

Asian Resonance

Trends in The Spatial Pattern of Development in Block Akhnoor (J&K)

Abstract

The various issues associated with the development process in regional context, disparity in development and public policy for a balanced regional development have always been highly fascinating research problem for regional scientist throughout the world. In geographical perspective development studies involve the performance of a regional system in the various sectors of development and also differences in overall development over different areas. The main thrust of geography, however, is on the spatial perspective of development. In order to identify the spatial pattern of development in the study area fourteen number of variables related to Infrastructure, Agriculture, Education and demography has been selected and analysed at village level to identify the homogenous areas in the level of development. The result obtained at village level finally reveals that, Block development shows

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Introduction

Development is the multidisciplinary concept and studied by different social scientist with different perspectives. Development is a multidimensional process. It includes economic, social, political and ecological dimensions of development. Maintaining the integrative approach of geography, "Gosal and Krishan" observed that "development in geographical parlance, denote the quality of functioning of a regional system in terms of economic progress, social advancement, political maturity and environmental conservation". Ideally any analysis of the relative development level must cover all these aspects. This is often not feasible due to non-availability of requisite data, especially on the physical and ecological parameters. Hence, the analysis mostly restricts itself to the economic and social dimensions of development. This has been the case of present study as well. Conceptually, the term has been defined as change from a given situation to attain a better one and this change is the basic component of development. A review of literature on the theme shows that 'Development' is one of the complex words in the English Language, is one of the hardest terms to define and there can be no 'correct' definition of 'development'. Geography is essentially an area-characterizing and area-differentiating science. Hence it can best serve as a corrective to the popular tendency of treating the underdeveloped world as one monolith block with much the same problems throughout.

The nature of development varies, depending on the content in which it is occurring. In developing countries like India 'development' is often used to suggest a condition that it seen to be desirable for countries where large number of population live in comparative poverty. These people do not have access to basic necessities quite apart from the common luxuries enjoyed by people living in developed countries. In the recent years there has been a surge of interest in the geographical aspects of development that is, in the question of where economic activity take place. Sharma S.C, Tripathi P.L, Gupta R.K. & Sharma Ranjan in 1995 Studies the micro-regional disparities in the level of social development of Gandak Command Area, U.P. They came to conclusion that only 6.0% of the total blocks of the study area are in the high category & about 2/5th of the blocks are in the moderately low category. Naseer Yasmeeen in 2004 in the similar pattern studied the overall development of west plain of U.P. The outcome of the study shows that the high & very high levels of development are registered in the western districts of the study area and the eastern most districts of the region are lagging behind in the pace of development in various sectors. In the same manner Fdorov in 2002 highlights the growing regional inequalities in Russia in the 1990's. This

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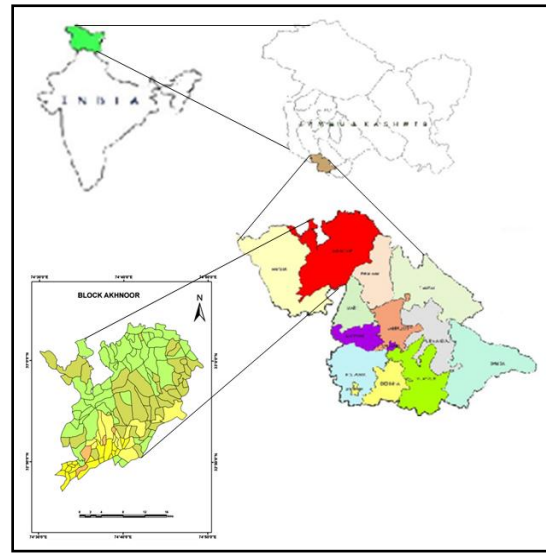
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study shows that regional inequality and polarization during the transitional period in Russia have increased significantly. Geographers are interested in the pattern of spatial distribution of levels of development in the world and in the reason for these. The patterns of development are not uniformed over different area. The differences in overall development over different areas are of special interest to geographers. The main thrust of geography, however, is on the spatial perspective of development: That is how in geography development is preferably called Regional Development.

