

## **Determinants of Poverty of the Tea Garden Labour Community of Dibrugarh District of Assam, India**

Nilakshi Gogoi

*M.Phil Research Scholar*

*Dibrugarh University, Dibrugarh, Assam, India*

---

### **Abstract:**

**Aims and Objectives:** The aim of the present study is to identify the factors that can determine the poverty status of the tea garden labour community.

**Methodology:** To identify the sample household's poverty status the state specific rural poverty line as fixed by the Rangarajan Committee of Planning Commission of India (2014) is used. A Logistic regression model is used to identify the main determinants of poverty of the sample households.

**Results:** The results show that the household size, education of the head of the household, employment status of the head of the household and the number of earning members in the household are the main determinants of poverty of the tea garden labour community.

**Conclusion:** The policymakers should give importance on access to education, employment opportunities and should also made effort to encourage smaller family size to reduce poverty.

**Keywords:** Poverty, Tea Garden Labour, Dibrugarh, Assam

---

### **I. INTRODUCTION**

Poverty has become a general phenomenon that is perceived to mean different things to different people at different times and places. Ogwumike (2001) defined poverty as a situation where a household or an individual is unable to meet the basic necessities of life, which include consumption and non-consumption items, considered as minimum requirement to sustain livelihood. Ogwumike (2001) referred to poverty as a condition of deprivation which could be in form of social inferiority, isolation, physical weakness, vulnerability, powerlessness and humiliation. In India, poverty reduction is one of the major objectives of economic development programmes. Though India was the first country in the world to define poverty as the total per capita expenditure of the lowest expenditure class, which is required to ascertain a minimum intake of 2400 kcal/day in rural and 2100 kcal/day in urban areas. The same is converted into financial terms and the poverty line is defined as a minimum level of income or expenditure, which is periodically updated. The latest updated poverty line is Rs. 972 in rural areas and Rs.1407 in urban area (Planning Commission, 2014). There has been no uniform measure of poverty in India. The Planning Commission of India has accepted the Rangarajan Committee report which says that 29.5 percent of people in India are living below the poverty line.

Assam being a geographically isolated and remote state of the country has always been in the forefront so far as the underdevelopment of different aspects of human life is considered. Poverty problem is also acute in the state. According to the estimates of Planning Commission of India in 1977-78 the percentage of people living below the poverty line in Assam was 57.15 percent and it had fallen down to 36.21 percent in 1987-88 and 36.09 percent in 1999-2000 and 19.7 percent in 2004-05. But in 2009-10 as per the Tendulkar Committee estimates the poverty rate in Assam again increased to 37.9 percent. But in 2011-12 it had fallen down to 32 percent which was higher than all India average. In case of the incidence of rural poverty, the poverty rate in Assam has been seen higher than the all India average. For instance in 1977-78 the rural poverty rate in Assam was 59.82 percent as against the all India average of 53.07 percent. In 1987-88 the rural poverty rate in Assam was 39.35 percent and for India as a whole it was 39.09 percent and in 1999-2000 the rural poverty rate of Assam was 40.04 percent as against the all India average of 27.09 percent. However in 2004-05 the rural poverty rate of Assam was lower than all India average and it was 22.3 percent as against the all India average of 25.7 percent. But in 2009-10 the rural poverty rate of Assam was increased to 39.9 percent which was higher than all India average of 33.8 percent. In 2011-12 as per the Tendulkar Committee estimates though the rural poverty rate had fallen down compared to the year 2009-10, but this rate was higher than the all India average of 25.7 percent. On the other hand the incidence of urban poverty in Assam is lower than the incidence of rural poverty and the urban poverty rate in Assam. In 1977-78 the urban poverty rate of Assam was 32.71 percent and it is lower than all India average of 45.24 percent. In 1987-88 the urban poverty rate of Assam was 9.94 percent as against the all India average of 38.20 percent and in the year 1999-2000 the urban poverty rate in Assam had fallen down to 7.47 percent which was lower than all India average of 23.62 percent. In 2004-05 again it had

fallen down to 3.3 percent as against the all India average of 25.7 percent. However in 2009-10 as per the Tendulkar committee estimates the urban poverty rate in Assam increased to 26.1percent and in that year it was higher than all India average of 20.9 percent. In 2011-12 as per the estimates of Tendulkar committee the urban poverty rate in Assam had fallen down to 20.5 percent as against the all India average of 13.7 percent.

