

Impact of Education and Occupational Background on Livelihood Diversification of Tribal People in Hill Tripura

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INTRODUCTION

Diverse livelihood is a common approach of the people in the present era. It is varied due to regional diversification, multiple caste system, seasonal change and obviously economic inequality. In addition to this, the availability of resources of the households, the geographical features of the region, opportunities of infrastructure services, seasonal unemployment, scarce resources etc. are the fundamental factors to the diversification of livelihood. Generally, it is an approach to expand the sources of income and strategies that contribute to one's livelihood. The strategy of livelihood includes a set of activities such as farming, plantation, cultivation, livestock rearing, small business ventures, wage labour, handicrafts, or services like transportation or tourism.

The existing researches observed large variety of livelihood in rural area (Ellis, 1998; Ahmed et, al., 1997; Basant, 1994; Gautam and Anderson, 2016; Khatun and Roy, 2016; Ghosh and Ghosal, 2022; Bora and Mohanta, 2024; Kumari et. al 2024). The studies observed that the gradual agricultural growth caused to expand varieties of livelihood of people in rural area. The working age members of the households involved to the agricultural production with their available resources. The topographies of land, seasonal variation also induced variety of crops such as sericulture, horticulture, plantation etc. In addition to this, education of the households' members diversified their livelihood in the rural area.

The present paper investigated the various sources of livelihoods in hill as well as rural area and factors contributing to diversify it in Tripura. Tripura is one of the small states of North East Region (NER) in India and is characterized by mountainous terrain and dense forests, indigenous tribes etc. The livelihoods of tribal people heavily rely on varieties of agriculture, livestock etc. The varieties of livelihood contribute to the development of rural economy in the state. Understanding the importance of livelihood opportunities, the present research aims to evaluate the determinants of diverse livelihood of tribal people in Tripura.

There are 19 categories of tribal population and it is 31.8 per cent of total population in Tripura (Census, 2011). Primarily, they practice shifting cultivation ('Jhum'). The shifting cultivation is a subsistence level of traditional production method and failed to generate surplus. The government established the Immigration and Reclamation Department for the development of 'Jhumia'. The government started rehabilitation programme since 1930-31 and it is upscaled further in 1943. However, the several forest conservation projects banned the large scale 'Jhum' cultivation and changed the lifestyle of 'Jhumia'. This transformation, along with factors like resettlement and

Abstract: *The present research focusses the livelihood diversification and its possible determinants of the tribal people in rural Tripura. Tripura is characterized as diverse features of cultural and socio-economic structure. These distinct features of the state stimulated the multiple sources of income earning of rural people in Tripura. Again, the diverse topography of the state encouraged to multiple choice of earnings strategy. The tribal population predominantly lived in hill Tripura and practices traditional method of production to generate income. However, several factors influenced to generate income of these people in the present era of development. Consequently, the present research investigated the factors of livelihood diversification of rural people in Tripura. We assumed level of education, households' land holding and number of workers per household are the key determinants of livelihood diversification or multiple choice of earnings. We surveyed three adjacent villages in hill Tripura and applied a multiple linear regression technique for this purpose. We obtained significant results.*

Keywords: Livelihood, Land, Education, Work Participation Rate, Rural Tripura

exposure to new environments forced tribal families to seek alternative means of livelihood. Simultaneously, economic opportunities and access to education and urban amenities led to young generations from wealthier backgrounds to pursue non-traditional jobs.

The purpose of the present research is to explore influential factors of diverse livelihood in rural Tripura with reference to tribal people in hill area.

The present research is decomposed into the following segments. The next segment presents the literature related to the present issue followed by methodology, results and discussion. The final segment concludes the research.

REVIEW OF LITERATURE

Khatun and Roy (2012) studied rural livelihood diversification in West Bengal. They found that factors like experience, education level, social status, training they received, the assets they own, access to loans, infrastructure services especially roads and other facilities affected to farming activities. These things encouraged people to different ways to make a better living. The study recommended several strategies to help people to diversify their livelihoods successfully. These include improving rural infrastructure like roads and markets, making it easier for poor people to start businesses by lowering costs, and creating more opportunities for jobs that are not related to farming.