The concept of development and disparities has inherited several ambiguity and connotation because of the differences in the view points and approaches of different discipline and the historical, socio-economic and political-administrative framework within which the planning process has in operation. The fundamental task of geography is to obtain a spatially differentiated analysis of the stages of development pertaining to individual regions with in those countries. Regional imbalances emerge due partly to differences in resource-endowments of regions and partly to the tendency to locate new investment in the easy area which has got facilities for development.

Study Area

Block Akhnoor is the part of Tehsil Akhnoor in Jammu District. It derives its name from the main town Akhnoor which is situated on the right bank of Mighty Chenab River. It is said that the town derives its name from the word Akh meaning Eye and Noor meaning light or vision. Physiographically Block Akhnoor is divided into two major divisions kandi (Local name of Shivaliks) and Plains. Kandi experienced undulating, dissected relief, bearing the rills, gullies and non perennial rivulets flow from north east to south west. The altitude of Akhnoor Shivaliks varies from 272 - 561mtrs whereas the altitude of plains varies from 260 to 268 mtrs. It is the northern most block of Jammu District and is surrounded by Block Khore in the South west, Block Bhalwal in the east, Bhalwal Block and International Border in the South east, Reasi district in the North East and District rajouri in the North. Akhnoor lies on Jammu-Poonch National Highway about 28 km away from Jammu



Map 1: Location of Study Area

Specific objectives of the current study are:

- i) To study the trends in the spatial pattern of Development at village level.
- ii) To study the spatial variation in the pattern of development.
- iii) To provide broader policy and suggestion for uniform pattern of development.

Data used

The study is mainly based on the secondary statistics meant for the year 1981 & 2001, collected for multi-level spatial units of the district under study. A brief account of these sources has been given below:

- Village Amenity Director, District Jammu 2000- 2001
- Census of India, Village & Town Directories, District Jammu, 1981 and 2001.
- Agriculture Statistics of Jammu and Kashmir, 1981, 1991, 2000 and 2001.

Methodology

The identification of regional level of development is a multidimensional process. Its impact cannot be captured fully by any single indicator. It becomes necessary to select the development variables carefully keeping in view the type and nature of the study area. There are two basic requirements or selection of variables. First, the variable should have a direct link with the level of development and other relate to measurement error. Thus the justification of the indicator must be sought not through the abstract logic of mathematics but in the underlying social reality. Keeping in view the above discussion a total fourteen number of variables related to Infrastructure, Agriculture, Education and demography has been selected and analysed at village level to identify the homogenous areas in the level of development.

In order to identify the spatial pattern of development in the study area it is necessary to derive composite index of development by combining all indicators related to three sectors of development so as to measure the overall level of development. To obtain the composite index in order to assess the

level of development, the equation may algebraically be expressed as:

$$C.I = \sum_{j=i}^n \frac{X_{ij}}{X_j}$$

Here,

C.I = Composite Index, X_{ij} = value of j^{th} variate for i^{th} village, n = number of variables.

Higher the value of C.I, the higher will be development. A modified version of mean and standard deviation method has been used wherein the mean occupies the mid position of a class rather than a dividing line for the segmentation of the study based on the different levels of development.

- (a) Very High or Rank Ist = Above (Mean + 1SD) or Above (Mean +2S.D)
- (b) High or Rank IInd = Between (Mean + ½ S.D to Mean + 1S.D) or (Mean + 1S.D to Mean + 2S.D)
- (c) Moderate or Rank IIIrd = Between (Mean to Mean + ½ S.D) or (Mean to Mean + 1S.D)
- (d) Low or Rank IVth = Between (Mean – ½ S.D to Mean) or (Mean-1 S.D to Mean)
- (e) Very Low or Rank Vth = Below (less than Mean – ½ S.D) or (less than Mean-1S.D)

Thus, the discussion is based on the results obtained by the composite index method. Appropriate GIS techniques have been used to enhance the presentation of statistical results by providing a visual impact.

