# Original Research Article

# Dynamics of Livelihood Diversification: A Study on Rural Tribal Youth of Tripura, India


## ABSTRACT

**Aims:** As fall out of transforming land use pattern coupled with the factors like resettlement, exposure to alien environment and effort to adjust with the new socio-agro-economic order, based upon their capability and resource endowment status, the tribal youth of North East Indian state of Tripura are in the look for various alternative occupations for their livelihood.

**Study design:** In this backdrop, a study was conducted in two tribal dominated districts of the state, Dhalai and Gomati, to trace out the mechanism of interplay of various socio-personal factors over livelihood vis-a-vis occupational diversification of the tribal youth.

**Methodology:** Primary data were collected from 120 tribal youths following multistage sampling. Correlation and multivariate path analysis was undertaken for analysis of data.

**Results:** The delineation of decomposition of total effects against each of the perceived explaining variables into their respective direct, indirect and via effects as outcome of multivariate path analysis showed that while land holding size, annual expenditure and economic motivation had the three highest order positive direct as well as indirect effect on the occupational diversity for resource poor category, whereas, asset endowment, land holding size and economic motivation were of highest order for their resource endowed counterpart. Moreover, while annual income, achievement motivation and social inclusiveness revealed first three highest order negative direct as well as indirect effects on the occupational diversity for resource poor category, those were annual income, decision making ability and cosmopoliteness for the resource endowed category. Still further, handful of variables was also found to have substantially interplayed in channelling their indirect effects through one or the other predictor variables.

**Conclusion:** Occupational diversification appeared to be the consequence of a complex interplay of multiple factors. However, appearance of substantial residual values as outcome of path analysis called for inclusion of more supplementary contextual explainers for any such future study.


**Key words:** Livelihood, Occupational diversity, Multivariate analysis, Tribal youth, Tripura

## 1. INTRODUCTION

Livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living; it is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base [1]. Livelihood diversification signifies the process by which rural households constructs an increasingly diverse portfolio of activities and assets in order to survive and improve their living [2]. While discussing the reasons that compel the rural households in low income countries to diversify their livelihood, seasonality, risk, labour markets, asset strategies, and coping strategies were identified as major determinants of diversification activities [3]. From several empirical studies, non-farm diversification have been customarily found to be more remunerative and opening up of the choice vis-a-vis opportunity for diversification of the rural people's livelihood [4; 5; 6; 7]. Contrarily, it was also observed that the reasons for diversification in rural households are diverse and hence a simple typology of diversification to discuss everything can be erroneous and misinforming [8]. In fact, the reasons for livelihood diversification in rural households are influenced by a multitude of factors like level of education, social participation, age, size of land holding, credit orientation, access to natural and financial capital, off-farm income, ability to identify and access alternative income sources and so on [9; 10; 11; 12; 13; 14;15].

The tiny North East Indian state of Tripura is inhabited by 19 different scheduled tribes/sub-tribes and as of 2011 Census, 31.8 per cent of the total population of 36.71 lakh in the state was represented by tribal communities. Earlier, the tribal people remained grossly dependent on shifting cultivation (*Jhum*) and orange orchards [16]. As fall out of such *jhum* based subsistence lifestyle, the tribal agro-economic order has become stagnant. *'Jhumia'* rehabilitation started in the state around 1930-31 and further up-scaled in 1943 with the establishment of Immigration and

Reclamation Department [17]. Setting up of reserved forests, banning *Jhum*, decreased economic returns and persistent effort from the Government towards settled agriculture gradually gave rise to emergence of a changed land-use pattern in the areas inhabited by the tribal dwellers. And such transforming land use pattern coupled with the factors like resettlement, exposure to alien environment and, of course, adjustment in the patterns of occupation as a means of livelihood provisioning or improvement, various tribal communities of Tripura in general and the resource poor tribal families in specific had to pay uptight look for alternative scavenging means of occupation in order to cater to their subsistence needs. Simultaneously, due to their greater economic affluence and access to the fruits of civilization like education, employment, proximity to cities and/or townships, etc., the new progeny of resource rich counterpart were also observed to be showing increasing bent towards different blue and white collar jobs by disassociating themselves from their ancestral occupations. Further, there is a school of thought that rurbanization has been impacting the choices of livelihood of the rural youth because of larger job markets in the cities and their agglomerations. It was in this light that a research endeavour was put forward to trace out the interplay of various antecedent socio-economic and socio-personal factors over livelihood diversification of the tribal youth communities.

