

## **CHAPTER-VII**

# **LEVEL OF DEVELOPMENT OF THE TRIBAL POPULATION**

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### LEVEL OF DEVELOPMENT OF THE TRIBAL POPULATION

In the preceding chapters, the social, economic and health condition of the tribal people of Dakshin Dinajpur are discussed elaborately giving equal importance to these three aspects which contribute separately to determine the level of development of a community. In those chapters, their social, economic and health condition are analysed from different aspects. But, to assess their level of overall development, it is required to combine the social, economic and health indicators systematically so that a vivid picture of the present condition of the tribal people can be visualized.

The construction of the composite index may accomplish this purpose. To assess the level of development, the composite index is a widely used method. There are different types of composite indices which help to measure the level of development or deprivation, may be in different aspect of life. The Human Development Index is one of such indices, developed by UNDP to measure the level of human development considering three main areas i.e. health, knowledge and living standard.<sup>1</sup> USSR developed the Human Poverty Index which is regarded as a complementary of HDI.<sup>2</sup> The NITI Aayog in India developed the Health Index.<sup>3</sup> Besides, different scholars, academicians or educationists have used such indices considering the purpose of their work. In the construction of such indices, the variables are selected depending on the purpose of index.

The same technique with some modifications is adopted here to assess the level of development of tribal people of Dakshin Dinajpur. Based on the objectives of present study, a composite index is constructed, which is named as Development Index.

#### 7.1 Construction of Development Index

The Development Index (DI) is constructed considering three major aspects i.e. social, economic and health condition of the tribal people. This index is actually the combination of three separate indices i.e. Social Index (SI), Economic Index (EI) and Health Index (HI) which are again developed through the combination of several sub-indices or pre-selected variables. The construction of Development Index involves some steps.

At the first step, necessary variables related to social, economic and health conditions (Table 7.1) of tribal people of this district are selected. The categories of these variables are

then scored in such a manner that higher score refers to the better condition. Then the scores are aggregated and finally converted into index by using the following equation of Dimension Index:

$$\text{Dimension Index} = \frac{\text{Actual Score} - \text{Minimum Score}}{\text{Maximum Score} - \text{Minimum Score}}$$

In this way, the sub-indices are developed and then combining the sub-indices by giving equal weightage, the main index is developed. The Social Index concentrates on three major domains i.e. educational attainment, housing condition and basic amenities. Thirteen variables are selected related to these three domains and they are given equal weightage to construct Social Index. Likewise, the Health Index is developed by focusing on occurrences of illness, preferences for medical practitioner and maternal health & child care which are also given same weightage. Ten variables related to these three areas are selected. The Economic Index is constructed by considering six variables. The table 7.1 represents the list of variables and their assigned scores.

**Table 7.1 List of Selected Variables and Assigned Scores**

<b>Selected Variables</b>	<b>Assigned Scores</b>
<b>Social Indicators</b>	
<b>Educational Attainment*</b>	Illiterate-0, I-IV-1, V-VIII-2, IX-X-3, XI-XII-4, Graduation-5, Post Graduation-6, Professional Courses-7
<b>Housing Condition</b>	
Number of Rooms	1-0, 2-1, 3-2, 4 & More-3
Material used for Roof	Straw/Tile/Asbestose-0, Tin-1, Concrete-2
Material used for Wall	Thatch/Mud-0, Tin-1, Brick-2
Material used for Floor	Mud-0, Brick-1, Concrete-2
Status of Kitchen	No Separate Kitchen-0, Separate Kitchen-1
Latrine Facility	No-0, Yes-1
Practice Open Defecation	Yes-0, No-1
<b>Basic Amenities</b>	
Electricity Connection	No-0, Yes-1
Access to Safe Source of Fuel	No-0, Yes-1
Water within Premises	Beyond 100 m of Premises-0, Within 100 m of Premises-1, Within Premises-2
Purification of Drinking Water	No-0, Yes-1
Type of Drainage Facility	No Drain-0, Uncovered Drain-1, Covered Drain-2