Result and Discussion

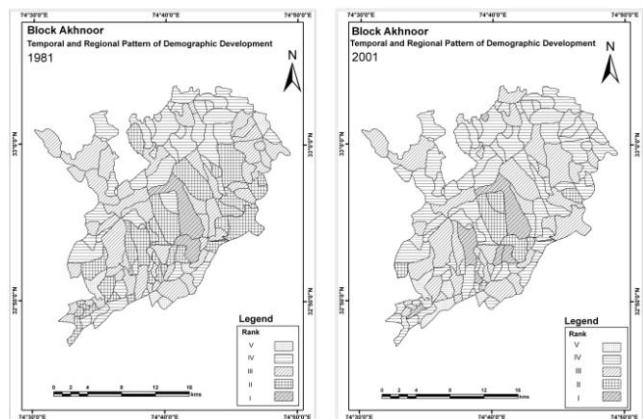
Temporal and Regional Pattern of Demographic Development

The general objective in this section is to analyze demographic development & changes in economic & social living conditions of the population. Population serves as the point of reference from which all other geographic elements are observed and from which they all singly and collectively derive significance and meaning. Population has double role in the process of development on one hand; they are factor of production as work force and effective market for goods and services. On the other hand people are sole beneficiary of the entire process of development therefore; all the development should address the people.

The present research activities combines a micro-analytical approach focusing on demographic & socio-economic process, with a micro level approach directed at describing changes in social and demographic structure. It covers issue like total population, density of population, sex ratio and %age of workers to total population. Population dynamics, such as birth rate, death rate and migration, also indicate development level of an area. Data on these counts are generally not available for small units like village. Hence, these could not be adopted as indicators for studying the Demographic Development. Village wise data has been used to study the Demographic Development at Block level.

Table 1
Composite Index of Demographic Characteristics of Block Akhnoor.

Category	1981			2001		
	Value of C.I	Rank	No. of Villages	Value of C.I	Rank	No. of Villages
Above Mean +2S.D	> 7.19	I	3	> 8.44	I	8
Mean + 1 S.D to Mean +2 S.D	5.56 - 7.18	II	16	6.26- 8.43	II	6
Mean to Mean+ 1S.D	3.93 - 5.55	III	38	4.08 - 6.25	III	32
Mean - 1 S.D to Mean	2.30 - 3.92	IV	60	1.90 - 4.07	IV	82
Less than Mean - 1 S.D	< 2.29	V	14	< 1.89	V	3
			131			131



Map 2: Temporal pattern of Demographic development in Block Akhnoor.

Table 1 depicts the Composite score in the levels of Demographic Characteristics over the period of Twenty year i.e. 1981-2001. The villages has been categorized into five ranks ranging from very low to very high on the value basis of composite Index calculated from the value of Total population, density of population, sex ratio and percentage of workers to total population. The finding in the table.1 reveals that there is overall improvement in the demographic development over the two decades. There were 14 villages in very low categories in 1981 the number comes down to 3 only in 2001 and moreover over the period two decades five number of villages added up in first category. This is due to increase in total population as well as there is sizeable increase in the percentage of workers to total population. Other important factor is that lot of people migrated due to border tension from the nearest block i.e. Khour which is close to the Actual Line of Control and settled down in block Akhnoor.

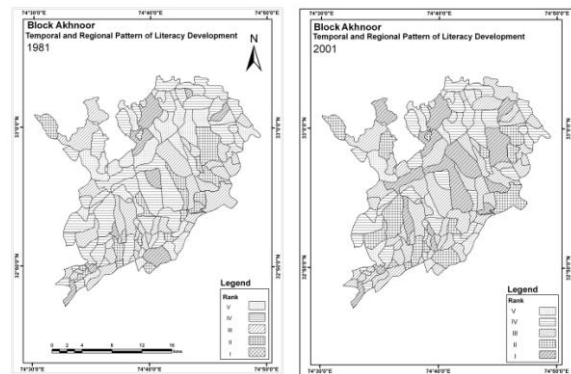
Temporal and Regional Pattern of Literacy Development

The term literacy relates to both reading and writing which imparts knowledge, cultivates skill, instill values and builds attitudes, all of which are vital to development process. Literacy can “Literate” people from social, educational, political and economical woes or it can become a major hurdle to development if the human resource remain illiterate (Freire 1995: 2469) (Source Internet www.Pngbkai.com). Human resources play a significant role in bringing the state of overall development in a country and the development of human resources depends mainly on literacy level. It is the literacy which determines the prosperity, welfare and security of not only individual but also for a country. In this scientific age, as much as 50% literacy is very essential for a country to be able to use the modern science and technology. Reddy opined that at least one-third population should be literate to achieve industrial modernization. The ability to read and write is an important input in and is vitally linked with the totality of development process.