## 2. METHODOLOGY

### 2.1 Research Methods

Since the study was purposed at dealing with the rural tribal communities, it was conducted in Dhalai and Gomati districts of the state Tripura as these districts were having the largest tribal population in the state. Therefore, after identification of districts, firstly, one block nearest to district headquarters and one farthest from it was identified from each of the two selected districts. This was done with the assumption that, proximity or farness of the block to a town, having higher infrastructural facilities and civic amenities, may influence the access to resources by the respondents, which may in turn influence the occupational choices made for attaining livelihood by those who stay nearer to towns or those who stay far from it. Accordingly, Ambassa Rural Development Block (nearest) and Durga Chowmuhani Block (farthest) was selected from Dhalai district and for Gomati district, Matabari (nearest) and Killa (farthest) Rural Development Blocks were selected. Then, the areas falling under Tripura Tribal Areas Autonomous District Council (TTAADC) within those blocks were identified and there from random selection of village councils were made.

The present study focused on the areas under TTAADC as the population of these areas are dominated by the tribal people, for larger comprehension, it is to be explained here that in Tripura, TTAADC was set up in 1982 to function in accordance with the Sixth Schedule of the Constitution of India in order to protect the tribal ways of life through self-governance. The Sixth Schedule allowed administration of notified areas as autonomous. The Autonomous District Councils (ADCs) have wide ranging legislative and executive powers and have complete freedom to run village bodies according to customary laws within their territories [18]. Under operational jurisdiction of TTAADC, village councils operate as lower tier units.

For the study, two village councils KIlla and Purbamog Pushkarini were selected from Killa and Matabari Rural Development blocks respectively in Gomati District. From Dhalai district, Srirampur and Kamalacherra village councils from Durgachowmuhani and Ambassa Rural Development Blocks were selected respectively. It was with the assumption that household's well-being and/or resource endowment status impacts over the nature of livelihood vis-à-vis occupational diversification of the youth as a transitional occupational *vis-a vis* livelihood pattern, at the first instance 60 number of tribal youth were identified as respondents from each of both resource endowed and resource poor social category by resorting to well-being analysis and then gender disaggregation of those selected youth was made as part of multi-stage sampling technique. Primary survey was conducted using pre-tested structured schedule and following ex-post facto research design. The total sample was comprised of 120 rural tribal youth in the age group of 18 to 35 years. A detailed account of district, block, village council, sex and well-being status wise distribution of respondents is furnished hereunder through Table 1.

### 2.2 Method of Analysis

In the present study, various socio-economic and socio-personal factors were assumed to have interplayed as causal/explaining variables over livelihood choices and the manifestation of such interaction was perceived to have taken place in the form of occupational diversification as a means of livelihood provisioning or improvement. Therefore, the occupational diversity index for a given respondent was considered to be the dependent/consequent variable (Y) and attempt was made to

comprehend the mechanism of interaction and influence of the following 12 perceived causal/explaining variables on the said dependent/consequent variable through multivariate analyses:

1. Land holding size ($X_1$)
2. Asset endowment ($X_2$)
3. Annual income ($X_3$)
4. Annual expenditure ($X_4$)
5. Education ($X_5$)
6. Dependency ratio ($X_6$)
7. Economic motivation ($X_7$)
8. Decision making ability ($X_8$)
9. Achievement motivation ($X_9$)
10. Cosmopoliteness ($X_{10}$)
11. Social participation ($X_{11}$)
12. Social inclusiveness ($X_{12}$)

As perceived consequent/dependent variable of the study, occupational diversity was operationalized as the measure of diversification of sources of income of the respondents from various on-farm, off-farm, and non-farm occupational choices available before him/her to obtain a secure livelihood. Simpson index of Diversity (SID) is widely used to measure diversification of crop/income/livelihood sources [19; 20; 15]. For the present study, SID was utilized to figure out occupational diversity. The formula for calculating SID is:

$$SID = 1 - \sum Pi^2$$

Where, Pi is the proportion of income coming from the source i.