The tea garden labour community is a term used to denote those active tea garden workers and their dependents who reside in labour quarters built inside 800 Tea estates spread across Assam. are the descendants of tribals and backward castes brought by the British colonial planters as indentured labourers from the predominantly tribal and backward caste dominated regions of present day Jharkhand, Orissa, West Bengal, Telengana and Chattishgarh into colonial Assam during 1960-90s in multiple phases for the purpose of being employed in the tea gardens industry as labourers. The total population of the community is estimated to be around 6.5 million (65 lakhs) or 18 percent of Assam's total population. They live in almost every district of Assam but their density varies according to the number of tea plantations in different regions of Assam. They are more numerous in Upper Assam and Central Assam than Lower Assam. They are one of the most backward and exploited communities in Assam due to decades of continuous exploitation by tea estate management and neglect on the part of the government. The literacy rate of the community is one of the lowest in Assam, particularly among girls and women.

Since the majority of the community are still labourers, they live in labour lines built inside tea-estates and established by tea planters. These estates are located in remote areas and this contributes to the backwardness and exploitation of them by the tea planters. The labourers in a way have to live with the basic facilities provided by the tea planters. The tea planters usually exploit the workers every possible way. Violence and agitation of labourers against the management is common, where the state machinery normally protects the tea-planters. Non-education, poverty, addiction of males to country-beer, poor standard of living, rising population and inadequate health facilities provided to them are the problems in their lives. According to the Assam Human Development Report, 2014 the poverty rate of the tea garden blocks of Assam is estimated to be 37.6 percent. There are a large number of studies that discusses the development problems of the tea garden labour community of Assam but most of the studies are concentrated on their socio-economic status, health problems, educational problems etc. To the best of my knowledge there are very limited studies that discuss the issue of poverty of the tea garden labour community of Assam. Hence the present study aims at identifying the main determinants of poverty of the tea garden labour community of the Dibrugarh district of Assam.

## II. REVIEW OF LITERATURE

The following table-1 provides a brief analysis of the existing literature on the determinants of poverty. The table-1 shows the various studies, their technique of analysis and the findings of these studies.

**Table- 1: Summary of Existing Literature on the Determinants of Monetary Poverty**

Year	Author	Country	Technique of Analysis	Findings
2007	Abuka et al.	Uganda	Logistic Regression Model	Education of the household head reduces the probability of being poor while increase in the household size and living in the rural areas increases the probability of being poor.
2012	Awopeju	Nigeria	Probit Regression Model	Household size, household head's age and sector have positive relationship with the probability of being poor. While gender of the household head, squared age of the household head, residing in North-Central, South-East, South-West, South-South geographical zones.
2013	Sekhampu	South Africa	Logistic Regression Model	Household size, age of the household head and employment status are the significant determinants of poverty. The age and employment status of the household head is negatively associated with the poverty status while the increase in household size increases the probability of being poor.
2013	Singh, Singh, Meena, Kumar, Jha and Kumar	Jharkhand (India)	Probit Regression Model	Increase in the length of education of the household members and increase in the number of earning members in the family reduces the probability of being poor. While the large family size and the increased dependency on agriculture increases the probability of being poor.

2014	Majeed and Malik	Pakistan	Logistic Regression Model	The increase in the age of the household head, increase in household size, households headed by males and provincial residences increases the probability of being poor. While the increase in level of education of the head of the household, experience, households living in urban areas, household head employed in agriculture and remittances received by the household reduces the probability of being poor.
2015	Deressa and Sharma	Ethiopia	Logistic Regression Model	Higher dependency ratio, large family size, female headed households, married /widowed/divorced household head increases the probability of being poor while increase in working members, education and formal employment of the household head and agricultural land holding reduces the probability of being poor.
2016	Maloma	South Africa	Logistic Regression Model	Education level of the household head, employment status of the household head and age of the household head is negatively related to the probability of being poor.
2017	Biyase and Zwane	South Africa	Probit Regression Model	The age, gender, marital status, race, employment status and level of education of the household head, asset ownership, dependency ratio, household size, some provincial dummies are the significant determinants of poverty status.

