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Spatial analysis on the provisions of educational amenities in North Kashmir [J&K]-India

Análisis espacial en la provisión de servicios educativos en Cachemira Del Norte (J Y K), India.

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ABSTRACT

Amenities that are needed for the society comprise the infrastructure, goods and services. For the emergence and sustain of a society these amenities are the central to a society. The paper examined inequalities in the distribution of amenities in North Kashmir which is manifested in the form of unequal provision of educational amenities within the blocks of North Kashmir. The spatial distribution of educational institution was studied in North Kashmir. To determine the spatial concentration pattern in the provision of educational amenity Location Quotient technique has been used. In accessing and quantifying the spatial disparity Lorenz Curve and Gini's coefficient proved to be useful tool. The results of the analysis indicate that inequalities exist in the provision of accessibility of educational amenity and there is complete disparity in the distribution of educational institutions across the spatial landscape of North Kashmir.

Keywords: Amenities, Infrastructure, Location Quotient, Lorenz Curve, Spatial, Accessing

RESUMEN

Los servicios indispensables para la sociedad son aquellos que comprenden la infraestructura, bienes y servicios. La razón por la cual los servicios son lo principal de una sociedad es por el surgimiento y sustento de esta misma. Este documento examina las desigualdades en la distribución de servicios en Cachemira del Norte, que se muestra en la desigualdad en la provisión de servicios educativos en los edificios de esta región. Para esto, se estudió la distribución espacial de las instituciones educacionales en Cachemira del Norte. Para determinar el patrón de concentración espacial se utilizó la técnica de cociente de localización para la provisión de servicios educativos, además, se utilizó la Curva de Lorenz y el Coeficiente de Gini como herramienta para la accesibilidad y cuantificación de la desigualdad espacial. Los resultados de análisis demostraron que existen desigualdades en la provisión de accesibilidad de los servicios educativos y que también hay una total disparidad en la distribución de instituciones educacionales a lo largo del paisaje espacial de Cachemira del Norte.

Palabras clave: servicios, infraestructura, cociente de localización, Curva de Lorenz, espacial, accesibilidad

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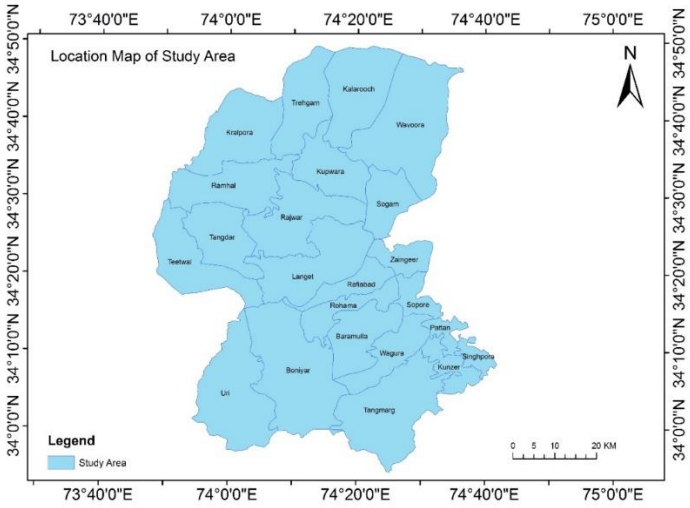
INTRODUCTION

The most important single factor in achieving rapid economic development and in creating social order founded on the values of freedom, social justice and equal opportunity is education (Arora, R.C., 1979). For rural transformation educational institutions are indeed, efficient tools. Peoples are the basis of planning and development, the core of everything is related to them. For the overall development and planning processes of area infrastructure facilities plays an important role. The process of integrated approach to planning requires detailed knowledge of the interrelations and inter dependencies between various sectors to resolve often conflicting requirements and available infrastructure of the region (Yadav, 2009). In North Kashmir there are having 1074 Primary Schools, 2255 Primary School, 1469 Middle Schools, 284 High schools 70 Higher Secondary Schools, 13 Collages and only 2 University campuses. The total number of educational institutions in North Kashmir is 5167.Therefore an attempt is made to analyze the provisions of educational facilities in north Kashmir.

