

# Study on Regional Disparities in the level of Socio-economic Development of Kochbihar District, West Bengal

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## ARTICLE DETAILS

### Article History

Published Online: 10 October 2018

### Keywords

Regional disparity, Socio-economic development, Kendall's Ranking co-efficient method, Developmental indicators

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## ABSTRACT

Regional disparity has remained a subject of interest for many regional economist and geographers. Regional disparity and economic development of a country are inter-linked and can be classified into geographical, social and economic inequality (Yu & Wei.2003).In the present paper attempt has been made to find out the spatial variation in the level of socio-economic development of Kochbihar district of North eastern West Bengal. We use thirty components to determine the spatial variation socio-economic development. This thirty component broadly categorized into three groups or indicators namely Social indicators, Economic indicators, Demographic indicators. The analysis of regional disparity shows that disparity are present in different sector like social development, Economic development, Human resource development. In case of over-all development there is also existence of disparity. Effective economic and social policies should be adapted which helps to eliminate the issue of regional disparity and develop the lagging areas.

## 1. Introduction

Regional disparity is one such problem which remained a burning issue for all those countries who are struggling for the economic growth of their country. Regional disparity has remained a core issue for many developed nations and regions like America and Europe.(Boldrin & Canova 2001).But its root deeper in the third world and developing countries(Hall 1984).China and India as the most populated nation of the world are also facing the repercussions of regional disparity(Bhattacharya & Sakthivel,2004).In general regional disparities or imbalances we meant wide differences in per capita income, literacy rates, availability of health and education services, levels of industrialization, infrastructural facilities etc between different regions. or in short it refers to difference in economic development and uneven economic achievement in different geographical regions. Different causes are responsible for regional imbalances in a region. It may listed as historical factor, geographical location, inadequacy of economic overheads, failure of planning mechanism, marginalization of the impact of new agricultural impact to certain regions, lack of growth of ancillary industries in backward region, political instability.

Developmental planning and activities can play a important roll to alleviate regional disparity .Development defined as a process of betterment for a large human group. It includes economic development as well as social transformation. The notion of development in the context of regional development refers to a value positive concept which aims at enhancing the levels of the living of the people and general conditions of human welfare in a region. At the micro level(villages and development blocks ),the aim of regional development is generally conceived to minimize disparities in the level of development as observed in differential access to resources and differences in the economic structure and social transformation. These differences are generally found in the

industrial structure, access to infrastructural facilities and to amenities. The purpose of the researcher is to measure differences in the general level of socio-economic development to find out differences between small and to suggest alternative distribution of facilities and amenities so that observed differences in access to resources are minimized. Furthermore, the researcher has to find out differences in the pace setting process as development of technology and modernization so that these process are strengthened in areas lagging behind. This will facilitate the full use of potentialities offered by a region.

The present study is an attempt to find out the socio-economic condition at block level of Kochbihar District. By using different indicators like social indicators, Economic indicators, Demographic indicators the level of regional disparity is analyzed.

## 2. Study Area

Kochbihar district is situated in the north eastern portion of the state of West Bengal, latitudinal extension is  $26^{\circ}32'46''$  N to  $25^{\circ}57'6''$  N and longitudinal extension is  $89^{\circ}52'$  E to  $88^{\circ}45'02''$  E. The district is surrounded by Alipurduar district in north, Bangladesh in south, Assam in the east and Jalpaiguri district in the west. The total area of the district is 3386 km<sup>2</sup> having 2822780 population with a population density of 833/km<sup>2</sup> as per census report, 2011.The district consists of twelve blocks and five sub-divisions. Topographically, the district Kochbihar chiefly comprises of plain land low and marshy tract at some places. Due to existences of many rivers and rivulets besides low land, it is very prone of flood during the monsoon. Considering surface configuration, relief and drainage pattern, soil types, climate condition, the formation of geology and forest tracts, the district Kochbihar falls under Barind region Fig no. 1

### 3. Objectives

The main objectives of the study are

1. To study the different aspect related to social, economical, demographic condition.
2. To analyze the block level regional disparity of Kochbihar district and to identify the backward block in respect of socio-economic development.
3. To find out probable causes responsible for regional disparity and suggest few proposal to minimize the spatial disparity among blocks.

### 4. Database and Methodology

The present study is based on the secondary data borrowed from District census Handbook 2011, District statistical Handbook 2013. To find out the regional disparity in block level we used Kendall's ranking co-efficient method. We know socio-economic development of any region is determined by multiple factors or indicators. So, for the Kendall's ranking co-efficient method we used 30 developmental indicators. This indicators are categorized into three groups namely Social indicators, Economic indicators, Demographic indicators. Which are follows

#### Social Indicators

- X1 Number of Primary school
- X2 Number of Middle & High school
- X3 Number of higher secondary school
- X4 Number of Family welfare centre and Sub centre
- X5 Number of Medical institution
- X6 Number of Beds in Hospitals
- X7 Number of Doctors
- X8 Number of Mouzas having Electricity
- X9 Number of Mouzas having Drinking water facilities
- X10 Percentage of Inhabited village having transport communication
- X11 Percentage of inhabited village having Post office facility