Bhattacharjee et. al. (2016) explored the effect of chronological changes of land use patterns on the livelihoods of indigenous people in Tripura. They conducted their study in the Tripura Tribal Areas Autonomous District Council (TTAADC) region and gathered information from 46 respondents. They found that the younger tribal generation (18-35 years) exhibited the highest level of concurrent diversification in livelihoods, with all respondents engaged in more than one occupation. This suggested that younger generations are better equipped to cope with the challenges arising from changes in land use patterns. The study highlighted on the dynamic relationship between land use changes and livelihood strategies among indigenous communities in Tripura.

Bhattacharjee et. al. (2018) studied the occupational diversification of tribal youth in Tripura. They focused the impact of socio-economic and personal factors amid changing land use patterns and socio-agro-economic conditions. They conducted the study in Dhalai and Gomati districts and surveyed 120 tribal youths through multistage sampling. Using correlation and multivariate path analysis, they found that land holding size, annual expenditure etc. significantly contributed to diverse occupation. The results highlighted the complexity of factors influencing occupational diversification. The substantial residual values suggest the need for future research to include additional contextual variables such as land use patterns, income seasonality, and gender-disaggregated access to resources to gain a more comprehensive understanding of the dynamics.

Marchang (2019) studied the transition of livelihood systems among Scheduled Tribes (STs) in the NER of India, emphasizing shifting from farming to non-farming systems. Employment in agriculture has declined, particularly among cultivators, while employment in non-farming sector has grown due the development of related factors. This transition reflects a convergence towards modern market-oriented employment and economy, marked by a decline in

agricultural income and a rise in non-agricultural income. Despite these changes, shifting cultivation continues to be significant for some states. The shift in livelihood means is associated with increased per capita income and educational levels, highlighting the influence of education and economic mobility in shaping livelihood patterns among ST populations.

Chauhan et. al. (2022) examined the livelihood security and diversification of dairy farmers from West Tripura, Khowai and Sepahijala districts in Tripura with special reference to the role of livestock on rural livelihoods. Results of field survey from 120 respondents indicated that infrastructural security (78.28%) contributed most to overall livelihood security, while social security (28.33%) contributed the least. The majority of respondents (67.50%) had medium levels of livelihood diversification, with 36.7% in the low diversification category, and only 0.83% highly diversified their livelihoods. Income and land holdings were significantly associated with livelihood diversification.

METHODOLOGY

We used primary data to investigate the research issue. We purposively selected three adjacent villages namely Zarial (I) from Kadamtala block and Sonaichari and Laikhua from Panisagar block of North Tripura district in Tripura and surveyed 50 households during April-June, 2024. The all population of the three villages are scheduled tribe and practiced traditional method of production. The keen interest of the selection of the three villages is the traditional practices of production of the people to investigate the objective of the research.

We applied the following multiple regression technique to investigate the objective of the research:

$$LI_i = \beta_0 + \beta_1 edu_i + \beta_2 Land_i + \beta_3 WPR_i + u_i$$

.... (1)

Where, the dependent variable LI_i is the Livelihood Index (LI) of the *i*th household. It is estimated using the Simpson index as given below:

$$LI_i = 1 - \sum_{j=1}^q s_j^2 \quad \dots (2)$$

Where, *q* is the total number of income sources and *s_j* represents income share of the *j*th income source. The value of *LI* lies between 0 and 1. The value of the index is zero when there is a complete specialization implies only one source of income and approaches to 1 as the level of diversification increases. Accordingly, households with most diversified sources of income will have the largest LI, and the less diversified sources of income are associated with the smallest LI. The existing researches classified the different level of LI as below:

Categories of Level	Simpson Livelihood Diversification Index
Low level	0.00 – 0.25
Medium level	0.26 – 0.50
High level	0.51 – 0.75
Very high level	> 0.75

The dependent variables are (i) 'edu' means education of each household. It is estimated using Gini coefficient method, (ii) 'land' is the area of land occupied by the household and (iii) 'WPR' is the work participation rate of the household measured by number of workers divided by total worker of the household.

RESULTS

This section provides the empirical findings of the research. The main focus of this study is to find the factors contributed to the livelihood diversification of the tribal people in rural Tripura. Using the data from household survey the results are presented in the following tables.

