions in NuwaraEliya District and of them, NuwaraEliya DS division was purposely selected for the study, since the highest estate population is recorded in this DS division (Central Bank, 2013). Multi stage sampling method was used for the selection of tea estates and systematic sampling technique was used to select the respondents. Out of seventy two GramaNiladari divisions, four GramaNiladari divisions were randomly selected. An estate was randomly selected from each selected GramaNiladhari division. Fifty workers were selected from each estate for the survey and total sample size was 200 estate workers. Primary data relating to various parameters of socio - economic status were gathered through well designed and pre tested questionnaire. The secondary information was collected from various published/unpublished sources. Tabular and regression techniques were employed to analyse the data. Binary Logistic regression model was employed to identify the determinants of poverty.

A poverty level (poor or non - poor) was decided by using the real per capita expenditure as a cut off point corresponding to Sri Lanka Official Poverty Line (OPL) Rs. 3924 in 2014 August (Department of Censes and Statistic, 2014).

The Binary Logistic regression model could be expressed as
$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \epsilon$$

$$(\quad = 1) = \frac{(\quad)}{(\quad)}$$

Where,

Table 01: Variable description

Variable	Variable Description
Y	Poor / Non poor household 1, Poor (if per capita household monthly expenditure < Official poverty line) 0, Non poor (if per capita household monthly expenditure > Official poverty line)
X ₁	Household size (Number)
X ₂	Gender of the household head 1, Male 0, Female
X ₃	Dependency Ratio
X ₄	Age of household head (Years)
X ₅	Education level of household head 1, if the household head was illiterate 2, if household head had studied up to primary (Grade1-5) 3, if household head had studied up to middle (Grade 6-10) 4, if household head had studied up to secondary (Grade 11-13) 5, if household head had studied up to graduate and post graduate
X ₆	Household Income (Rs. / Month)
X ₇	Household daily calorie intake (Calories / day)
X ₈	Number of occupant members in the household (Number)
X ₉	Monthly household savings (Rs / Month)

Suffering from Chronic illness or disability within the household members

X_{10} 0, if yes

1, if no

β_0	Intercept term
$\beta_1 - \beta_{10}$	Coefficients of $X_1 - X_{10}$
ε	Random error term

Results and Discussion

According results of the binary logistic regression (Table 02), gender of household head, education level of household head, household income and household daily calorie intake were the negative significant factors. That indicates these factors are negatively effect on poverty and positively effect on non - poor. However, household size was positive significant factor to the poverty. The negative coefficient of gender of household head (- 1.49) showed that tendency of female headed household to become a poor is high. The negative coefficient value of education level of household head (- 0.39), indicated that when the education level of the household head decreased, probability of becoming their family in to poor has increased. The coefficient associated with household income had a negative effect on poverty (- 0.000042). It indicated that when the household income was reduced they cannot fulfill their basic needs and wants, therefore the family become a poor family. The coefficient of household daily calorie intake was also negative (- 0.000150). It means that when the family members did not get their daily recommended nutrient allowance they are poor. The positive coefficient associated with household size is (0.72). Hence when household size increases, the poverty also increased.

Table 02: Parameter estimates for binary logistic regression

Variables	Coefficient	P > Z	Exp (β)
Household Size	0.723360***	0.000	2.061
Gender of Household Head	-1.497702	0.083	0.224
Age of household head	-0.035240	0.113	0.965
Education level of household head	-0.399094***	0.009	0.671
Dependency ratio	0.001365	0.628	1.001
Household income	-0.000042**	0.016	0.999

Household daily calorie intake	-0.000150***	0.005	0.999
Household members suffering chronic illness or disability	0.177778	0.619	1.195
Constant	2.507769	0.151	12.278

Note: significant levels denoted as *** P < 0.01 (1%) ** P < 0.05 (5%) * P < 0.1

(10%) **Conclusion**

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \epsilon$$

According to the results household size, gender of the household head, education level of the household head, household daily calorie intake and household income are directly influenced to the poverty in estate workers. These results indicate that large families are more tend to be poverty. Awareness creation on family planning will go a long way in reducing the household size of the estate households since there is tendency of being poor with large household size. Most of the estate workers always eat less number of food groups and their diet diversity was less therefore the awareness program should be conducted to increase workers knowledge about food consumption pattern. And also awareness program should be conducted to the parents, about importance of the education. More attention should be given to the above factors when designing poverty alleviation programmes to the estate workers in the NuwaraEliya district. The findings of the study will be useful to the government when make policies for poverty alleviation programmes in the study area.

Acknowledgement

All the estate managers and estate workers who have participated in my interviews are acknowledged. **References**

Central Bank, (2013). Annual report, Central bank, Sri Lanka.

Central Bank, (2013). Economic and Social Statistics of Sri Lanka 2013, Central Bank, Sri Lanka.

Department of Censes and Statistic, (2014). District official poverty lines, Ministry of Finance and Planning, Sri Lanka.