The value of SID ranges from 0 to 1, where SID=0 indicates only one source of income or Pi=1. As the number of sources increase, their share in Pi declines, so that the value of SID approaches to 1. If there are k sources of income, then SID falls between zero and 1-1/k. The households with largest number of diversified income will have the highest SID and the less diversified incomes are associated with the smallest SID.

Distribution of diversification among the resource endowed respondents showed 32, 57, and 11 percent of them were having low, medium, and high diversification respectively. For the resource poor category, it was 20, 57 and 23 percent in the low, medium, and high category respectively.

In order to measure systematic association between the variables, firstly inter-correlation statistics was utilized separately for both the resource poor as well as resource endowed category of selected tribal youth; and secondly, path co-efficient analysis was done to determine the direct as well as indirect effects of causal/explaining variables (as exogenous variables) on the consequent/dependent variable (as endogenous variables) [21; 22; 23]. The path co-efficient analysis involves a method of partitioning the total correlation between the dependent and independent variable and the independent component variable and its indirect effect via other variables on dependent variable. Path co-efficient can be defined as the ratio of the standard deviation of the effect due to a given cause to the total standard deviation of the effect, *i.e*., if Y is the effect due to a given cause to the total standard deviation of the effect, i.e., if Y is the effect and $X_1$ is the cause, the path co-efficient for the path from cause $r_1$ to effect Y is $\sigma X_1 / \sigma Y$. The statistical analyses were carried out by using the SPAR (Version I) data analysis software. For more clarity in comprehending the interplaying of various causal/explaining variables over occupational diversity in the forms of their direct effects, indirect effects and via effects, the path analysis matrices as output of software based data analysis was appropriately rearranged and presented in a tabular form [24].

## 3. RESULTS AND DISCUSSION

### 3.1. Inter-correlation between causal/explaining variables and diversity index for resource poor category of tribal youth

It transpired from Table 2 that many of the correlation coefficient values were having positive significant relation with each other. While land holding size ($X_1$) was observed to have significant correlation with as many as seven variables like annual income ($X_3$), annual expenditure ($X_4$), education ($X_5$), economic motivation ($X_7$), decision making ability ($X_8$), achievement motivation ($X_9$) and social inclusiveness ($X_{12}$); asset endowment ($X_2$) was found to have significant correlation with five variables like land holding size ($X_1$), education ($X_5$), economic motivation ($X_7$), cosmopoliteness ($X_{10}$) and social participation ($X_{11}$). Side by side, annual income ($X_3$) had significant correlation with six variables like land holding size ($X_1$), annual expenditure ($X_4$), education ($X_5$), economic motivation ($X_7$), achievement motivation ($X_9$) and social inclusiveness ($X_{12}$). Likewise, education ($X_5$), economic motivation ($X_7$), decision making ability ($X_8$), achievement motivation ($X_9$), cosmopoliteness ($X_{10}$), social participation ($X_{11}$) and social inclusiveness ($X_{12}$) etc. were also detected to have significant positive correlation with as many as seven [land holding size ($X_1$), asset endowment ($X_2$), annual income ($X_3$), economic motivation ($X_7$), decision making ability ($X_8$), achievement motivation ($X_9$) and social inclusiveness ($X_{12}$)]; five [land holding size ($X_1$), asset endowment ($X_2$), annual income ($X_3$), education ($X_5$), decision making ability ($X_8$), achievement motivation ($X_9$) and social inclusiveness