Table 1: Distribution of general education levels of the members of the responded households.

Level of education	Sex		Total
	Male	Female	
Illiterate	4	9	13 (4.73)
Below primary	20	30	50 (18.18)
Primary	23	20	43 (15.64)
Junior Secondary	17	8	25 (9.09)
Secondary	33	35	68 (24.73)
Higher Secondary	23	21	44 (16.00)
Graduate	16	12	28 (10.18)
Post Graduate	4	0	4 (1.45)
Total	140	135	275 (100)

Source: Own field survey, April-June 2024.

There are 275 members from the 50 households. The above table 1 shows the educational qualification of the members of the surveyed households across gender. We observed the highest percentage (24.73) of secondary educated persons followed by below primary (18.18), higher secondary (16.00), primary (15.64), graduate (10.18), junior secondary (9.09), illiterate (4.73) and post graduate (1.45) in the study area.

Table 2: Occupation of the members of surveyed households

Categories of Occupation	Sex		Total
	Male	Female	
Housewife	00	50	50 (34.96)
Cultivation	30	00	30 (20.98)
Small Business	15	00	15 (10.49)
Govt. Employee	15	06	21 (14.69)
Private Employee	06	04	10 (6.99)
Labourer	10	07	17 (11.89)
Total	76	67	143 (100)

Source: Own field survey, April-June 2024.

We observed that 52 per cent of total inhabitants are employed in various sectors. The above table 2 shows the occupation of the members of surveyed households across gender. However, 34.96 per cent of total employment females' is housewives. The number of inhabitants involved with cultivation and business are 30 and 15, respectively who are only males. We found that the number of individuals employed in Government sector is 21, of which 15 individuals are male and remaining is female. Again, the number of persons involved with daily labourer is 17,

comprising 10 males and seven females. We found a smaller number of private employees – only six male and four female at the surveyed villages.

Table 3: Occupation across education of the members of the surveyed households.

Level of education	Categories of occupation						Total
	House wife	Cultivator	Small business	Govt. Employee	Private Employee	Labourer	
Illiterate	01	00	00	00	00	01	02
Below Primary	12	06	00	00	00	07	25
Primary	10	07	04	01	00	02	24
Junior Secondary	03	04	01	02	01	02	13
Secondary	16	09	02	03	04	03	37
Higher Secondary	02	02	03	08	02	02	19
Graduate	06	02	05	05	03	00	21
Post Graduate	00	00	00	02	00	00	02
Total	50	30	15	21	10	17	143

Source: Own field survey, April-June 2024.

Table 3 shows the occupation across the educational qualification of the members of the surveyed households. In the surveyed villages there are 50 individuals who are housewife, however among them one is illiterate, 12 number below primary, 10 number primary, three number junior secondary, 16 number secondary level, two number higher secondary, six number graduate and no post graduate. There are 30 individuals who were cultivator and their education levels are – six persons are below primary, seven are primary, four are junior secondary, nine persons are secondary, two are higher secondary, and two persons are graduate, and no illiterate and post graduate persons are involved in cultivator at surveyed households. The above table shows that there are 15 businessmen and among them four persons are primary, only one person is under junior secondary level, two persons are secondary, three and five persons are categorized under higher secondary and graduate, respectively. We found in the surveyed villages 21 individuals are employed in government sector and among them one, two, three, eight, five and two persons are categorized under primary, junior secondary, secondary, higher secondary, graduate and post graduate degree, respectively. Again, 16 individuals involved with daily labour and their educational qualification are – seven persons are under below primary level, two are primary, two are junior secondary, three are under secondary and two persons are under higher secondary level. There are only two persons who are employed in private sector and one is under higher secondary level and another is under graduate degree.

Table 4: The possible sources of income

Sl. No.	Sources of income
1	Plantation
2	Wage labour
3	Govt. employee
4	Private employee
5	Business
6	Agriculture
7	Jhum

Source: Own field survey, April-June 2024

Table 4 shows the various sources of income. We found seven categories of sources of income in the study area, viz., plantation, wage labour, govt. employee, private employee, business, agriculture etc.

Table 5: Number of sources of income of the surveyed households

Maximum no. of sources of income	Number of households
Four Sources of income	3
Three sources of income	13
Two sources of income	34
Total	50

Source: Own field survey, April-June 2024.