#### Economic Indicators

- X12 Percentage of Net shown area to gross cropped area
- X13 Percentage of Cultivable area to total area
- X14 Percentage of Irrigated area to total cultivable area
- X15 Number of shallow and deep tube wells
- X16 Number of Commercial Bank
- X17 Number of Gramin Bank
- X18 Percentage of inhabited village with agricultural credit societies
- X19 Number of Fertilizer depot
- X20 Percentage of Agriculture labor to total workers
- X21 Percentage of cultivators to total workers
- X22 Percentage of Inhabited village approached by pucca road

#### Demographic Indicators

- X23 Density of population
- X24 Sex ratio
- X25 Literacy rate as percentage of total population
- X26 Male literacy rate
- X27 Female literacy rate

- X28 Gaps in Male-Female literacy
- X29 S.C. Population literacy rate
- X30 S.T. Population literacy rate

### Kendall's Rank Order Score Method

For the analysis of block level regional socio-economic development we used the above mentioned component or developmental indicators in Kendall's Rank Order Score Method. The basic rule of this method is indicators have to be ranked according to their total number. If a block has maximum number score for particular indicators then imposed rank for this particular indicator is 1 and so on. Similarly on the basis of score of the other block have to be ranked 2, 3, and 4 and so on. After this the sum of the rank of different indicators of a particular block has to be calculated, and then from the total value the average value have to compute. After this on the basis of average score the level of development has been analyzed. Here if a block securing maximum average score will be treated as low developed category and lowest average score treated as high developed category.

### 5. Result and Analysis

Here we used three basic sectors to determine the level of spatial disparity which are disparities in the level of Social development, disparities in the level of economic development, disparities in the level of Human resource development. The detailed discussion about the indicators separately are as follows.

#### 5.1 Disparities in the level of Social development

To find out the level of Social development 11 social indicators have been used. The composite index value of 11 selected indicators of social sector has depicted the overall condition of inter block disparity in social sector. The composite index value for social development ranges from 2.77 to 8. We categorized the 12 block into 3 categories which are follows.

Table No. 1

#### Developed Blocks

The range of composite index for this category is <4.50. Three block (25%) namely Kochbihar -I, Kochbihar-II, Tufangang-I are lies in this category. These three block located beside the two big town of the district namely Kochbihar and Tufanganj. So the population of the blocks get different social amenities services from the adjacent town, more over due to locational advantage the social amenities services also in good number in the blocks.

#### Moderately Developed Blocks

This category having the range of 4.50-6.25. The 5 blocks (41.67%) falls under this category, which are Mathabhanga-I, Mathabhanga-II, Tufangang-II, Dinhat-I, Dinhat-II. As availability of different social amenities are in moderate condition that's why the blocks occupy this position.

#### Les Developed Blocks

The range composite score for this category is >6.25. The number block under this category is 3 (25%). Which are Mekhliganj, Sitai, Haldibari. All three blocks bordered by

Bangladesh and location is remote compare to other block. Here all the social indicators are not in good condition also.

Figure No. 2

### 5.2 Disparities in the level of Economic Development

To study the level of economic development of the district we used 11 parameters like Net shown area, cultivable area, irrigated area, Shallow and deep tube wells, Commercial banks, Gramin banks, Co-operative societies, Fertilizer depot, Percentage of agricultural labor, cultivators, Village connected by Pucca road. In this sector the level of disparities among different blocks are quite greater than the other sector. Here the range is 5027-7.09. This result reflects that, some blocks are highly developed in respect of economic development and some blocks have poor condition. For detailed analysis we divided the blocks into 3 category.

Table No. 2

#### Developed blocks

The range for this category is < 5.90, Haldibari, Mathabhanga-I, Kochbihar-I, Dinhata -II, Sitai total 5 blocks (412.67%) are fall under this category. As this block situated nearer the different urban tract so they enjoys the benefits of locational advantage, and govt also paid importance to develop the economic sector infrastructure.

#### Moderately Developed Blocks

Here the composite value is 5.90-6.50 .Dihata-I, Tufanganj-I, Kochbihar-II, Sitalkuchi total 4 block (33.33%) are consider under this category. The different indicators of economic sector have present in this block neither in satisfactory condition nor in poor also.

#### Less Developed Blocks

The blocks belongs to the value of >6.50 namely Tufanganj-II, Mathabhanga-II, and Mekhliganj (25%) are fall under this category. The indicators used to determine the level of economic development are not in good condition as well as the population of these blocks not so much benefited from Govt. limited projects.

Figure No. 3

### 5.3 Disparities in the level of Human Resource Development

We know to measure the development of any area we have to taking into account the quality of Human resource also. To assess the disparities in the level of human resource development we used 8 indicators like Population density, Sex ratio, Literacy rate, Male literacy rate, Female literacy rate, Literacy gap, S.C. literacy rate, S.T. literacy rate etc. On the basis of the composite score of the above indicators we divided the 12 blocks into 3 categories.

Table No. 3

#### Developed blocks

Here the composite value for this category is <5.50. Five blocks (41.67%) namely Kochbihar-I, Kochbihar-II, Tufanganj-I, Tufanganj-II, Dinhata-I fall under this category. The result

indicate that all the indicators are used to assess the level of Human resource development are in satisfactory level.