The objectives are 1) To analyze the spatial distributional pattern of educational institutions in North Kashmir. 2) To examine and analyze the magnitude of spatial concentration and disparity in the provision of educational facility in North Kashmir.

STUDY AREA

North Kashmir is a part of Greater Kashmir Himalayas lies between $34^0$16'– 34^0 40'North Latitude and $73^0$45'- 75^0 35' East Longitude. The North Kashmir range have average altitude of 2400 meters and covers an area 5110.60 sq. Kms. North Kashmir Himalayas takes turn towards south west Zojila to Baramulla. It acts as water divide between Jhelum in Kashmir Valley and Kishanganga Raza, et.al, 1978. Total population of the study area is 1878393 persons as per 2011 census the area is divided into 23 blocks.



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DATA BASE AND METHODOLOGY

The base map was generated by using S.O.I. Topo sheet an scale 1:50000. Data pertaining to various socio-economic variables like total population of the study area, its block wise distribution, location and strength of different amenities etc. have been gathered accordingly from various departments. The data on population and its various attributes was obtained from Census Department. Data for health care institutions and ration stores was gathered from different government departments. The data collected from different sources has been treated statistically byusing the appropriate methods of determining the spatial distribution, spatial concentration and disparity. The statistical technique which was used are: Location Quotient and Lorenz Curve.

L.Q. $=\frac{ni/p}{Ni/P}$

ni=number of facility (i) in a given block

P= population of a given block

Ni =Number of facility in North Kashmir

P= Total population of North Kashmir.

RESULTS AND DISCUSSION

Spatial Variation: Proper and even distribution of educational institutions is vital for the development of any region as it is intimately related to the welfare of better human resource. The distribution of Educational institutions in North Kashmir is presented in the Table 1.1. Wide variation is observed in the availability of educational institutions across the Blocks of North Kashmir. Large numbers of educational institutions are found in Langet Block followed by Kupwara block while the least number educational institutions are present in Tangdar blocks of North Kashmir. Such variations indicate that the distribution of educational institutions across blocks is not proportional to the distribution of population.

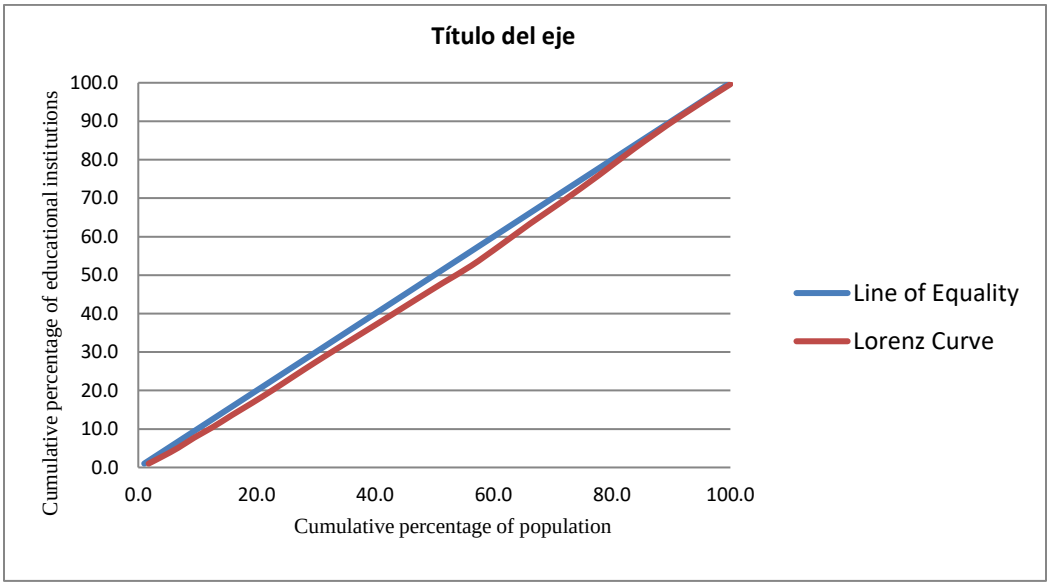
Table 1.1 Distributions of Educational Facilities in North Kashmir

