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Educational Infrastructural Disparities: An Analysis of Hadauti Region

Dr.Sandeep Yadav¹, Dr.Zuber Khan², Dinesh Kumar Sharma³

Associate Professor, Department of Geography, Govt. College, Bundi, India ¹

Assistant Professor, Department of Geography, Govt. College, Bundi, India ^{2,3}

ABSTRACT: According to government records, Hadauti's literacy rate is 67.82 percent. The research is based on male-female enrollments in each block in government schools at various levels, with the goal of determining the level of awareness and understanding. The criteria considered were the number of schools, the total number of males, and the total number of females enrollment in the year 2015. The research also served as a tool for understanding the situation of female education and their development awareness. The Composite Index approach has been used for the purpose of categorizing blocks based on a variety of variables.

KEYWORDS: Composite Index, Variables, Development, Enrollment

I. INTRODUCTION

The Composite Index is a statistical method and instrument that combines several indices, data, and equities to provide unique values that may be used to analyze status and performance. The technique is applied in a variety of sectors, including trade, economics, demographics, and even geography. Geographers generally work with multi-dimensional spaces that serve as the foundation for subsequent investigation. The necessity to comprehend several dimensions in a reduced form is thus a typical issue that is frequently addressed through the aggregate of distinct dimensions to generate composite indices. The United Nations Development Programme's (UNDP) Human Development Index (HDI) is an example of an overall index which integrates indicators of health, education, and income. Other examples include the Physical Quality of Life Index (Ram, 1982), the World Bank's Logistics Performance Index (LPI), so on and so forth. The Composite Index is calculated with the help of indices or parameters that determine the value of the composite index.

Literacy and education are considered the main drivers of the betterment of a nation. The fate of the largest democracy in India will surely depend on the academic improvement of the people. According to Mahatma Gandhi, the purpose of training is to build a non-violent and non-exploitative social and financial order. Education is one way to do this. In recognizing this reality, there has been an astonishing improvement in education due to independence; But in terms of beautiful income in India, it has always been one of the most difficult situations to deal with the government (Som and Mishra, 2014).

Several studies have shown, both theoretically and empirically, the importance of education not only for economic but also social benefit. Hazra (1997) compared the performance of the main world regions in terms of women's literacy, highlighting the low position of South Asian countries in this regard. Regarding the female literacy pattern in India, the author pointed out that the vicious cycle of female illiteracy, poverty and low social status must be broken. In her detailed study on "Spatial dimensions of literacy in India" based on district census data, Gosal (2001) notes that regional literacy patterns in the country in 1961-2001 have not changed significantly.

II. REVIEW OF LITERATURE

Literacy and education are believed to be the primary drivers of a nation's development. Education and literacy not only control the level of development, but they also determine it. Education not only promotes a person's personality, but also contributes to the development of the region. Several studies have shown, both theoretically and empirically, the importance of education not only for economic but also social benefit. Krishan (1978) emphasizes a sharp increase in the ratio of women to men in higher education from 14: 100 in 1951 to 66: 100 in 2001. Women's participation in medical, engineering, and technical training has also increased markedly in recent decades. Data at the state level show that "the presence of women in higher education finds a stronger correlation with the literacy rate of

women than with levels of urbanization or per capita income. Nath (2001) notes the lowest literacy rates in Uttar Pradesh and Bihar, which together “have about a quarter of the country's population. Despite the large number of illiterates, progress in literacy is remarkable, which translates into phenomenal growth in the print media of weekly newspapers and daily newspapers, magazines and books, movies, and television series in local languages.

Singh (1998) analyzed emerging trends in female literacy in India and concluded that, despite the enormous social and economic costs of neglecting female education, the study of female literacy in India is overwhelming illiteracy caused by regional differences and of genre. Through the years, widespread inequality and the persistence of acute illiteracy in the regions, stemming from both supply and demand constraints, are cause for serious concern. There seems to be a dialectical connection between educational progress and social change. Illiterate people are inevitably trapped in a vicious cycle of poverty, repeated births, disease, and powerlessness and do not have the means to get out of their difficult situation, education. Illiteracy becomes a dead end for them, contributing to their marginalization within the family, in the workplace and in public life.