The improvement in literacy level improves the, living standard and also the ability to face the social problems which eventually improve the development level. Keeping in view the above the literacy variable has been examined by three components namely, Percentage of literate to total population, percentage of female literate to total population and the education facility at village level.

Table 2:
Composite Index of Literacy Characteristics of Block Akhnoor.

Category	1981			2001		
	Value of C.I	Rank	No. of Villages	Value of C.I	Rank	No. of Villages
Above Mean +2S.D	>5.53	I	7	>5.68	I	5
Mean + 1 S.D to Mean +2 S.D	3.77-5.53	II	7	4.34 - 5.57	II	11
Mean to Mean+ 1S.D	2.01 - 3.77	III	39	3 - 4.34	III	32
Mean - 1 S.D to Mean	0.25 - 2.01	IV	64	1.66 - 3	IV	75
Less than Mean - 1 S.D	<0.25	V	14	<1.66	V	8
			131			131



Map 3: Temporal pattern of Literacy development in Block Akhnoor.

Table.2 clearly depicts that there is considerable improvement in the literacy scenario over a period of two decades. There are six villages which shift their position from last category (i.e Rank V) to the other categories between 1981 to 2001. This is due to the fact that, Government of Jammu and Kashmir over the years formulate various programmes and policies to improve the overall literacy pattern.

Temporal and Regional Pattern of Infrastructure Development

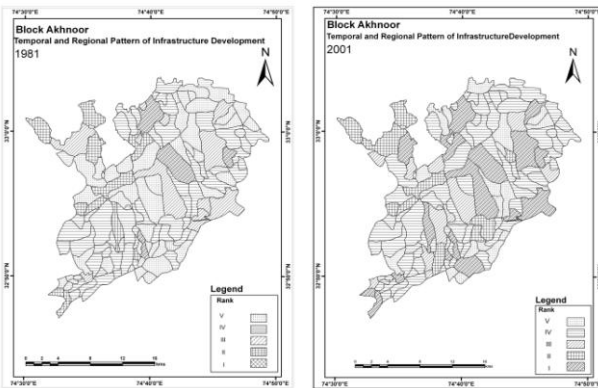
The essential concept of infrastructure is a simple one-Infrastructure is a set of assets needed to supply certain desired services. Infrastructure simply refers to the basic facilities, services and installations needed for the functioning of a community or society, such as transportation communication systems, water and power lines, public institutions including schools, Hospitals, Post office and Prisons. The world Development Report 1994 published by world bank under the title “Infrastructure for Development” rightly mentions that the adequacy of Infrastructure helps to determine one country’s success and another’s failure-in diversifying production, expanding trade, coping with population growth, reducing poverty, or improving environmental condition. Mody (1997 : XII) aptly suggests that in any modern society, infrastructure play a pivotal role often decisive role in determining the overall productivity and development of a country’s economy, as well as the quality of life of its citizens. Infrastructure definition says that anything that forms the core of the functioning of any country is infrastructure and robust infrastructure is the fuel for sustainable Development.

Infrastructure Development shows the quality of life of population in any given region. The infrastructure is the totality of the structure of road network, communication and transmission of information, health and other activities. The development of a region depends upon the development of agriculture and industry but such a development cannot take place without simultaneous development of Infrastructure. The rural areas of India are stagnant and lagging behind the urban areas because of inadequacy in Infrastructure. Keeping in view the above discussion the five set of social amenities viz., (i) village connected with Pucca Road (ii) Village having Electricity facility (iii) Village with

Post Office (iv) Village with Tap Water and (v) Village with medical facility has been taken to analyse the spatial pattern of Infrastructure development in the region under study.

Table.3
Composite Index of Infrastructure Characteristics of Block Akhnoor.

Category	1981			2001		
	Value of C.I	Rank	No. of Villages	Value of C.I	Rank	No. of Villages
Above Mean +2S.D	>7.56	I	17	> 6.88	I	27
Mean + 1 S.D to Mean +2 S.D	5.31 - 7.56	II	10	5.62 - 6.88	II	0
Mean to Mean+ 1S.D	4.02 - 5.31	III	42	4.36 - 5.62	III	2
Mean - 1 S.D to Mean	2.25- 4.02	IV	15	3.10 - 4.36	IV	81
Less than Mean - 1 S.D	< 2.25	V	47	< 3.10	V	21
			131			131



Map 4: Temporal pattern of infrastructure development in Block Akhnoor.