Name of Block	Area in Sq .km	Population	Educational Institutions
Zaingeer	91.68	99511	225
Sopore	71.96	130596	163
Rafiabad	105.14	42750	178
Pattan	46.18	106292	261

Rohama	122.43	49889	184
Kunzer	91.6	72250	246
Singhpora	44.73	78897	224
Baramulla	197.58	150986	253
Wagura	160.09	78998	309
Boniyar	490.14	67494	225
Uri	381.2	70571	228
Tangmarg	403.99	59805	288
Tanghdar	287.85	34348	90
Teetwal	237.33	25781	139
Kupwara	192.35	163818	384
Trehgam	145.62	78321	166
Kralpora	489.13	111063	195
Sogam	298.85	83169	177
Wavoora	264.28	62363	141
Kalaroose	308.96	58169	119
Ramhal	330.67	51813	206
Rajwar	260.08	77473	310
Langet	208.82	124036	456
Total	5230.1	1878393	5167

Spatial Concentration: Location Quotient gives us an idea about the relative position of particular facilities in particular block. The analysis reveals that the level of concentration of these facilities varies quite significantly across the blocks in the North Kashmir. This means that considerable disparity exists among the blocks in terms of different facilities in order to have an idea about the degree of spatial disparity with respect to these facilities, a special type of cumulative frequency graph was employed. If the curve is close to the Line of equality, it indicates least disparity and the more it deviates from it, the more is the disparity.