<b>Economic Indicators</b>	
Ration Card	BPL/Antyodaya-0, APL-1
Number of Earning Members	1-0, 2-1, 3-2, 4-3, 5 & More-4
Size of Agricultural Land	No Agricultural Land-0, 0.01-2.50 acre-1, 2.51-5.00 acre-2, More than 5 acre-3
Monthly Per Capita Income	Rs.1000 & Less-0, Rs.1001-2000-1, Rs.2001-3000-2, Rs.3001-4000-3, Rs.4001-5000-4, More Than Rs.5000-5
Have Savings	No-0, Yes-1
Have Loan	Yes-0, No-1
<b>Health Indicators</b>	
<b>Types of Illness**</b>	**Category V-0, Category IV-1, Category III-2, Category II-3, Category I-4, Healthy-5
<b>Preferences for Medical Practitioners</b>	Traditional Healers-0, Quack-1, Doctor-2
<b>Maternal Health and Child Care</b>	
Antenatal Care	Never-0, 1 Time-1, 2 Time-2, 3 & More Time-3
Postnatal Care	Never-0, 1 Time-1, 2 Time-2, 3 & More Time-3
Iron and Folic Supplements	No-0, Yes-1
Access to Nutritious Diet	Never-0, Sometimes-1, Always-2
Place of Child Delivery	Home-0, Some at Home and Some at Hospital-1, Hospital-2
Incidents of Child Death	Yes-0, No-1
Adoption of Family Plan	No-0, Yes-1
Vaccination	None-0, Few Child-1, All Child-2

*Computed by researcher*

\*Educational attainment and types of illness are studied considering all the family members of a sample household

\*\*Refer to the table 6.2 for different categories of illness

Finally, the Development Index is prepared by providing equal weightage to Social, Economic and Health Indices as these three aspects are equally important in determining the socio-economic condition of the tribal people of Dakshin Dinajpur.

$$\text{Development Index} = \frac{1}{3}(\text{Social Index}) + \frac{1}{3}(\text{Economic Index}) + \frac{1}{3}(\text{Health Index})$$

## **7.2 Result of Different Indices**

### **7.2.1 Social Index**

The Social Index represents the social condition of the tribal people of this district. This index focuses on three major domains i.e. educational attainment, housing condition and

accessibility to basic amenities which are significant to determine the social condition of the tribal people. On the basis of the values of Social Index, the tribal people of this district are categorised into three groups. The values ranging between 0-0.400 refer to the group of low level of social development where as 0.401-0.600 refers to moderate level of social development and finally, the values between 0.601-1 indicate high level of social development.

It is evident from the table 7.2 that 83.32% out of the total sample households are at the lowest level of social development and only 3.03% respondents have achieved the higher status. Thus, the result of social index has made it clear that the majority of the tribal people of this district is still socially backward which is really very disappointing.

**Table 7.2 Result of Social Index**

Tribal Groups	Percentage Distribution			Mean	Standard Deviation
	0-.400	.401-.600	0.601-1		
Santal	85.24	10.71	4.05	0.286	0.139
Oraon	84.11	12.58	3.31	0.303	0.125
Munda	75.56	21.11	3.33	0.331	0.130
Bedia	72.55	25.49	1.96	0.349	0.112
Mahali	73.17	26.83	0.00	0.326	0.111
Mal Pahariya	95.83	4.17	0.00	0.254	0.092
Lohara	94.23	5.77	0.00	0.253	0.083
<b>Total</b>	<b>83.32</b>	<b>13.65</b>	<b>3.03</b>	<b>0.299</b>	<b>0.129</b>

*Computed by researcher*

However, the situation of the seven tribal groups is not the same. The mean of Social Index values shows that out of the seven tribal communities, the Bedia are most developed considering the social variables while the Loharas are most backward followed by Mal Pahariyas. To find out whether the difference among the seven tribal communities is statistically significant, the ANOVA is applied. The result of ANOVA (Table 7.3) confirms that there is significant difference among the selected tribal groups in their social condition.