#### Moderately Developed Blocks

The blocks belongs to the value of 5.50-7.25 are counted in this category. Total 4 blocks (33.33%) which are Mathabhanga-II, Dinhata-II, Sitalkuchi, Mathabhanga-I. Here all the demographic factors are in developing stage but not in developed stage.

#### Less developed Blocks

Less developed category consists the score of >7.25. Only three blocks (25%) are in this category, namely Haldibari, Mekhliganj, and Sitai. Here sex ratio, Literacy rate, male female literacy rate, S.C. & S.T. Literacy rate are not in good condition.

Figure No. 4

### 5.4 Composite level of disparities in Socio-Economic Development

In case of composite level of development it is the sum of the level of Social development, level of Economic development and level of Human resource development. Here we used overall 30 indicators to determine the composite level of inter block disparities. To judge the disparities level we taking into account the Kendall's Rank Score Method. The result shows the wide disparity in terms of social, economic and demographic sector among different blocks of Kochbihar district. On the basis of the result the Kochbihar district divided into three categories, which are Developed, Moderately Developed, and Less Developed.

#### Developed Blocks

According to composite score of <5.30 only three (25%) blocks are consider as developed blocks namely Kochbihar-I, Kochbihar-II, and Tufanganj-I. It need to mention that all the three blocks are facilitated by two big urban centre namely Kochbihar town which one is the District sadar and Tufanganj town. Due to presence of good no. of social indicators (Primary & High school, Doctors, Medical institute, Electricity, Drinking water etc) Economic indicators (irrigation facility, Bank, Co-operative society, fertilizer depot, Pucca road) and good condition of Demographic indicators (Male & Female literacy, S.C. & S.T. literacy, Sex ratio) the above mention blockns obtain the position as developed blocks.

#### Moderately Developed Blocks

The composite score for this category is (5.30-6.50). Total five blocks (41.67%) namely Tufanganj-II, Dinhata-I, Dinhata-II, Mathabhanga-I, Mathabhanga-II. All the indicators of different sectors like Social indicators, Economic indicators and Demographic indicators are not in satisfactory condition but in poor condition also.

#### Less developed blocks

Here we consider >6.50 composite score for this category. So based on this score 4 blocks (33.33) are lying in this category, namely Sitalkuchi, Haldibri, Sitai & Mekhliganj. Mentionable fact is that this result is not a cumulative effect of some years rather it is because of

cumulative effect of long term issue. Here the issue is negligency and improper implementation of Govt. projects related to social and economic development.

Figure No. 5

## 6. Conclusion

A rise in the social inequalities affects the process of economic development which in the long run exacerbate the inequalities at the regional level. We find that the issue of regional disparity is mainly associated with unequal distribution of social, economic and demographic component among different blocks of Kochbihar district. Result shows that except in Economic development, the block namely Kochbihar –I, Kochbihar-II, Tufanganj-I are secure their position as developed block in terms of Social development, Human development, and Over all development also. On the other side Sitai, Mekhligang, Haldibari all are obtained their position as

less developed block in the sector of Social development, Human resource development and over all development. The rest of the block keep their position as moderately developed.

On the basis of the result following are the policy recommendations

- Decentralization of Govt. policy should adopt, that may improved the situation. Such economic and social policies should be adapted which helps to eliminate the issue of regional inequality and developed the backward block.
- Govt. should take proper measures and promote effective development programs which equalize the access to Social, Economic facilities in all the blocks & alleviate the increasing gap among the blocks.

## References

1. Angadi, D.P. 2012. Regional Disparities in Agricultural Development: A case study of Belium District of Karnataka State, India, *Regional Symbiosis* 20: 68-86
2. Bhattacharya, B.B., & Sakthivel, S. (2004) Regional growth and Disparity in India: Comparison of Pre – and Post- reform decades. *Economic and Political Weekly*, 39(10), 1071-1077
3. Boldrin, M. & Canova, F (2001) Inequality and convergence in Europe's regions: Reconsidering European Regional Policies. *Economic policy*, 16(32), 205-253
4. District Census Handbook, 2011, Koch Bihar District, Directorate of Census Operations, West Bengal
5. District Statistical Handbook, 2013. Baureau of Applied Economics and Statistics. Government of West Bengal
6. Hamid, N., & Hussain, A. (1974) Regional inequalities and capitalist development. *Pakistan Economic and Social Review*, 12(3), 255-288
7. Kendall, M.G. 1955. Rank Correlation Methods. Hanfer Publishing Co, New York
8. Mohammad, I.H., Das, Patnayak P. and Mishra, B.K. 2007. Regional Inequality in Orissa, Some Emerging, *Indian Journal Of Regional Science*, 39(1).
9. Nayak, L.T. Narayankar, D.S. (2009) : Identification of Regional Disparities in levels of Development in Bellary District-Karnataka, *Indian Journal of Regional Science*, vol. XXXXI No.1, PP 37-47
10. Rai, S.C., Bhatia, V.K. 2004. Dimentions of Regional Disparities in Socio-Economic Development of Assam, *Indian Society Of Agricultural Statistics*, 57: 178-190
11. Sen, B., & Ali, Z. (2009) Spatial Inequality in Social Progress in Bangladesh. *The Bangladesh Development Studies*, 32(2), 53-78
12. Sharma, D. D. & Aashis, P. 2014. Disparities in the level of Socio- Economic Development in the District Sirmour of Himachal Pradesh

