Amenities in Rural Bengal: Distributional Pattern

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Abstract: The present article focuses on the importance of amenities in rural areas of West Bengal. A better quality of Life is highly determined by the access to such amenities which includes sanitation, drinking water, health facilities, banks and credit systems, power supply etc. The availability of such facilities in a village impacts health, education and economic life of a person. The Census of India, 2011 district level data has been used for the present study. It has tried to analyse the distributional pattern of rural amenities at district level. A suitable index has been used to combine several indicators and observe different zones of available amenities.

Keywords: Rural amenities, sanitation, drinking water, health facilities, banks and credit systems, power supply, distributional pattern.

I. INTRODUCTION

The rural India has uneven access to infrastructural facilities. The socio-economic development of any region is highly dependent on the access to basic amenities like drinking water, sanitation, education, health facilities etc. "There was an improvement in access to basic amenities in rural India during 2001–2011 as indicated by Census data. Kumar. A (2015) shows fall in percentages of deprived households—from 71.3% to 65% for drinking water, 78.1% to 69.3% for latrine facility, 56.5% to 44.7% for electricity and 96.09% to 94.2% for closed drainage connectivity for waste water outlet in the premise". The availability of amenities is important for the development and a better quality of life in rural areas. Deller et al. (2001) has observed that different types of amenities can influence growth in population, employment and per capita income in subtle and unique ways.

II. RESEARCH METHODOLOGY

The district level, Census of India 2011 data has been used for the present study. The District Census Handbook, Appendix-I has been used to conduct a district level study of West Bengal. The total number of 18 districts has been used for this study.

In this study 23 indicators (table 1.1) of amenities have been used to construct respective indexes and a composite amenities index to assess the distributional pattern of amenities at the district and block level.

Sl no **Indicators (23)** Category 1 Education 1. Primary, 2. Middle, 3. Senior Secondary school 4. Primary health centre, 5. Primary health sub centre, 6. Maternity Child Welfare Centre, 7. 2 Health Medical Practitioner with MBBS, 8. Medical Practitioner (with other degree), 9. Medical Shop 10.Post office, 11.Subpost office, Landlines, 12.Mobile phone coverage, 13.Internet cafes/ 3 Communication Common service centre 4 Transport 14. Village roads-pucca road, 15. Bus service (public/private), 16. Taxi & vans, 17. Tractors. 5 Banking 18. Commercial & co-operative banks, 19. Agricultural credit societies Miscellaneous 6 20. Power, 21. Newspaper 7 Drinking water 22. Hand pump, 23. Tubewell

Table 1.1 List of Indicators

The following analysis has been conducted:

1. Composite index(weighted method): $\{(i_1 \times w_1) + (i_2 \times w_2) + (i_3 \times w_3)\}/(w_{1+}w_{2+}w_3)$

where i_1 = value of indicator 1, i_2 = value of indicator 2, i_3 = value of indicator 3 w_1 = value of weight 1, w_2 = value of weight 2, w_3 = value of weight 3 2. Correlation (Pearson's method).

III. RESULTS AND DISCUSSIONS

The district level pattern of amenities distribution (table 1.3) in villages shows 10 districts of Puruliya, Paschim Medinipur, Dakshin Dinapur, Bankura, Darjiling, Maldah, Uttar Dinajpur, South 24 Parganas, Koch Bihar, Purba Medinipur, Birbhum have below average distribution to these amenities.

Table 1.2 District wise rural amenities index of West Bengal, 2011

Composite amenities index (CAI)	Frequency	Percent				
High (47.3 - 52.3)	5	27.8				
Medium (42.3 - 47.3)	2	11.1				
MEAN 42.3						
Low (37.3 - 42.3)	9	50.0				
Very Low (32.3 - 37.3)	2	11.1				
Total N	18	100				

Source: Computed from various District Census Handbook, West Bengal, 2011

The rest 7 districts are observed to have villages with above average access to these amenities. The standard deviation is 5 which is low indicating lesser deviation from mean value 42.3. The lowest Composite amenities index is observed in Puruliya district and highest of 49.8 is found in Bardhaman district of West