**Table 7.3 Result of ANOVA: Social Index**

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Significance
Between Groups	.675	6	.112	7.022	.000
Within Groups	16.781	1048	.016		
<b>Total</b>	<b>17.456</b>	<b>1054</b>			

*Computed by researcher*

## 7.2.2 Economic Index

The economic condition of the tribal people of this district is assessed through the construction of Economic Index. Again, the values of Economic Index are divided into three categories. The values ranging between 0-0.400 refer to the group of lower economic development where as 0.401-0.600 refers to the group of moderate economic development and finally, the values between 0.601-1 is the group of high economic development.

The table 7.4 shows that 82.18% families belong to the lower category of economic development and only 2.18% families has reached to the level of high economic development. It has already been discussed that the work participation rate is highest among the tribal people compared to the work participation rate of the Scheduled Caste population and the General population of the district (Table 5.2). Yet, it is observed that large number of the sample households belong to the category of lower economic development which indicates the poor economic condition of the tribal people of this district.

While the seven tribal communities are compared considering the mean values of Economic Index, it is observed that the Loharas are at the lowest level of economic development where as the Oraons and the Bedia are economically most sound though the Oraons are slightly better than Bedia in terms of economic development.

**Table 7.4 Result of Economic Index**

Tribal Groups	Percentage Distribution			Mean	Standard Deviation
	0-0.400	0.401-0.600	0.601-1		
Santal	82.38	15.00	2.62	0.307	0.143
Oraon	79.14	17.22	3.64	0.324	0.144
Munda	84.44	14.44	1.11	0.286	0.152
Bedia	81.37	18.63	0.00	0.321	0.136
Mahali	80.49	19.51	0.00	0.275	0.143
Mal Pahariya	83.33	16.67	0.00	0.275	0.147
Lohara	96.15	3.85	0.00	0.245	0.105
<b>Total</b>	<b>82.18</b>	<b>15.64</b>	<b>2.18</b>	<b>0.306</b>	<b>0.143</b>

*Computed by researcher*

To find out whether there is significant difference among the seven selected tribal communities regarding economic development, the ANOVA is applied. The result of ANOVA (Table 7.5) shows that considering the economic condition, there is significant difference among the selected tribal groups. Hence, it can be stated that considering the economic condition, the study rejects the null hypothesis and accept the alternative hypothesis.

**Table 7.5 Result of ANOVA: Economic Index**

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Significance
Between Groups	.434	6	.072	3.596	.002
Within Groups	21.077	1048	.020		
Total	21.511	1054			

*Computed by researcher*

### 7.2.3 Health Index

With the help of Health Index, the health status of the tribal people of Dakshin Dinajpur is assessed here. It is observed that in comparison with the social and economic condition, the Health Index (Table 7.6) shows a better health status of the tribal people of this district as 51.28% families belong to the middle category having moderate health status while 18.29% families are in upper category who are in good health condition. However, there are still 30.43% families who belong to the lower category. They are suffering from different chronic diseases, preferring traditional treatment and not much concerned about the importance of reproductive health care.

**Table 7.6 Result of Health Index**

Tribal Groups	Percentage Distribution			Mean	Standard Deviation
	0-0.400	0.401-0.600	0.601-1		
Santal	34.05	49.29	16.67	0.456	0.156
Oraon	27.81	52.98	19.21	0.488	0.148
Munda	26.67	52.22	21.11	0.491	0.163
Bedia	25.49	54.90	19.61	0.486	0.140
Mahali	17.07	56.10	26.83	0.504	0.141
Mal Pahariya	39.58	52.08	8.33	0.433	0.136
Lohara	34.62	44.23	21.15	0.474	0.162
<b>Total</b>	<b>30.43</b>	<b>51.28</b>	<b>18.29</b>	<b>0.477</b>	<b>0.152</b>

*Computed by researcher*

The inter-tribe comparison shows that the Mal Pahariyas are in the most backward condition considering the mean values of Health Index while the health status of Mahalis is most improved among the seven tribal groups. However, to know whether there is significant difference among the seven tribal communities regarding the health status, the ANOVA is applied. The result of ANOVA (Table 7.7) shows that there is no significant difference among the seven tribal communities regarding the Health Index as it has failed to

reject the null hypothesis. Hence, it cannot be said that their poor health status has any relation with the community of tribe they belong to.