Figures

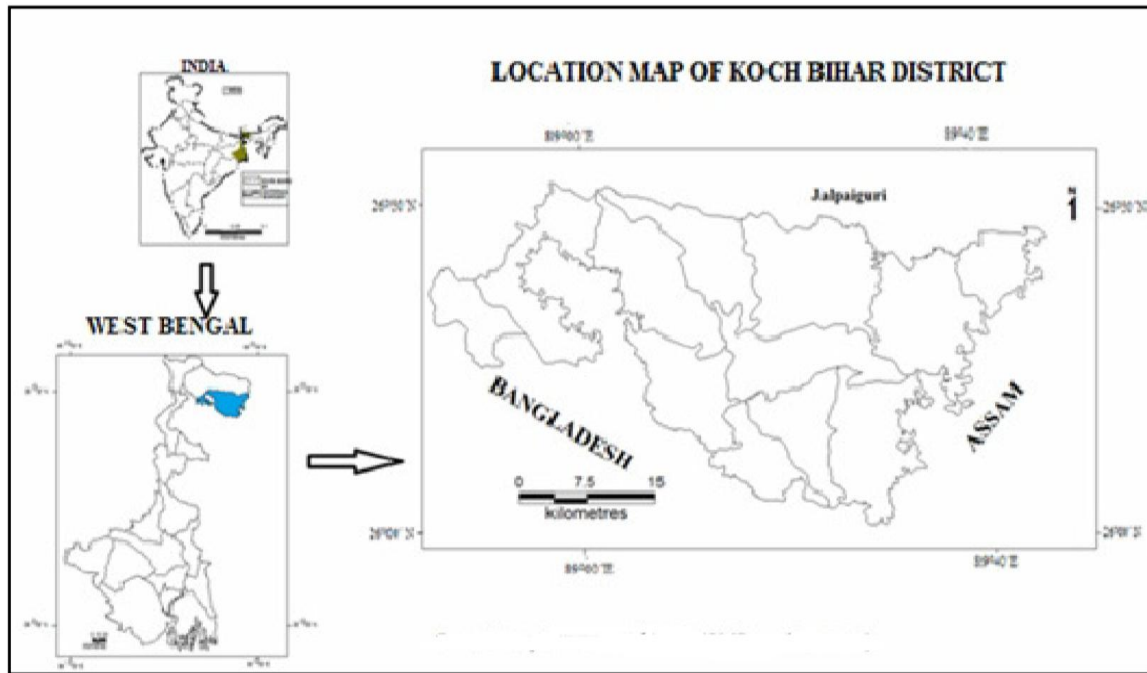


Figure1. Location Map of the Study Area