($X_{12}$)]; five variables [land holding size ($X_1$), education ($X_5$), economic motivation ($X_7$), achievement motivation ($X_9$) and social inclusiveness ($X_{12}$)]; seven [land holding size ($X_1$), annual income ($X_3$), annual expenditure ($X_4$), education ($X_5$), economic motivation ($X_7$), decision making ability ($X_8$) and social inclusiveness ($X_{12}$)]; two [asset endowment ($X_2$) and social participation ($X_{11}$)]; two [annual income ($X_3$) and cosmopoliteness ($X_{10}$)]; and seven [land holding size ($X_1$), annual income ($X_3$), annual expenditure ($X_4$), education ($X_5$), economic motivation ($X_7$), decision making ability ($X_8$) and achievement motivation ($X_9$)] other selected causal/explaining variables respectively. It requires a further mention here that diversity index (Y) as perceived dependent/consequent variable was also having positive significant correlation with land holding size ($X_1$). Thus, it is understood that apart from the variable dependency ratio ($X_6$), there existed varying forms of inter relationship among the explaining variables as well as between the consequent and explaining variables for the resource poor category of selected tribal youth.

**Table 2. Inter-correlation between perceived explaining and consequent variables for resource poor category (N=60)**

| | Y | $X_1$ | $X_2$ | $X_3$ | $X_4$ | $X_5$ | $X_6$ | $X_7$ | $X_8$ | $X_9$ | $X_{10}$ | $X_{11}$ | $X_{12}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Y | 1.000 | 0.263* | 0.030 | -0.099 | -0.067 | -0.052 | -0.1724 | -0.100 | -0.017 | -0.221 | -0.003 | 0.081 | -0.174 |
| $X_1$ | - | 1.000 | -0.206 | 0.537** | 0.317* | 0.372** | -0.022 | 0.326* | 0.367** | 0.372* | -0.068 | 0.108 | 0.361** |
| $X_2$ | - | - | 1.000 | -0.208 | -0.011 | -0.504** | -0.061 | -0.330* | -0.077 | -0.207 | 0.333** | 0.310* | -0.185 |
| $X_3$ | - | - | - | 1.0000 | 0.693** | 0.290* | 0.001 | 0.516** | 0.234 | 0.514** | -0.013 | 0.093 | 0.366** |
| $X_4$ | - | - | - | - | 1.000 | 0.057 | 0.227 | 0.236 | 0.101 | 0.428** | 0.227 | 0.229 | 0.395** |
| $X_5$ | - | - | - | - | - | 1.000 | -0.043 | 0.388** | 0.316* | 0.301* | -0.234 | -0.062 | 0.359** |
| $X_6$ | - | - | - | - | - | - | 1.000 | -0.138 | -0.102 | -0.035 | 0.030 | -0.087 | -0.065 |
| $X_7$ | - | - | - | - | - | - | - | 1.000 | 0.429** | 0.587** | -0.193 | 0.005 | 0.274* |
| $X_8$ | - | - | - | - | - | - | - | - | 1.000 | 0.398** | 0.099 | 0.148 | 0.298* |
| $X_9$ | - | - | - | - | - | - | - | - | - | 1.000 | -0.092 | 0.168 | 0.482** |
| $X_{10}$ | - | - | - | - | - | - | - | - | - | - | 1.000 | 0.307* | 0.067 |
| $X_{11}$ | - | - | - | - | - | - | - | - | - | - | - | 1.000 | 0.004 |
| $X_{12}$ | - | - | - | - | - | - | - | - | - | - | - | - | 1.000 |

**Significant at 1% level; *Significant at 5% level of probability

### 3.2. Inter-correlation between causal/explaining variables and diversity index for resource endowed category of tribal youth

Keeping parity with the trend of inter-correlations among selected causal and consequent variables as observed from Table 2 meant for the resource poor category of selected tribal youth, in case of their resource endowed counterpart also many of the selected variables were found to have positive significant correlation coefficient values among themselves (Table 3). It became apparent from the table that diversity index (Y), as perceived consequent variable, was having positive significant correlation with three numbers of causal/explaining variables namely, land holding size ($X_1$), annual income ($X_3$) and economic motivation ($X_7$). Among the selected explaining variables, while land holding size ($X_1$) was observed to have significant correlation with four variables like asset endowment ($X_2$), annual expenditure ($X_4$), economic motivation ($X_7$) and social inclusiveness ($X_{12}$); for asset endowment ($X_2$) existence of significant correlation was found to be with even higher number of six variables like annual income ($X_3$), annual expenditure ($X_4$), decision making ability ($X_8$), achievement motivation ($X_9$), cosmopoliteness ($X_{10}$) and social inclusiveness ($X_{12}$). Side by side, annual income ($X_3$) also had significant correlation with two variables like asset endowment ($X_2$) and annual expenditure ($X_4$). Similarly, annual expenditure ($X_4$), achievement motivation ($X_9$) and cosmopoliteness ($X_{10}$) were also found to have significant correlation with few amongst each other. But, compared to their resource poor counterpart, in case of resource endowed category of tribal youth the variables were found to have much lesser extent of inter-correlations among themselves.