Table 5 shows the various sources of income of the surveyed households. We observed three households engaged in multiple sources of income sources. They responded that their family members earned income from four sources in the entire year. Similarly, we found 13 households involved in three sources of income and finally 34 households are involved only two sources of income.

Table 6: Various categories of households by diversification index.

Categories	Diversification index	Number of households*
'Low level'	0.00 – 0.25	34 (68)
'Medium level'	0.26 – 0.50	13 (26)
'High level'	0.51 – 0.75	03 (6)
'Very high level'	0.75	00
Total	–	50 (100)

Source: Own Estimation. * The percentage values are shown in parenthesis.

Table 6 displays the classification of the surveyed households according to the diversification index. We estimated the LI of the households and classified them using the estimated values. We observed 68 per cent of the households are involved in low level of diversification of income earnings activities. However, 26 per cent of the households are engaged in medium level and finally six per cent household shown the high level of diversification of income earnings.

Table 7: Results of Regression

. regress LI edu Land WPR					
Source	SS	df	MS	Number of obs	= 47
Model	.154168349	3	.051388945	F(3, 43)	= 3.12
Residual	.707219444	43	.016446964	Prob > F	= 0.0355
Total	.861387793	46	.018725822	R-squared	= 0.1790
				Adj R-squared	= 0.1217
				Root MSE	= .12825

LI	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
edu	.2737368	.1863458	1.47	0.149	-.1020653 .6495388
Land	.0212377	.0104712	2.03	0.049	-.0001206 .0423549
WPR	.0404184	.0239698	1.69	0.099	-.0079212 .0887538
_cons	.2109022	.0703385	3.00	0.004	.069051 .3527533

We now present the results of the key objective of the research. Table 7 represents estimation of the factor contributing to livelihood diversification. The coefficients of the exogenous variables are significant at five per cent level of significance and we conclude that they jointly

contributed to change the endogenous variable LI (Livelihood Index). Hence, education of the households' availability of land and number of workers of each household contributed to find multiple sources of income. The individual coefficient of the variable 'edu' shows the direct relation to LI, but it is insignificant. Similarly, the coefficient of the variable 'Land' shows the significant relation to LI and finally, WPR shows the significant direct relation to LI. We conclude that one unit increase in area of land LI increases by 0.02 unit. It implies the households use their land for several production purposes. Similarly, one unit rise in number of workers per household LI rises by 0.04 unit. It implies working members of the household search for multiple sources of income.

DISCUSSION

We observed that households in rural Tripura engaged in diverse livelihood activities to sustain their living. The selected three villages are located in hilly region. Rural families typically combine various activities such as government and private services, plantation, retail businesses, cultivation and small-scale farming. Their land facilitated to plantation and cultivation. Many of them also work as wage labour's side by side. The members of the household find job in different sector of the economy across block or district or in the other state. Overall, the mix of livelihood activities plays a crucial role to promote economic well-being of in rural Tripura.

We observed that the factors, level of education, asset holding including land, number of workers, different activities of household caused to the variation of income from household to household. The analysis shown that the land is directly linked to the livelihood diversification. It infers that if area of cultivated land of the household is increased, then the livelihood is diversified. Similarly, the worker participation rate of each household directly linked to livelihood index and finally higher level of education shown direct link to livelihood index. If number of workers increased in the household, then the livelihood is diversified. Though education is slightly insignificant but it also contributed to the diversification of the households. Therefore, all these three determinants positively contributed to rural livelihood diversified the sources of income in rural Tripura.

CONCLUSION

The research observed the significant impact of factors on livelihood variation in rural Tripura. By engaging in a variety of activities beyond traditional farming, individuals and households can enhance their livelihood security and raise their living standards. This diversification not only broadens income sources but also builds resilience against economic uncertainties.

To further promote household livelihood diversification and uplift rural communities, it is crucial for governments to acknowledge and support sectors like farm businesses and cultivation. Policies that facilitate access to resources, training, and market opportunities can empower rural households to effectively engage in these sectors. By doing so, governments can contribute to sustainable rural development, job creation, and overall socio-economic growth, thereby improving the quality of life for rural residents.

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