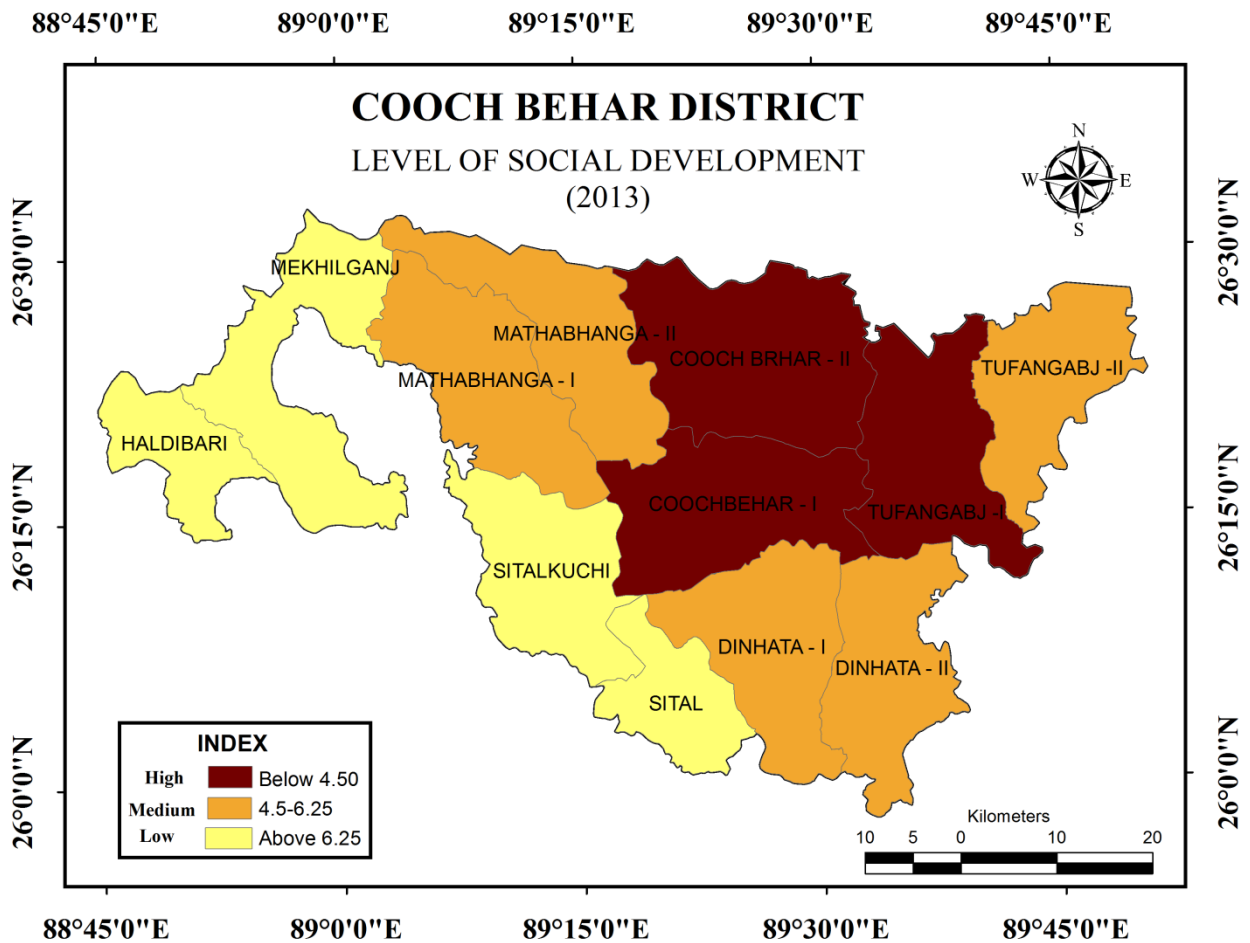


Figure 2. Level of Social Development