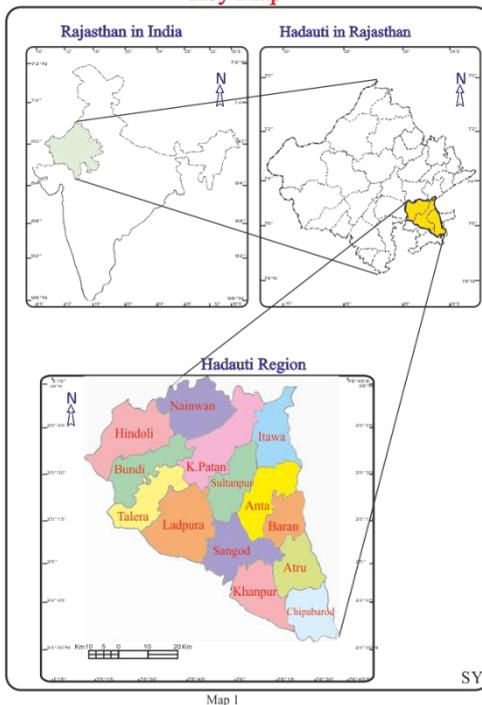
Mehta (1995) focused on patterns and correlates of tribal literacy in India. The spatial and economic distances from schools, as well as the lack of opportunities for native language teaching, were found to be the main obstacles to tribal literacy in the country. Before the 1990s, attempts were also made to analyze regional trends and differences in literacy. In this context, the work of Gosal (1964), Tirtha (1966), Naik (1971), Krishan and Shyam (1978), Gosal (2001), Sagar (1991), Reddy (1985), Raza et al. (1986) and Chandna (1972) can be cited. Panwar and Vyas (1993) worked on planning strategies to eliminate disparities in educational development in Rajasthan. Apart from this, a series of studies on the regional analysis of literacy at the meso / microscale, that is. state or district or tehsil level have been done. The attempts of Joshi (2000), Mukerji (1968), Sharma (1985), Chitnis (1974), Krishan and Chandna (1974), Banerjee (1975), Siddique (1977), Singh (1979), Schuth (1980), Dutta (1982) and Shastri (1985) fall into the category of regional studies. Yadav, Jetwal, and Khan (2018) examined the spatial patterns of literacy differences in the Hadauti region.

Therefore, the level of education is also a symbol of regional development. This study analyzes the dual and important role of education.

III. METHODOLOGY AND DATA BASE

The research is based on both primary and secondary data sources. The Rajasthan Government Education Portal is one of the key data sources. Some teachers teaching in these schools from various blocks were interviewed to gain a better understanding of the situation and parameters influencing the enrollment process. The sample space was filled with government schools from across the region, which were then surveyed.

Key Map



The composite index calculation method demands mathematical analyses. Because the nature of data differs, it is necessary to standardize its value so that it can be analyzed. To get the composite index value, these standardized values are added together to get the gross value, which is then divided by the host of factors chosen. The selection of factors or indicators comes first, followed by data gathering. The data's mean, deviation, and standard deviation are calculated using statistical formulae. The standardized value is calculated using these values. The standardized value formula is as follows:

$$z = \frac{x - \mu}{\sigma}$$

Here μ is mean and σ is standard deviation.

By summarizing the standardized value, the raw value is obtained, which is divided by the factors to extract the value of the composite index from different blocks for the analysis.



IV. STUDY AREA

Study area is located in the south-eastern part of Hadauti Plateau in Rajasthan, between $24^{\circ}25'$ to $25^{\circ}51'$ North latitudes and $75^{\circ}15'$ to $76^{\circ}45'$ East longitudes. The total geographical area of this region is 14481.6 square kilometres. This region includes the entire Bundi district, the entire Kota district except Ramganj Mandi tehsil, the entire Baran district except Chhabra Kishanganj and Shahbad tehsils and Khanpur tehsil of Jhalawar district. There are 14 blocks in this region, in which there are 2278 inhabited villages and 19 towns. The main ever flowing river of this region is Chambal, whose tributaries are Kali Sindh, Parvan, Parvati and Mej. The climate here is semi-arid and subarid. Agriculture is the main occupation of the population here.

The school level is divided into primary, middle and senior criteria. Primary schools from 1st to 5th grade, middle from 6th to 8th grade and finally senior level from 9th to 12th grade. On this basis, study was conducted at three levels.

V. DISCUSSIONS

The figures of enrollments and number of primary, middle and senior schools have been shown in Table 1, Table 2 and Table 3 respectively. These show the block wise data collected from statistical outlines of 2016.

Table 1 Block wise number of primary schools and male – female enrollments

Blocks	Total No. of schools	Total No. of Male Enrollment	Total No. of Female Enrollment
Talera	130	3610	3256
Keshoraipatan	230	4821	4313
Hindoli	366	7658	7420
Nainwan	236	5060	5110
Bundi	236	5167	5237
Ladpura	150	1295	1442
Sangod	102	4882	6452
Sultanpur	106	1357	1428
Itawa	74	1424	1410
Khanpur	122	2199	2420
Baran	47	1007	1239
Anta	76	1051	1206
Atroo	47	549	609
Chipabarod	121	2635	2762
Mean	145.93	3051.07	3164.57
Std.Deviation	87.16	2078.34	2107.39

The data of Primary schools shows that the highest number of primary schools is in Hindoli block, which is part of Bundi District. The block is predominantly backward and vegetable farming is the main source of livelihood. The block also has highest number of male and female enrollments. The primary schools provide mid-day meals to the students which has created awareness and an increase in the enrollments of the students. On interviewing the teachers of primary section, it was revealed that in villages there has been a craze for English medium schools and migration to urban centers also decreases the enrollments. Hindoli is a predominantly rural block with vegetable farming, has seen less migrations compared to other blocks of Hadauti region.