### III. MATERIALS AND METHODS

**Survey Design:** The present study is a survey based study. The Dibrugarh district has been chosen purposively to conduct the study as it has the highest number of tea gardens in Assam. The district has a total of 144 tea gardens (Census, 2011). Moreover Dibrugarh district is popular as the 'Tea City' of North-East India. The present study adopts a multistage random sampling method to collect the sample. In the first stage one tea garden from each of the seven community development blocks of the district is chosen randomly. Then in the next stage 20 households from each tea garden are chosen to collect the sample and thus a total of 140 households are selected to collect the sample. The data are collected from the period of July, 2018 to August, 2018.

**Survey Questionnaire:** A well designed questionnaire is used to collect the data. The questionnaire is used to collect information both at the household level and at the individual level. At the household level the information are collected on religion, household consumption expenditures on various food and non-food items etc. and at the individual level information are collected on the gender, age, marital status, level of education, employment status, etc.

**Measurement of Poverty:** In order to measure poverty of the tea garden labour community household is considered as the unit of analysis and the state specific rural poverty line of Assam as fixed by the Rangarajan Committee of Planning Commission of India (2014) has been used. This is because all the tea gardens chosen for the present study are located in rural areas. The Ranagarajan committee fixed the poverty line for rural areas of Assam as Monthly Per Capita Consumption Expenditure (MPCE) of Rs. 1006.66. A household as considered as poor if its monthly per capita consumption expenditure is less than the official poverty line. Then Foster-Greer-Thorbecke (FGT) class of poverty measures are used to measure poverty of the sample households belonging to tea garden labour community. The individual indices within the family of FGT poverty measures can be derived by substituting different values of the parameter 'α' into the equation given below.

$$FGT_{\alpha} = \frac{1}{N} \sum_{i=1}^H \left( \frac{z - y_i}{z} \right)^{\alpha}$$

Where  $z$  is the poverty line threshold of MPCE,  $N$  is the total number of sample households,  $H$  is the number of sample households below the poverty line,  $Y_i$  is the actual consumption of each household. The present study set the value of  $\alpha = 0$  in order to obtain the poverty headcount.

**Model Specification:** The present study used a Binary Logistic Regression Model to identify the determinants of poverty. Here the dependent variable is dichotomous in nature and the poverty incidence of the sample households (1=Poorest and 0=Non-Poorest) is taken as the dependent variable. The binomial logistic regression model applied here can be written as,

$$Z_i = \ln \left( \frac{P_i}{1-P_i} \right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \epsilon_i$$

Where,  $Z_i$  is the poverty status of the  $i$ 'th household represented with a dummy; 1 if poorest and 0 otherwise.  $P_i$  is the probability that the household is being poorest and  $1-P_i$  is the probability that the household is being non-poorest.  $\beta_0$  is the constant term included in the model.  $\beta_1, \beta_2, \dots, \beta_k$  are the regression coefficients of each independent variable included in the model ( $X_1, X_2, \dots, X_k$ ) and  $\epsilon_i$  represents the stochastic error term.

**Selection of Variables:** The empirical literature on the determinants of poverty includes a wide range of determinants. But the present study includes household size, gender of the household head, age of the household head, education of the household head, employment status of the household head, number of working members in the household as the plausible determinants of poverty status of the sample households. The predictor variables of poverty are briefly discussed in the following table-2.