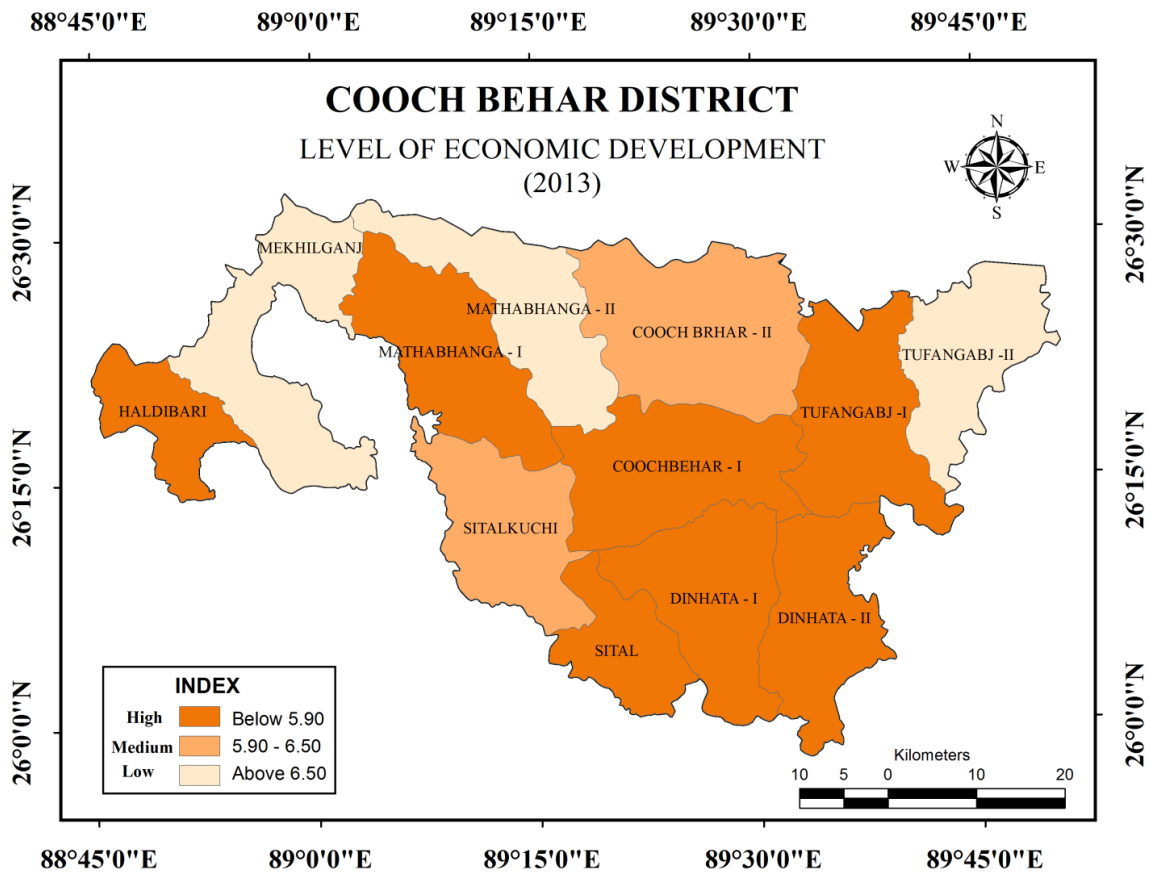
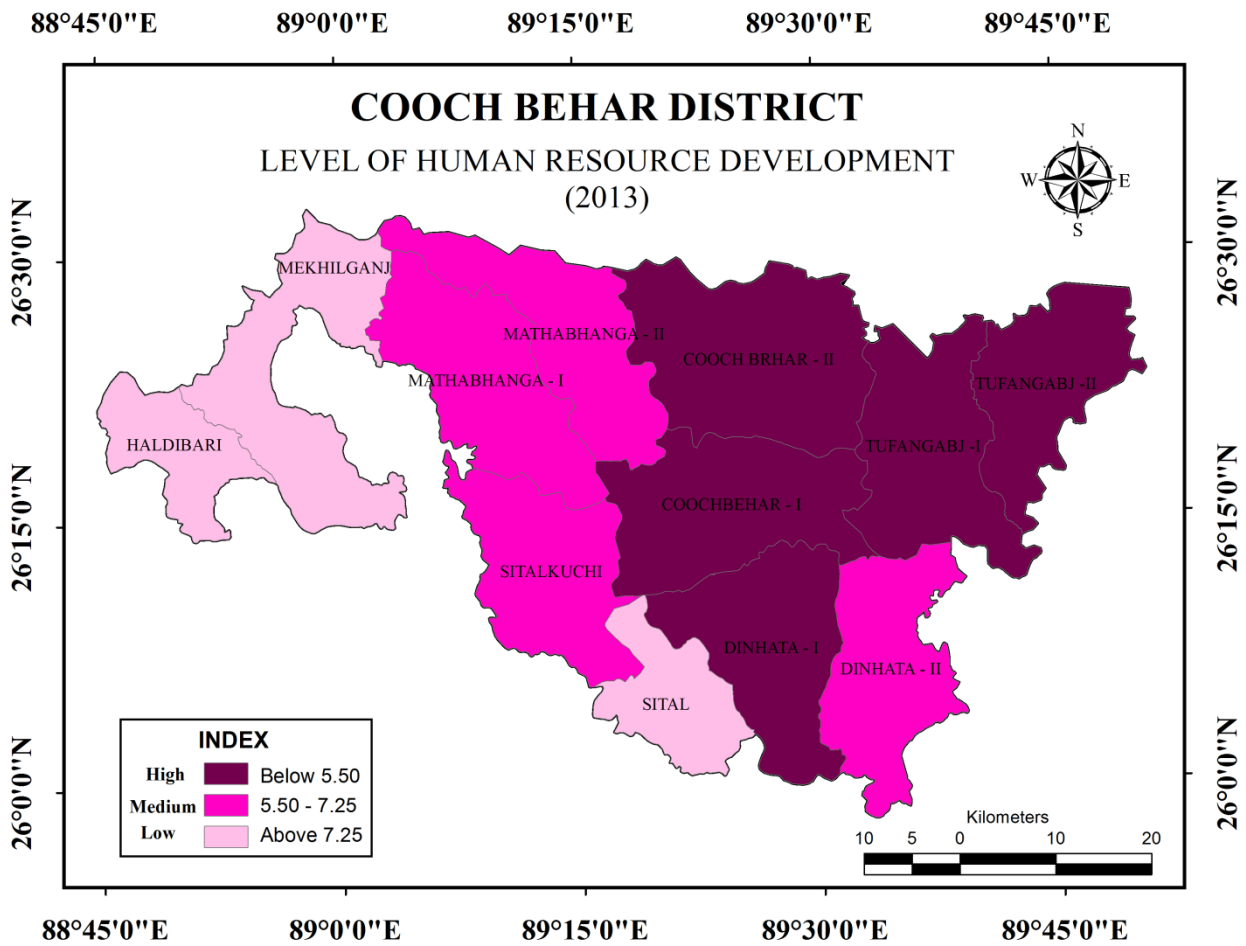