Table 2Block wise number of middle schools and male – female enrollments

Blocks	Total No. of schools	Total No. of Male Enrollment	Total No. of Female Enrollment
Talera	120	7003	5696
Keshoraipatan	251	13645	13384
Hindoli	125	11869	9128
Nainwan	210	18072	16132
Bundi	208	11638	9702
Ladpura	418	4597	4737
Sangod	112	3046	2888
Sultanpur	89	4928	5421
Itawa	129	4526	4789
Khanpur	146	7978	7762
Baran	67	2520	3592
Anta	64	2779	3588
Atroo	76	2353	3019
Chipabarod	59	3414	3889
Mean	148.14	7026.29	6694.79
Std.Deviation	94.16	4759.01	3920.18

In the middle school category, Ladpura block has highest number of schools. This is mainly it is highly urbanized, but the enrollments of students do not match the figure because though the number of schools is high, but the schools are small in size thus intake of students is limited. The highest number of student enrollment is seen in Nainwan block which is again one of the backward blocks of Hadauti region. Social and cultural factors along with lack of initiatives from the government also affect the enrollment rate.

Table 3Block wise number of senior schools and male – female enrollments

Blocks	Total No. of schools	Total No. of Male Enrollment	Total No. of Female Enrollment
Talera	57	9426	7726
Keshoraipatan	125	20542	15335
Hindoli	75	14679	11149
Nainwan	76	14219	10442
Bundi	109	21001	14885
Ladpura	501	9653	12609
Sangod	85	3860	2550
Sultanpur	53	2945	3379
Itawa	57	3108	5069
Khanpur	76	11648	9155
Baran	37	3158	3680
Anta	57	5962	7298
Atroo	42	3641	4444



Chipabarod	35	6559	4508
Mean	98.93	9314.36	8016.36
Std.Deviation	114.27	6087.46	4169.4

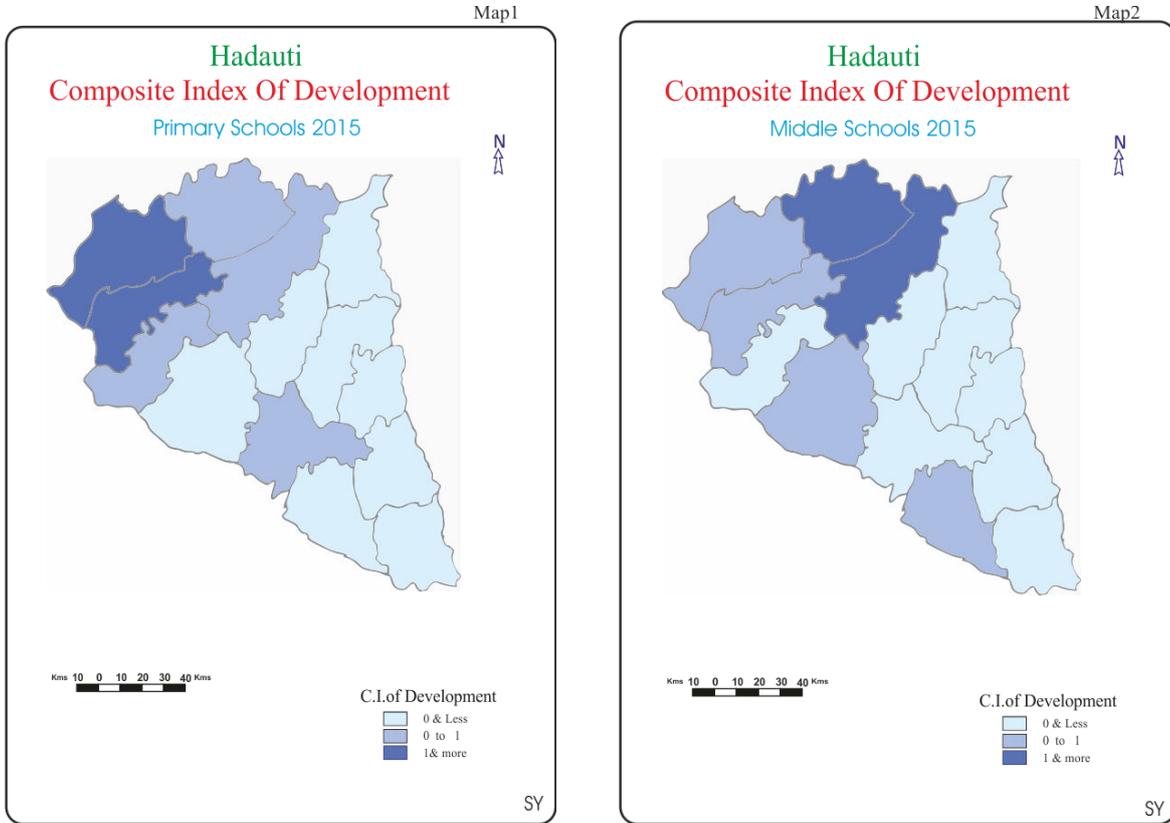
The highest numbers of senior schools are in Ladpura block, which is highly urbanized, but the number of enrollments does not match the figure as the schools intake is small. The highest numbers of enrollments are seen in Bundi and Keshoraipatan blocks. This is because these blocks have higher number of schools compared to other blocks of the region. Hindoli and Nainwan have higher enrollments on paper as the students get themselves enrolled in the schools but at the same time, they help in the fields for vegetable plucking and take the cattle for grazing.