**Table-2: Description of the Explanatory Variables**

Variable	Definition	Type	Description
Household Size (HHS)	It refers to the total no. of member in a household	Continuous	Total number of members in the household
Gender of the household head (Gender)	It refers to whether the household head is male or female	Categorical	1= Male 0 = Female (Reference Category)
Age of the Household Head (Age)	It refers to age of the Household Head in the survey year	Continuous	Age of the Household Head (in years)
Education of the Household Head (Education)	It refers to the education status of the Household Head	Categorical	1= Primary level and/or above 0= No Education (Reference Category)
Employment Status of the household head (EmpStat)	It refers to whether the head of the household is employed or unemployed	Categorical	1=Employed 0= Unemployed (Reference Category)
Number of Working Member(s) in the Household (WMember)	It refers to the total number of working member(s) (15 years or above) in the household	Continuous	Total number of Working Member(s) (15 years or above) in the household
Dependency Ratio (DRatio)	Ratio of dependents (people younger than 15 or older than 64) to the working age population (aged 15-64)	Continuous	Dependency ratio of the household

Source: Author's Own Justification

#### IV. RESULTS

The estimated results of the regression model of the determinants of poverty have been presented in the following table-3.

**Table-3: Determinants of Poverty: Binomial Logistic Regression Results**  
**Dependent Variable: Poverty Incidence of the Households (1=Poorest and 0=Non-Poorest)**

Predictor Variables	Coefficient ( $\beta$ )	Wald	Exp( $\beta$ )
HHS	1.703***	45.944	5.493
Gender	1.161	1.759	3.192
Age	0.023	1.023	1.024
Education	-0.900**	4.594	0.407
EmpStat	-1.889**	4.205	0.151

WMember	-3.425***	44.574	0.033
DRatio	0.073	0.022	1.076
Constant	-3.514***	14.510	0.030

**Source: Author's Calculation Using SPSS**

Cox & Snell R<sup>2</sup>= 0.477

Nagelkerke R<sup>2</sup>= 0.646

Hosmer and Lemeshow Goodness of fit test statistic = 11.517 (p= 0.174)

\*\*\* implies 1 percent level of significance, \*\* implies 5 percent

## V. DISCUSSION

From the estimated results of the binary logistic regression model it can be seen that out of the seven predictor variables included in the model four variables viz., household size, education of the household head, employment status of the household head, number of working member(s) in the household are found as the significant variable in determining the monetary poverty status of the household. The household size is found to be significant at 1 percent level. The coefficient of the household size is found to be 1.703 which means that the probability of being poor is increased with the increase in the size of the household. The exponential of the coefficient of household size indicates that keeping the other regressors as constant one unit increase in household size increases the probability of being monetarily poor by 5.493 units. This result is found to be similar with Abuka et al (2007), Awopeju (2012), Sekhampu (2015), Majeed and Malik (2014), Deressa and Sharma (2015). These studies found that the increase in household size increases the probability of being poor. This positive relationship between the size of the household and the probability of being poor might be due to the fact that the increase in household size reduces the per capita expenditure of the households, especially when there are a large number of dependents in the household and a few number of earning members. But this result is contrary to the findings of Biyase and Zwane (2017) who found a negative relationship between the household size and the probability of being monetarily poor. The negative relationship between the household size and the probability of being monetarily poor might be due to the fact that increase in household size also increases the number of future earning members in the household. As a result the household income increases and the probability of the households being poor also falls. Another significant determinant of monetary poverty of the sample households is education of the household head. The estimated coefficient of education of the household head is significant at 5 percent level. The value of the estimated coefficient of the variable education of the household head is -0.900. This means that the households in which the household heads have education (primary and/or above) reduces probability of the household being poor by 0.900 units. This result is consistent with the results of Abuka et al. (2007), Majeed and Malik (2014), Deressa and Sharma (2015), Maloma (2016) and Biyase and Zwane (2017) who also found that increase in education of the household head reduces the probability of being monetary poor. This result might be due to the relationship of education with the labour market. Employment status of the household head is found to be an another significant determinant of monetary poverty status of the sample households. The estimated coefficient of employment status of household head is significant at 5 percent level and the value of the estimated coefficient is -1.889. This means that the households in which the household heads are employed reduces the probability of being poor of the household by 1.889 units. This result is consistent with the findings of Sekhampu (2013), Majeed and Malik (2014), Deressa and Sharma (2015) who also found that the employment status of the household head reduces the probability of being poor. This might be due to the fact that employment of the household head provides a regular source of earnings to the household and this in turn increases the probability of the household being non-poor. Another significant factor of monetary poverty of the sample households is the number of working member(s) in the household. The estimated coefficient of this variable is significant at 1 percent level and the value of its estimated coefficient is -3.425. Thus the number of earning member in the household is negatively associated with the probability of being poor and keeping the other regressors as constant the one unit increase in the number of earning members in the household reduces the probability of being poor of the household by 3.425 units. This result is found to be consistent with Singh et al. (2013), Deressa and Sharmah (2015) who found that increase in the number of working member(s) in the household reduces the probability of being poor. This might be due to the fact that increase in earning member in the household increases the total earnings of the household which in turn increases the chances of the households to be non-poor.