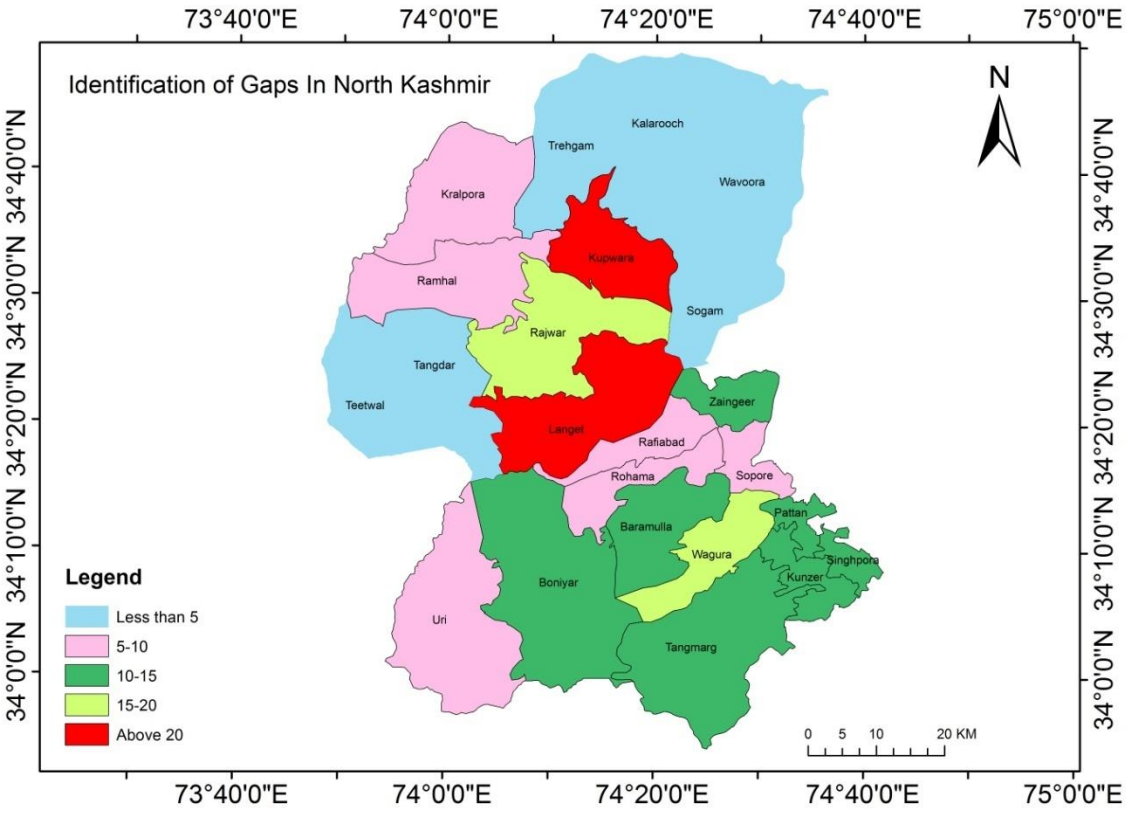
Blocks	Population	Percentage of population	Educational institutions	Percentage of Educational institutions	Location Quotient of ED.I
Zaingeer	99511	5.3	225	4.35	0.27
Sopore	130596	7	163	3.15	0.12
Rafiabad	42750	2.3	178	3.44	0.52
Pattan	106292	5.6	261	5.05	0.3
Rohama	49889	2.6	184	3.56	0.46
Kunzer	72250	3.8	246	4.76	0.46
Singhpora	78897	4.2	224	4.33	0.3
Baramulla	150986	8.03	253	4.89	0.12
Wagura	78998	4.20	309	5.98	0.46
Boniyar	67494	3.6	225	4.35	0.46
Uri	70571	3.76	228	4.41	0.46
Tangmarg	59805	3.18	288	5.57	0.52
Tanghdar	34348	1.82	90	1.74	0.3
Teetwal	25781	1.37	139	2.69	0.67
Kupwara	163818	9	384	7.43	0.3
Trehgam	78321	4.2	166	3.21	0.3
Kralpora	111063	6	195	3.77	0.12
Sogam	83169	4.42	177	3.42	0.3
Wavoora	62363	3.32	141	2.72	0.12
Kalaroose	58169	2.8	119	2.30	0.3
Ramhal	51813	2.7	206	3.98	0.46
Rajwar	77473	4.12	310	5.99	0.52
Langet	124036	6.6	456	8.82	0.56
Total	1878393	100	5167	100	



Identification of Gaps: The Weightage method has been used to identify gaps in North Kashmir given to different facilities as per their standard numbers weightage has been given to different facilities. The total number of facilities in each block has been multiplied by the number obtained by dividing the aggregate number of all kinds of facilities by total number of each facility. On the basis of the aggregated weightage the study area is divided into five categories Kupwara and Langet blocks are having highest number of educational institutions in the study area followed by Wagura and Rajwar . Blocks which fall into the category of 10-15 are Zaingeer, Pattan, Kunzer, Singhpora, Boniyar, Baramulla and Tangmarg while as Sopore, Rafiabad, Rohama, Uri, Kralpora and Ramhal blocks fall into the category of 5-10 weightage score. Block Tangdar, Teetwal, Trehgam, Sogam, Wavoora and Kalaroose with least educational facilities in the study area.

Name of Block	Educational Institutions	Aggregate Weightage Score
Zaingeer	225	11
Sopore	163	5.4
Rafiabad	178	8
Pattan	261	14
Rohama	184	6
Kunzer	246	13
Singhpora	224	11
Baramulla	253	14
Wagura	309	18
Boniyar	225	12
Uri	228	9

Tangmarg	288	15
Tanghdar	90	1
Teetwal	139	3
Kupwara	384	24
Trehgam	166	5
Kralpora	195	8
Sogam	177	5
Wavoora	141	3
Kalaroose	119	3
Ramhal	206	8
Rajwar	310	16
Langet	456	46
Total	5167	



CONCLUSION

The analysis revels that the distribution of educational institutional among the blocks as presented above indicates that there is a relationship among different blocks. Some blocks are more developed in terms of a particular facility while other blocks are lagging behind.

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