**Table 3. Inter-correlation between perceived explaining and consequent variables for resource endowed category (N=60)**

| | Y | $X_1$ | $X_2$ | $X_3$ | $X_4$ | $X_5$ | $X_6$ | $X_7$ | $X_8$ | $X_9$ | $X_{10}$ | $X_{11}$ | $X_{12}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Y | 1.000 | 0.456** | 0.246 | -0.346** | -0.018 | -0.212 | -0.136 | 0.283* | -0.182 | -0.060 | 0.126 | 0.148 | 0.205 |
| $X_1$ | - | 1.000 | 0.282* | 0.043 | 0.273* | 0.231 | 0.135 | 0.305* | -0.132 | 0.053 | 0.142 | 0.117 | 0.318* |
| $X_2$ | - | - | 1.000 | 0.376** | 0.587** | -0.101 | 0.092 | 0.214 | 0.284* | 0.319* | 0.360** | 0.130 | 0.388** |
| $X_3$ | - | - | - | 1.000 | 0.597** | 0.192 | 0.025 | 0.131 | 0.075 | 0.107 | -0.005 | 0.033 | 0.116 |
| $X_4$ | - | - | - | - | 1.000 | 0.348** | 0.046 | 0.191 | 0.247 | 0.185 | 0.190 | 0.017 | 0.489** |
| $X_5$ | - | - | - | - | - | 1.000 | 0.056 | 0.126 | 0.118 | 0.164 | 0.006 | -0.112 | 0.146 |
| $X_6$ | - | - | - | - | - | - | 1.000 | 0.034 | -0.090 | 0.044 | -0.003 | -0.034 | 0.043 |
| $X_7$ | - | - | - | - | - | - | - | 1.000 | 0.130 | -0.119 | 0.214 | -0.133 | 0.138 |
| $X_8$ | - | - | - | - | - | - | - | - | 1.000 | 0.057 | 0.184 | 0.181 | 0.124 |
| $X_9$ | - | - | - | - | - | - | - | - | - | 1.000 | 0.353** | 0.029 | 0.057 |
| $X_{10}$ | - | - | - | - | - | - | - | - | - | - | 1.000 | 0.180 | 0.382** |
| $X_{11}$ | - | - | - | - | - | - | - | - | - | - | - | 1.000 | 0.093 |
| $X_{12}$ | - | - | - | - | - | - | - | - | - | - | - | - | 1.000 |

**Significant at 1% level; *Significant at 5% level of probability

Thus, the inter-correlation webs as presented through correlation matrices of Tables 2 and 3, made it apparent that in spite of variations between the two categories of respondents, with regard to mode of inter-correlations across the categories of tribal youth separately as well as in combination, there had been existence of wide range of multiplicity of significant relationships among the selected causal/explaining variables. In order to get clearer picture of the mechanism of direct and indirect effects of those perceived predictor variables on the dependent/consequent variable in consideration, hence, the researcher resorted to path analysis.