## VI. CONCLUSION

The aim of this article paper has been to analyze the relationship between various household level factors and the poverty status of households. The analysis revealed that household size, education of the household head, employment status of the household head and number of earning members in the household are the important variables in determining the poverty status of households. The larger the size of the household, the higher is the probability of it being categorized as poor. An analysis of the results of the survey revealed that

household whose head has education lowers the probability of the household being categorized as poor. The author of this article thus seeks to encourage policy makers to pay attention to issues such as improved access to educational opportunities, employment opportunities particularly for the poor, and to make efforts to encourage smaller family sizes. These two factors will have a positive impact on the ability of households to earn a higher income, which will lead to a reduction in the number of households that are classified as poor.

#### REFERENCES

- [1]. Abuka, C. A., Ego, M. A., Opolot, J., & Okello, P. (2007). Determinants of poverty vulnerability in Uganda. Discussion Paper No. 203. Institute for International Integration Studies.
- [2]. Awepoju, S. O. (2012). Determinants of poverty status among households in Nigeria” (Master Thesis). Retrieved from, <http://szd.lib.uni-corvinus.hu/>.
- [3]. Biyase, M., & Zwane, T. (2017). An empirical analysis of the determinants of poverty and household welfare in South Africa”. *Journal of Developing Areas*. Tennessee State University, College of Business, vol. 52(1), pages 115-130, January-M.
- [4]. Deressa, T. K., & Sharma, M.K. (2014). Determinants of poverty in Ethiopia. *Ethiopian Journal of Economics*, Ethiopian Economics Association, vol.23(1),September.
- [5]. Majeed, M. T., & Malik, M. N. (2014). Determinants of household poverty: empirical evidence from Pakistan”. MPRA Paper No. 57744. University Library of Munich, Germany.
- [6]. Maloma, I. (2016). The socioeconomic determinants of household poverty status in a low-income settlement in South Africa”. *International Journal of Social Sciences and Humanities*, 8(2): 122-131.
- [7]. Ogwumike, F.O. (2001). Profile and Dimension of Poverty in Nigeria. Paper presented at NCEMA workshop on poverty reduction, Development policy centre Ibadan, 3<sup>rd</sup>-21<sup>st</sup> August.
- [8]. Sekhampu, T. J. (2013). Determinants of poverty in a South African township. *Journal of Social Sciences*, 34(2): 145-153.
- [9]. Singh, K.M., Singh, R.K.P., Kumar A., Meena, M.S., Jha, A.K., & Kumar, A. (2012). Dimensions of rural poverty in Bihar: a village level study”. MPRA Paper No. 44815. University Library of Munich, Germany, revised 17 Nov 2012.
- [10]. Singh, K.M., Singh, R.K.P., Kumar A., Meena, M.S., Jha, A.K., & Kumar, A. (2013). Rural Poverty in Jharkhand: An Empirical Exploration of Socioeconomic Determinants. Electronic copy available at: <http://ssrn.com/abstract=2330844>.

Nilakshi Gogoi. ” Determinants of Poverty of the Tea Garden Labour Community of Dibrugarh District of Assam, India.” *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*. vol. 23 no. 11, 2018, pp. 64-69.