Table.3 shows the Infrastructure Development in Block Akhnoor. Block Akhnoor shows an increase of 10 villages in Rank I between 1981 and 2001 and also twenty one numbers of villagers shift their position from fifth category to the upper categories in terms of Infrastructure development. Block under study shows tremendous improvement in Drinking water facilities, in Electricity facility, and in Road connectivity. There seems little development in Medical and Postal services. On the average the concern blocks show Moderate Development in terms of Infrastructure Development over the period taken under study.

Temporal and regional pattern of agriculture development

Most of the India's poor people live in rural areas and are engaged in farming. This fact led many researcher to conclude that Agriculture Development is essential in helping the poor not only by directly increasing the incomes of poors who farm but also by releasing labour and capital that can be used in non-agricultural enterprises and by stimulating the demand

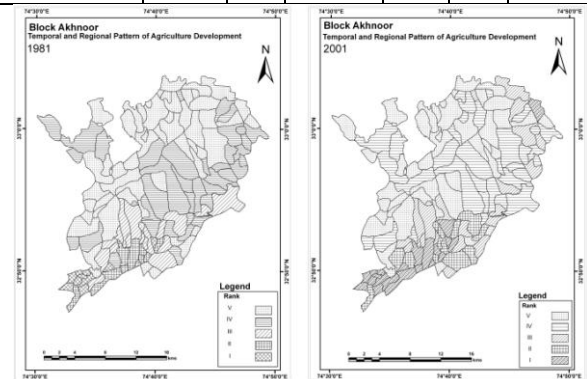
for non-agricultural goods. Agriculture Development is not pre-determined but it is a continuous process of improvement of crop and livestock production. Moreover Development in the farm sector requires a balanced human resources development in most of the countries. In Indian context rural development depends on progress and growth of agriculture.

The importance of Farm sector in Jammu and Kashmir can be accessed from the fact that it employ 70% of state work force and contribute 60% of the state income. Moverover Agriculture was the highest contributor to the GSDP of the state among all industries in various sectors during 2005-06. (Internet IBEF: - India Brand Equity Foundation).

Most of the population in the southern part of the Block is engaged in farm sector and about 30% its geographical area is under cultivation. Its development and prosperity is essentially related to Agriculture. All round development in agriculture will surely be reflected on economic upliftment. Keeping in views the above facts indicator like % of net cultivated area to total geographical area, % of net irrigated area to net cultivation and source wise irrigation has been analysed to judge the levels of Agriculture Development.

Table.4
Composite Index of Agriculture Characteristics of Block Akhnoor.

Category	1981			2001		
	Value of C.I	Rank	No. of Villages	Value of C.I	Rank	No. of Villages
Above Mean +2S.D	>5.25	I	20	>7.38	I	9
Mean + 1 S.D to Mean +2 S.D	3.79- 5.25	II	4	4.94 - 7.38	II	16
Mean to Mean+ 1S.D	2.34 - 3.79	III	14	2.50- 4.94	III	17
Mean - 1 S.D to Mean	0.89 - 2.34	IV	40	1.28 - 2.50	IV	38
Less than Mean - 1 S.D	< 0.89	V	53	<1.28	V	51
			131			131



Map 5: Temporal pattern of Agriculture development in Block Akhnoor

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A cursory look at table no. 4 shows a negligible agriculture growth in block Akhnoor, over a period of two decades. The numbers of villages in all ranks are almost same between 1981 and 2001. The value of Mean and Standard Deviation also shows a very slight difference. This can be attributed to the fact that about 417.84 hector of cultivated land area comes under Akhnoor town and Jourian notified area committee which comes into existence after 1981 census. Moreover most part of the block falls under the kandi belt.

Conclusion

The above discussion depicts the temporal and spatial pattern of development in block Akhnoor. The result pertaining to the various sectors of development shows that there is considerable improvement in demography and literacy. Whereas in terms of Infrastructure, there is moderate pattern of development between 1981 to 2001. In contrary to this Agriculture shows a negligible improvement over the period taken under study in Akhnoor block.

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