### 3.3 Path analysis of causal/explaining variables and diversity index for resource poor category of tribal youth

Table 4 reflects the total effects, direct effects and total indirect effects of twelve perceived causal/explaining variables of occupational diversity as perceived consequent variable for resource poor category of selected tribal youth. Alongside, in order of importance, it also indicates of the coefficients of those variables through which substantial indirect effects were channeled to influence the said consequent variable. The delineation of decomposition of the total effects against each of the twelve causal/explaining variables into their respective direct, indirect and via effects revealed that land holding size ($X_1$) had the highest positive direct as well as indirect effect on the diversity index and in case of smaller such positive direct as well as indirect effect, the standing of other causal/explaining variables in descending order were annual expenditure ($X_4$), economic motivation ($X_7$) and social participation ($X_{11}$). Interestingly, on the contrary, annual income ($X_3$) came out to have highest negative direct as well as indirect effect on the diversity index which was followed in descending order by achievement motivation ($X_9$), social inclusiveness ($X_{12}$), dependency ratio ($X_6$), education ($X_5$), cosmopoliteness ($X_{10}$), and decision making ability ($X_8$). Further, for all the explaining variables, barring one, the direct effects channelled by them were found to be smaller in values than the corresponding values of indirect effects. This implied existence of their mutual dependencies among themselves. Thus, occupational diversification emerged to be the consequence of a complex network based performance of several antecedent factors.

It also became evident from Table 4 that a handful of variables had substantially interplayed in channelling their indirect effects through one or the other important predictor variables. While the variable achievement motivation ($X_9$) channelled highest indirect effect of as many as eight other variables to establish its immense networking with them, the variables like annual income ($X_3$), annual expenditure ($X_4$) and education ($X_5$) were also detected to have networking with six other variables apiece. Side by side, each of both the variables like land holding size ($X_1$) and economic motivation ($X_7$) were observed to be having networking with five others. Still further, networking with three others were found remaining for each of the variables like asset endowment ($X_2$), decision making ability ($X_8$)

and social inclusiveness ($X_{12}$). Thus, the contention that the whole process of occupational diversification of the resource poor tribal youth in the areas under investigation is the consequence of an explicit network based influence of socio-economic and socio-personal variables became established. However, still there remained an important pointer to add that the residual value of path analysis being 0.693 to indicate that the constellation of perceived predictor variables could not explain as high as 69.3 per cent of variations in the consequent values. And such revelation went suggestive to include more number of contextual relational variables in terms of careful socio-agro-economic characterization of the given local setting, even if the focus of study would be on tribal youth *per se*.

**Table 4. Path coefficients showing effects of explaining variables on diversity index for resource poor category tribal youth (N=60)**

| Independent variables | Total effect | Direct effect | TIE* | Variables through which substantial indirect effects are channeled |
|---|---|---|---|---|
| Land holding size ($X_1$) | 1.9051 | 0.5499 | 1.3552 | 0.2950($X_3$), 0.2048($X_9$) 0.2044($X_5$), 0.2020($X_8$) |
| Asset endowment ($X_2$) | 0.0098 | -0.0675 | 0.0773 | 0.0340($X_5$),0.0222($X_7$) 0.0141($X_3$), 0.0140($X_9$) |
| Annual income ($X_3$) | -1.5230 | -0.3785 | -1.1445 | -0.2622 ($X_4$), -0.2031($X_1$) -0.1954($X_7$), -0.1947($X_9$) |
| Annual expenditure ($X_4$) | 1.0591 | 0.2715 | 0.7876 | 0.1881($X_3$), 0.1163($X_9$) 0.1074($X_{12}$), 0.0862($X_1$) |
| Education ($X_5$) | -0.1362 | -0.0609 | -0.0753 | 0.0307($X_2$), -0.0236($X_7$) -0.0226($X_1$), -0.0219($X_{12}$) |
| Dependency ratio ($X_6$) | -0.1711 | -0.2427 | 0.0716 | -0.0552($X_4$), 0.0336($X_7$) 0.0210($X_{11}$), 0.0248($X_8$) |
| Economic motivation ($X_7$) | 0.1262 | 0.0407 | 0.0855 | 0.0239($X_9$), 0.0210($X_3$) 0.0175($X_8$), 0.0158($X_5$) |
| Decision making ability ($X_8$) | -0.0483 | -0.0150 | -0.0333 | -0.0065($X_7$), -0.0060($X_9$) -0.0055($X_1$), -0.0048($X_5$) |
| Achievement motivation ($X_9$) | -1.0757 | -0.2747 | -0.8010 | -0.1612($X_7$), -0.1413($X_3$) -0.1323($X_{12}$), -0.1177($X_4$) |
| Cosmopoliteness ($X_{10}$) | -0.0496 | -0.0339 | -0.0157 | -0.113($X_2$), -0.104($X_{11}$) 0.0080($X_5$), -0.0077($X_4$) |
| Social participation ($X_{11}$) | 0.1121 | 0.0504 | 0.0617 | 0.0156($X_2$), 0.0155($X_{10}$) 0.0116($X_5$), 0.0084($X_9$) |
| Social inclusiveness ($X_{12}$) | -0.7388 | -0.2201 | -0.5187 | -0.1060($X_9$), -0.0870($X_4$) -0.0805($X_3$), -0.0795($X_1$) |