Table 4 Block wise composite index of schools in Hadauti region

Blocks	C.I. Value of Senior Schools	C.I. Value of Middle Schools	C.I. Value of Primary Schools
Talera	-0.14	-0.18	0.04
Keshoraipatan	1.28	1.4	0.78
Hindoli	0.47	0.46	2.25
Nainwan	0.4	1.8	0.97
Bundi	1.22	0.79	1.01
Ladpura	1.56	0.62	-0.54
Sangod	-0.78	-0.73	0.65
Sultanpur	-0.85	-0.46	-0.7
Itawa	-0.7	-0.41	-0.81
Khanpur	0.15	0.15	-0.34
Baran	-0.86	-0.87	-1.01
Anta	-0.36	-0.86	-0.9
Atroo	-0.76	-0.9	-1.18
Chipabarod	-0.62	-0.81	-0.23



The analysis of primary schools shows that the highest level of composite index is occupied by blocks of Bundi and Hindoli. In the moderate level lies, Sangod block of Kota district and Talera, Keshoraipatan and

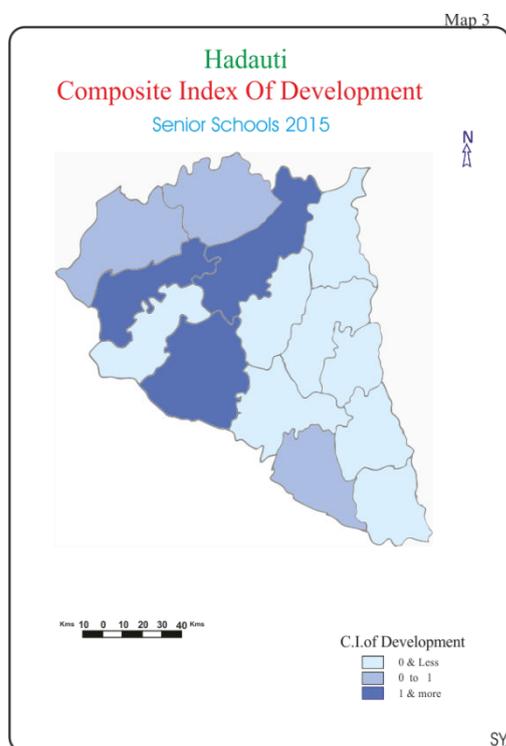


Nainwan blocks of Bundi district. While all other blocks of the region have negative composite index and fall into the category of lowest development.

Further calculations conclude the level of development with respect to the enrollments in the middle schools. Nainwan, and Keshoraipatan recorded highest composite index while Hindoli, Bundi, Ladpura and Khanpur falls in the moderate level. While all other blocks of theregion have negative composite index and fall into the category of lowest development.

Finally, for the senior schools the highest level is occupied by Ladpura, Bundi and Keshoraipatan blocks while the moderate level of development is found in Nainwan, Hindoli and Khanpur blocks. While all other blocks of the region have negative composite index and fall into the category of lowest development.

VI.CONCLUSIONS



The highest level of composite index value for the study is observed in Bundi and Keshoraipatan that have obtained the highest value of composite index in at least two levels of schooling. This is mainly because of urbanization and migration. While the least record has been set by blocks of Baran district. Rural areas, on the other hand, have a low enrollment status due to migration, lack of development, and local backwardness. The rise of English medium, day boarding, and other boards institutions in urban areas has created a fascination to pull students. There are certain blocks where female enrollment is larger than male enrollment, which is a sign of development and proof that parents are concerned about their daughters' education. Though this is only on papers but actually the number of dropouts is also high in these areas due to child marriages prevalent in these area.

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