Figure 3. Level of Economic Development



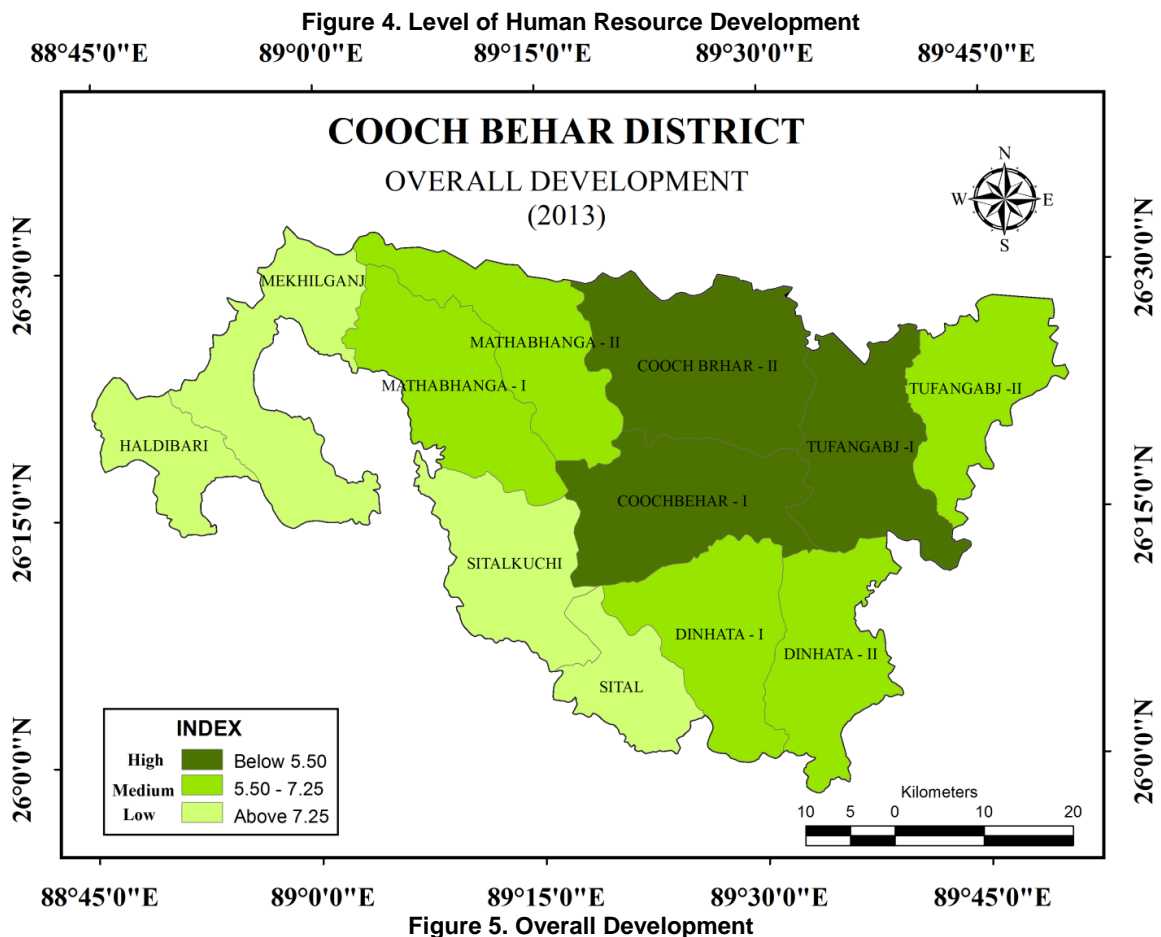


Figure 5. Overall Development

Tables

Table No. 1 Regional Disparities in the level of Socio-Economic Development

Regional Disparities in the Level of Socio-Economic Development, (Social Indicators)Cooch Bihar 2013														
Sl No.	BLOCK	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	TOTAL RANK	AVERAGE RANK
1	MEKHLIGANJ	113(10)	30(6)	10(6)	25(9)	3(4)	30(7)	5(5)	78.07(10)	81.08(9)	35.04(4)	12.41(11)	81	7.36(LD)
2	HALDIBARI	85(11)	26(8)	7(8)	19(10)	3(4)	25(8)	1(8)	98.38(5)	93.55(8)	31.58(6)	12.28(12)	88	8(LD)
3	MATHABHANJA-1	141(8)	43(2)	15(3)	31(8)	2(5)	20(10)	3(7)	99.02(3)	99.01(3)	22.77(10)	22.77(7)	66	6(M)
4	MATHABHANJA-2	152(6)	19(11)	13(5)	34(6)	4(3)	36(6)	8(2)	96.77(8)	98.92(4)	35.87(3)	21.74(9)	63	5.72(M)
5	SITALKUCHI	SL NO.	31(5)	9(7)	31(8)	3(4)	40(5)	5	96.14(9)	97.14(7)	28.36(7)	22.39(8)	74	6.72(LD)
6	COOCHBIHAR-1	195(2)	50(1)	20(2)	47(3)	3(4)	66(2)	7(3)	100(1)	100(1)	53.52(1)	21.13(10)	30	2.77(D)
7	COOCHBIHAR-2	210(1)	29(7)	22(1)	53(1)	7(1)	228(1)	16(1)	100(1)	100(1)	26.13(9)	24.32(6)	30	2.77(D)
8	TUFANGANJ-1	153(5)	36(4)	14(4)	42(4)	4(3)	58(3)	6(4)	98.63(4)	98.63(5)	33.33(5)	43.06(1)	42	3.82(D)
9	TUFANGANJ-2	143(7)	38(3)	10(6)	33(7)	3(4)	24(9)	5(5)	98.15(6)	100(1)	49.06(2)	39.62(2)	52	4.72(M)
10	DINHATA-1	177(3)	25(9)	10(6)	48(2)	2(5)	20(10)	4(6)	99.23(2)	97.69(6)	28.12(8)	30.37(3)	60	5.45(M)
11	DINHATA-2	171(4)	24(10)	9(7)	37(5)	5(2)	56(4)	5(5)	100(1)	99.12(2)	21.01(11)	24.37(5)	56	5.09(M)
12	SITAI	69(12)	11(12)	4(9)	18(11)	3(4)	58(3)	4(6)	98.11(7)	100(1)	18.87(12)	28.30(4)	81	7.34(LD)