* TIE = Total Indirect Effect Residual = 0.693

### 3.4 Path analysis of causal/explaining variables and diversity index for resource endowed category of tribal youth

The description of decomposition of the total effects against each of the twelve causal/explaining variables into their respective direct, indirect and via effects, as transpired from Table 5, gave the impression that as against six such variables which were having positive direct and indirect effects on the occupational diversity, the six remaining variables were having negative direct as well as indirect effect on that perceived consequent variable i.e. occupational diversification. In that respect, asset endowment ($X_2$) had the highest positive direct as well as indirect effect on the diversity index followed by land holding size($X_1$); economic motivation ($X_7$); social participation ($X_{11}$); annual expenditure ($X_4$); and social inclusiveness ($X_{12}$). On the contrary, annual income ($X_3$) emerged to have highest negative direct as well as indirect effect on the occupational diversity and that was followed in descending order by decision making ability ($X_8$); cosmopoliteness ($X_{10}$); education ($X_5$); dependency ratio ($X_6$); and achievement motivation ($X_9$). Another important revealing feature of the path coefficient values was that excepting for the variables like dependency ratio ($X_6$) and social participation ($X_{11}$), the direct effects channelled by all other explaining variables were smaller in values than the corresponding values of indirect effects to imply their mutual dependencies among themselves and, thus, to establish that for the resource endowed category of tribal youth also occupational diversification had been the consequence of a complex interplaying of the causal/explaining variables.

Table 5 was further suggestive that the variables like asset endowment ($X_2$), annual expenditure ($X_4$), cosmopoliteness ($X_{10}$), dependency ratio ($X_6$), social inclusiveness ($X_{12}$) etc. had substantially interplayed in channelling their indirect effects through the important predictor variables. While asset endowment ($X_2$) channelled highest indirect effect of as many as eight other variables to establish its immense networking with others, the variables like annual expenditure ($X_4$) by way of proven networking with seven others; cosmopoliteness ($X_{10}$) with five; education ($X_5$) and social inclusiveness ($X_{12}$) four each; and land holding size ($X_1$), annual income ($X_3$) and economic motivation ($X_7$) – all with three variables apiece - came out to be the other valuable ones in the whole process of occupational diversification. But, the residual value being 0.3916, it might be inferred that the constellation of antecedent variables could not explain 39.16 per cent of variations in the values of consequent variable i.e. occupational diversification.

**Table 5. Path coefficients showing effects of perceived explaining variables on diversity index for resource endowed category of tribal youth (N=60)**

| Explaining variables | Total effect | Direct effect | TIE* | Variable through which substantial indirect effects are channeled |
|---|---|---|---|---|
| Land holding size ($X_1$) | 0.7753 | 0.2801 | 0.4952 | 0.0890($X_{12}$), 0.0854($X_7$) 0.0791($X_2$), 0.0765($X_4$) |
| Asset endowment ($X_2$) | 1.3598 | 0.3459 | 1.0139 | 0.2030($X_4$), 0.1344($X_{12}$) 0.1300($X_3$), 0.1247($X_{10}$) |
| Annual income ($X_3$) | -1.4445 | -0.5368 | -0.9077 | -0.3204($X_4$), -0.2017($X_2$) -0.1032($X_5$), -0.0705($X_7$) |
| Annual expenditure($X_4$) | 0.4184 | 0.1003 | 0.3181 | 0.0599($X_3$), 0.0589($X_2$) 0.0491($X_{12}$), 0.0349($X_5$) |
| Education ($X_5$) | -0.3135 | -0.1442 | -0.1693 | -0.0501($X_4$), -0.0333($X_1$) -0.0277($X_3$), -0.0237($X_9$) |
| Dependency ratio ($X_6$) | -0.2953 | -0.2188 | -0.0765 | -0.0296($X_1$), -0.0202($X_2$) 0.0196($X_8$), -0.0123($X_5$) |