Table 1.3 Districtwise composite amenities index (CAI), 2011

	edu-	M	drinking	comuni-	trans-	~W . W		composite
11	cation	health	water	cation	port	banking	miscell	amenities
district	index	index	index	index	index	index	index	index (cai)
Puruliya	37.9	9.2	47.9	30.3	29.6	4.3	77.8	33.9
Pas.Medinipur	26.5	6.9	64.9	32.3	22.8	6.1	82.9	34.6
D. Dinajpur	29.6	7.0	66.8	35.4	43.5	4.9	76.9	37.7
Bankura	35.5	8.3	64.5	34.8	33.6	5.9	84.2	38.1
Darjiling	42.1	12.7	43.4	39.9	42.4	7.7	81.3	38.5
Maldah	38.9	12.3	61.8	37.7	36.0	5.4	79.3	38.8
U. Dinajpur	37.5	11.5	71.1	37.8	40.2	4.7	77.5	40.0
S 24 Parganas	47.4	17.4	51.0	43.6	32.2	6.9	92.1	41.5
Koch Bihar	41.3	12.0	72.4	36.7	37.3	8.6	83.9	41.7
PurMedinipur	39.9	14.9	62.7	42.7	26.7	13.4	92.2	41.8
Birbhum	39.0	10.4	68.6	41.0	39.6	7.4	89.2	42.2
Haora	49.9	22.7	39.9	46.8	43.8	13.0	95.4	44.5
Murshidabad	46.1	14.6	70.9	43.3	39.9	11.0	87.5	44.8
Jalpaiguri	48.9	21.2	73.1	41.2	47.2	9.9	91.4	47.5
N24 Parganas	49.0	18.8	69.4	45.2	44.9	12.8	94.4	47.8
Hugli	41.3	17.7	72.7	48.4	45.2	15.0	97.9	48.3
Nadia	47.9	15.6	75.8	45.9	55.0	15.3	93.1	49.8
Barddhaman	43.4	16.4	72.0	49.5	57.4	14.6	95.5	49.8
mean	41.2	13.9	63.8	40.7	39.9	9.3	87.4	42.3
stdev	6.5	4.7	10.9	5.5	9.0	3.9	7.0	5.0

Source: Computed from various District Census Handbook, West Bengal, 2011

Bengal. The district level pattern of amenities distribution (table 1.2) shows that majority of the districts have low access to amenities in rural Bengal. However it is not so discouraging to observe that 39 percent of the districts have medium to high access to amenities. The districts with very low access to amenities are only 11 percent.

The relationships have been explored with the help of Pearson's Correlationship (table 1.4) & many of them have resulted to be significant. The relationship among education and health facilities is very significant and R is .739 which is strong. The health facilities also have a strong relation with communication; communication again has a strong relation with transport and miscellaneous facilities. We can find a moderately significant correlation at .01 level among education and transport, miscellaneous facilities. The rest have a low correlation but significant at mostly .01 level.

Table 1.4	Correlationship among various indicators at block level
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						miscellene	drinking
			comuni_i	transport	banking	ous	water
	edu_ index	hlth_index	ndex	index	index	index	index
edu_index	1	739**	500**	.318**	.549**	.318**	-0.081
		.00	.00	.00	.00	.00	.138
hlth_index	.739**	1	.610**	.449**	.484**	.458**	0.012
sig. (2-tailed)	.00		.00	.00	.00	.00	.822
comuni_index	.500**	.610**	1	.583**	.447**	.580**	.164**
sig. (2-tailed)	.00	.00		.00	.00	.00	.002
transport_index	.318**	.449**	.583**	1	.278**	.349**	.218**
sig. (2-tailed)	.00	.00	.00		.00	.00	.00
banking_index	.549**	.484**	.447**	.278**	1	.319**	.109*
sig. (2-tailed)	.00	.00	.00	.00		.00	.045
miscell_index	.318**	.458**	.580**	.349**	.319**	1	.227**
sig. (2-tailed)	.00	.00	.00	.00	.00		.00
d_water_index	-0.081	0.012	.164**	.218**	.109*	.227**	1
sig. (2-tailed)	.138	.822	.002	.00	.045	.00	

^{**.} Correlation is significant at the 0.01 level (2-tailed), N=341

IV.CONCLUSION

We can conclude from the above discussion that the distribution of amenities in rural Bengal is not as good as the urban areas. We have clearly identified patterns of existing lower distributed areas in the western rural areas of West Bengal comprising mainly of Puruliya, Bankura, Birbhum, East Medinipur, in southern part West Medinipur, South 2 Parganas. The situation is even severe in northern parts where except Jalpaiguri all the 5 districts of Uttar & Dakshin Dinapur, Koch Bihar, Darjiling, Maldah have lower distribution of amenities. The scenario in the central Bengal comprising of North 24 Parganas, Bardhaman, Nadia, Hugli and only Jalpaiguri in North Bengal belongs to the high amenities zone .The districts of Haora and Murshidabad have medium access to amenities in rural Bengal. It is also evident from Pearson's correlation that a positive change in some indicator brings a significant impact on other indicators. Hence the amenities improvement can cause a chain of positive interrelated development in the rural areas. Certain amenities development can compliment improvement of other amenities which is very essential for rural development.

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^{*.} Correlation is significant at the 0.05 level (2-tailed).