Within parenthesis the ranks are given  
Source: Computed by the authors

**Table No.2 Regional Disparities in level of Economic Development**

Regional Disparities in the Level of Economic Development(Economic Indicators)														
SL NO.	BLOCK	X12	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	TOTAL RANK	AVERAGE RANK
1	MEKHLIGANJ	42.79 (7)	72.59 (9)	11.52 (10)	2327 (9)	3 (7)	5 (3)	6.57(9)	72(6)	34.04(7)	48.22(2)	45.26(9)	78	7.09
2	HALDIBARI	34.63 (12)	79.21 (3)	30.73 (1)	2313 (10)	4 (6)	4 (4)	21.05(1)	37(10)	44(3)	37.98(5)	52.63(3)	58	5.27
3	MATHABHANGA-1	81.91 (1)	71.52(10)	28.89 (3)	1544 (12)	6 (5)	4(4)	15.84(2)	93(3)	31.21(11)	47.24(3)	45.57(8)	62	5.64
4	MATHABHANGA-2	51.34 (5)	59.66 (12)	14.88 (7)	3286 (3)	7 (4)	4(4)	2.17(12)	60(7)	39.06(5)	34.25(6)	39.13(11)	76	5.91
5	SITALKUCHI	41.00 (10)	77.51 (5)	13.03 (9)	2739 (5)	3 (7)	2(6)	6.97(10)	100(2)	29.94(12)	56.59(1)	52.24(4)	71	6.45
6	COOCHBIHAR -1	46.40 (6)	78.22 (4)	9.84 (11)	2618 (6)	32 (1)	8(1)	11.27(4)	51(8)	32.37(10)	27.85(10)	65.49(1)	62	5.64
7	COOCHBIHAR -2	42.39 (8)	76.97 (6)	8.41 (12)	2750 (4)	9 (3)	8(1)	9.91(5)	120(1)	33.37(4)	21.35(12)	49.55(5)	66	6
8	TUFANGANJ-1	36.56 (11)	76.76 (7)	28.72 (2)	2360 (7)	7 (11)	6(2)	12.5(3)	89(5)	34.95(6)	24.69(11)	45.83(7)	65	5.91
9	TUFANGANJ-2	53.81 (3)	69.03 (11)	18.42 (5)	2356 (8)	2 (8)	5(3)	7.55(8)	51(8)	33.82(8)	28.70(9)	56.60(2)	73	6.64
10	DINHATA-1	41.47 (9)	79.93 (1)	14.67 (8)	4449 (2)	13 (2)	3(5)	8.59(7)	91(4)	39.07(4)	30.49(8)	46.88(6)	65	5.9
11	DINHATA-2	58.27 (2)	76.16 (8)	19.61 (4)	4492 (1)	9 (3)	3(5)	3.36(11)	35(11)	51.06(1)	33.51(7)	44.54(10)	63	5.73
12	SITAI	51.96 (4)	79.61 (2)	15.30 (6)	1802 (11)	3 (7)	1(7)	9.43(6)	43(9)	44.92(2)	41.96(4)	56.60(2)	60	5.45

Within parenthesis the ranks are given  
 Source: Computed by the author

**Table No. 3 Regional Disparities in the level of Human Resource Development**

Regional Disparities in the level of Human Resource Development(Demographic Indicators) & Grand Rank													
SL NO.	BLOCK	X23	X24	X25	X26	X27	X28	X29	X30	TOTAL RANK	AVERAGE RANK	GRAND RANK	AVERAGE RANK
1	MEKHLIGANJ	514(12)	938(6)	69.03(11)	76.55(10)	61.02(10)	15.53(1)	70.15(10)	50.5(12)	72	9	61+78+72=231	7.7
2	HALDIBARI	682(11)	967(2)	69.22(10)	75.69(11)	62.54(9)	13.15(6)	70.32(9)	59.71(8)	66	8.25	88+58+66=212	7.07
3	MATHABHANGA-1	683(10)	940(5)	71.51(8)	78.83(6)	63.71(7)	15.12(2)	71.42(8)	55.17(11)	57	7.13	66+62+57=185	6.17
4	MATHABHANGA-2	734(6)	942(4)	72.68(6)	79.40(5)	65.55(6)	13.85(3)	71.97(7)	58.71(9)	46	5.75	63+76+46=185	6.17
5	SITALKUCHI	706(7)	966(3)	70.34(9)	77.03(9)	63.41(8)	13.62(4)	70.10(11)	70.75(4)	55	6.88	74+71+55=200	6.67
6	COOCHBIHAR -1	904(3)	938(6)	75.44(3)	81.38(3)	69.11(2)	12.27(9)	75.59(3)	78.45(1)	30	3.75	30+62+30=122	4.07
7	COOCHBIHAR -2	892(4)	908(9)	80.48(1)	85.86(1)	74.50(1)	11.36(12)	79.18(1)	70.62(5)	34	4.25	30+66+34=130	4.33
8	TUFANGANJ-1	784(5)	936(7)	73.64(4)	79.74(4)	67.12(4)	12.62(8)	75.67(2)	76(2)	36	4.5	42+65+36=143	4.77
9	TUFANGANJ-2	703(8)	940(5)	75.56(2)	81.97(2)	68.72(2)	13.25(5)	75.11(5)	67.58(6)	36	4.5	52+73+36=161	5.37
10	DINHATA-1	1024(1)	940(5)	73.05(5)	78.62(7)	67.12(4)	11.50(11)	73.55(6)	73.65(3)	42	5.25	60+65+42=167	5.57
11	DINHATA-2	988(2)	927(8)	72.33(7)	78.09(8)	66.1(5)	11.99(10)	75.39(4)	63.61(7)	51	6.38	56+63+51=170	5.67
12	SITAI	686(2)	970(1)	62.79(12)	69.17(12)	56.21(11)	12.96(7)	63.62(12)	56.48(10)	74	9.25	81+60+74=215	7.17

Within parenthesis the ranks are given  
 Source: Computed By the Author