| Explaining variables | Total effect | Direct effect | TIE* | Variable through which substantial indirect effects are channeled |
|---|---|---|---|---|
| Economic motivation ($X_7$) | 0.6027 | 0.2701 | 0.3326 | 0.0824($X_1$), 0.0578($X_2$) 0.0576($X_{10}$), 0.0516($X_4$) |
| Decision making ability ($X_8$) | -0.6098 | -0.2799 | -0.3299 | -0.0794($X_2$), -0.0690($X_4$) -0.0516($X_{10}$), -0.0508($X_{11}$) |
| Achievement motivation ($X_9$) | -0.0814 | -0.0362 | -0.0452 | -0.0128($X_{10}$), -0.0115($X_2$) -0.0067($X_4$), -0.0059($X_5$) |
| Cosmopoliteness ($X_{10}$) | -0.3059 | -0.1019 | -0.2040 | -0.0389($X_{12}$), -0.0367($X_2$) -0.0360($X_{10}$), -0.0218($X_7$) |
| Social participation ($X_{11}$) | 0.2483 | 0.1653 | 0.0830 | 0.0300($X_8$), 0.0298($X_{10}$) -0.0220($X_7$), 0.0214($X_2$) |
| Social Inclusiveness ($X_{12}$) | 0.1567 | 0.0475 | 0.1092 | 0.0233($X_4$), 0.0185($X_2$) 0.0182($X_{10}$), 0.0151($X_1$) |

* TIE = Total Indirect Effect Residual = 0.3916

As observed from Table 4 and 5 above, size of land holding ($X_1$) had significant effect on livelihood diversification for both resource poor and resource rich respondents, though the effect was higher for the former because of their livelihood more dependent on land. Tribal livelihood has always been more or less dependent on land, but with redistribution of forest land with Forest Rights Act, increased restriction on jhum cultivation, and non-remunerativeness of solely agriculture-based livelihood, there is a need to rethink the use of land among the tribal communities, especially the youth. Because of its limited availability and restricted use, farm-based agricpreneurship opportunities promoting sustainable livelihood and eco-friendly agricultural practices needs to be promoted for better income along with sustainable livelihood portfolio of the tribal youth. Consequently, it also highlights the future research needs for identification of further explaining variables for proper policy formulation and programme planning to increase income sustainability among rural tribal youth.

## 4. CONCLUSION

No society remains completely static. As the wheel of time moves on, many varying combinations of occupation for livelihood emerges in accordance with temporal variations in scope of movement of factors of production from one type of productive environment to the other. And in accordance with the basic tenets of such dynamism of human society, these combinations of occupations are subjected to take newer forms under the influence of determinants like economic environment, socio-cultural factors, political system, land use pattern, etc. Now, in the face of a presumably transforming intergenerational occupational pattern across the tribal youth of Tripura in the face of newer socio-agro-economic order and contextual to no denying learning experience of the study that definitely there had been complex interplaying of various socio-economic and socio-personal determinants which singularly or in combination with a handful of other mutually interdependent variables were regulating and/or influencing the occupational diversification of the rural tribal youth, it has become imperative for the contemporary social scientists to study the intricacies of such transformational process within this social milieu. From that perspective, appearance of substantial residual values as outcome of path analysis exercises especially for the resource poor category of tribal youth was indicative of the insufficiency in comprehensive inclusion of causal/explaining variables. And being come across with such reflection, inclusion of supplementary contextual explainers like land ownership vis-a-vis land use pattern, income seasonality, farm income efficiency, efficiency of local/peripheral labour market, gender disaggregated access and entitlement to resources etc. for throwing even better light on the issue is being called for while pursuing any such future research endeavour.

## CONSENT

Purpose of the study was explained and verbal consent was taken from the respondents before collecting the data.

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