**Table 7.7 Result of ANOVA: Health Index**

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Significance
Between Groups	.240	6	.040	1.733	.110
Within Groups	24.147	1048	.023		
<b>Total</b>	<b>24.387</b>	<b>1054</b>			

*Computed by researcher*

#### **7.2.4 Assessment of Overall Socio-Economic Development with the Help of Development Index**

Finally, to evaluate the overall socio-economic development of the tribal people of Dakshin Dinajpur, the above three indices are combined by giving equal weightage to each of the three to form a composite index which is named as Development Index (Appendix-3). The Development Index rightly helps to assess the level of overall development of the tribal people. The index values are classified into three categories. The DI values ranging between 0-0.400 refer to the lower level of development. The middle group ranging between 0.401-0.600 refers to the moderate level of development. The DI value of 0.601-1 refers to the people who are at the high level of development.

The Development Index (Table 7.8) shows that 70.24% sample families are still at the lower level of socio-economic development. About 27.30% families are at present moderately developed and only 2.46% sample households have reached at the high level of development.

**Table 7.8 Result of Development Index**

Tribal Groups	Percentage Distribution			Mean	Standard Deviation
	0-0.400	0.401-0.600	0.601-1		
Santal	75.48	20.95	3.57	0.353	0.102
Oraon	67.55	29.80	2.65	0.372	0.096
Munda	64.44	33.33	2.22	0.370	0.104
Bedia	54.90	44.12	0.98	0.386	0.085
Mahali	58.54	41.46	0.00	0.368	0.089
Mal Pahariya	79.17	20.83	0.00	0.321	0.087
Lohara	84.62	15.38	0.00	0.324	0.067
<b>Total</b>	<b>70.24</b>	<b>27.30</b>	<b>2.46</b>	<b>0.361</b>	<b>0.098</b>

*Computed by researcher*



The study also attempts to find out the inter-tribal disparity in their overall socio-economic development. Considering the mean values, it can be stated that the Bedias are the most developed among the seven tribal communities while the Mal Pahariyas are at the lowest level in terms of socio-economic development. The table shows that not a single household among Mahalis, Mal Pahariyas and Loharas belongs to the higher category. In case of Santals, it is observed that they are in fifth position considering the mean DI value though the proportion of people belonging to high level of development is the highest among them. It indicates that the intra-tribal disparity is more among the Santals. The Santals are the largest tribal community of this district yet it is observed that a large segment of its population is still backward compared to the Bedia, Oraon, Munda and Mahali.

While discussing about the individual index separately, the result of ANOVA shows significant difference among the seven selected tribal communities in case of Social Index and Economic Index while the Health Index is independent of the types of the tribal communities. But, in case of Development Index which is the combination of these three indices, the result of ANOVA (Table 7.9) shows that there is significant difference among the seven selected tribal communities regarding their level of overall development.

**Table 7.9 Result of ANOVA: Development Index**

<b>Source of Variation</b>	<b>Sum of Squares</b>	<b>Degree of Freedom</b>	<b>Mean Square</b>	<b>F</b>	<b>Significance</b>
Between Groups	.281	6	.047	5.010	.000
Within Groups	9.780	1048	.009		
Total	10.061	1054			

*Computed by researcher*

In this chapter, the level of development of the tribal people of this district is measured with the help of Development Index. The DI value shows that about 70.24% tribal people of this district are still at the lower level of development considering the selected social, economic and health parameters. The study, thus, makes it clear that even after several decades of independence, the majority of the backward segment of India's population still remain at the lower level of development.

While the three indices i.e. Social, Economic and Health Index are considered separately, it is observed that only in case of health status, the tribal people has experienced a considerable advancement. They have moved a long way, from their traditional healing system to modern health care system like institutional delivery instead of delivery at home,

adoption of family planning methods etc. It is true that they are still far away from the target of desired level of achievements, yet the present achievement is also praiseworthy. But, the Social and Economic indices make it evident that in these two aspects the tribal people are much below than the standard of the high level of development. Thus, their overall level of development clearly expresses that majority of the tribal people of this district still live a backward life.

## **References**

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