

Spatial Disparities in Socio-economic Development among North-western Indian States

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ABSTRACT Regional disparity in the socio-economic development is a universal phenomenon which can be found in developed and developing countries of the world including India. The present paper addresses the issue of regional disparity based on 16 indicators of socio-economic development at district level in north-western region of India. The study has been done with reference to three reference years at an interval of 20 years, that is, 1971, 1991 and 2011. The study is entirely based on secondary sources of data collected from various government data providing agencies. In order to examine the spatial variations in socio-economic development, Z-score and composite standard score have been computed and interpreted. Co-efficient of variation (C.V.) has also been computed to measure the disparities at the variable level and overall development. During 1970s, the high level of development was concentrated in few pockets. North-west India has witnessed visible improvement in the levels of socio-economic development. The study shows that the low level of development remained concentrated in the districts of Rajasthan along with the central-western districts of Jammu & Kashmir. Despite declining regional disparities in socio-economic development, some of the districts are still multi-sectoral backward in the study region.

INTRODUCTION

Development is a very complex term. Historically, it hovered around economic aspects. Initially, Development was seen in economic terms and measured in terms of gross domestic product (GDP) per capita. Later on, social aspects also received attention and provided a comprehensive and inclusive character to the concept of development. Nowadays, development incorporates both the economic and social aspects as a barometer of the well-being of any region. With the absence of any of the component either economic or social, the welfare improvement and the progress of society can't be analysed. Development is a planned and comprehensive economic, social, ecologically oriented and political process which aims at improving the well-being of entire population. Undoubtedly, nature has created many differences among people, regions and various situations. The conditions of differences are known as constraints. On the other side, the social, economic, political and religious differences created by man are known as inequalities or disparities (Rajalakshmi 2013: 4). Disparities and development are actually two sides of a coin.

These cannot be separated from each other. In social science literature, disparities are measured mainly in terms of infrastructural facilities, social welfare, economic growth, agricultural development and basic amenities.

Hence, development is a multifaceted phenomenon. It mainly includes the level of socio-economic growth, health services, degree of modernization, distribution of goods and services and status of women in society. All these aspects of development can't be same because of some reasons, that is, unequal distribution of natural resources, administrative mechanism, political will and numerous historical, demographic and economic processes. The socio-economic development and ecological sustainability present the true fabric of any region. It means the improvement in the lifestyles of people through improved education, income, economy and employment. It can be termed as the process of economic and social transformation based on cultural and environmental factors. Socio-economic development and regional disparities go hand in hand. Regional disparities are the integral part of socio-economic development with varying intensity. Many scholars of different fields have worked on the issue of regional disparities in the levels of socio-economic development. Some of the international

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works by Kuznets (1955), Myrdal (1957), Zimon (1979), Siddiqui (1981), Lipchitz (1986) and Daly and Hale (2010) stand out here.

The studies on spatial disparities in the socio-economic development in India also mirrored the international trend in terms of thrust, perspective and methodology. Rao (1986), Nair (1988), Narain et al. (2002), Noorbaksh (2003), Rai and Bhatia (2004), Mustaqim et al. (2006), Sahol and Kaur (2006), Kurian (2007), Asif (2009), Mohanty (2009), Mishra and Mujoo (2013), Rajalakshmi (2013), Ganaie et al. (2014), Ghosh and Chakma (2014), Nayak (2014), Singh (2014), Sadaf and Munir (2015), Devi and Rajeshwari (2016), Mustaqim and Asif (2016), Radhika et al. (2016), Sharma (2017) and Raj and Thakur (2019) analysed the issue of regional disparities in India. Raj and Thakur (2020) has already mentioned that these studies have mainly focused on the disparities in infrastructure, health, education and agriculture sectors conducted at different geographical scales.

Regional imbalances in socio-economic and political spheres are a major concern in India. The pattern of regional development in India is quite unequal. The history of regional disparities in India goes back to the colonial rule of Britishers. British developed only those particular regions, which were politically, economically and administratively important to them. Other regions of the country remained neglected to the process of development and the problem of regional disparities remained alive even after introducing and implementing a plethora of regional development programmes. The regional disparity in the levels of socio-economic development among the states of north-west India is also a matter of serious concern. The study area is well known for the differences in economic base, social aspects, resource distribution, unequal agricultural production and physical environment. So, the study of regional disparity in the levels of socio-economic development assumes a vital significance for ameliorating the backwardness in the concerned areas.

Objectives

The present study has been conducted to realise the two-fold objectives:

- i. To examine the increase or decrease in the regional disparities in socio-economic developments among north-western states

of India between 1971 and 2011 at variable and sectoral levels

- ii. To analyze the varying pattern of socio-economic development at the district level during the study period

Study Area

The Northwestern Indian states have been chosen for the present investigation. These states included the states of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Haryana, Punjab and Rajasthan along with two union territories of Chandigarh and Delhi. As per 2011 Census the study area sprawls over an area of about 6, 67,327 sq. kms. It supported about 17 Crore persons. It accounted for about 20 percent of the geographical area and 14 percent of the total population of India. It lies between 23° 30' N to 37° 06' N latitude and 69° 30' E to 81° 10' E longitude. In the North, it forms the international border with Afghanistan and Pakistan. It shares the international boundary with China and Nepal in the north-east. In the South-east, it shares the boundary with Madhya Pradesh. It demarcates the boundary with Gujarat state in the south-west.

METHODOLOGY

The present study is based on secondary sources of data collected from Directorate of Census Operations, Directorate of Economics and Statistics and Department of Health and Family Welfare of states of north-west India, for the years 1971, 1991 and 2011. The spatial disparities in the levels of socio-economic development have been studied at district level.

The spatio-temporal variations in socio-economic development have been assessed with respect to 16 indicators namely total literacy rate (X^1), female literacy rate (X^2), male literacy rate (X^3), urbanization (X^4), total work participation rate (percentage of workers to total population) (X^5), male work participation rate (percentage of male workers to total male population) (X^6), female work participation rate (percentage of female workers to total female population) (X^7), sex ratio (X^8), total health institutes/10000 persons (X^9), total institutional beds/10000 persons (X^{10}), road density (km/100 km²) (X^{11}), student-teacher ratio (number of students per teacher) (X^{12}), net

irrigated area (percent) (X^{13}), net sown area (percent) (X^{14}), irrigation intensity (percent) (X^{15}) and cropping intensity (percent) (X^{16}).

The spatio-temporal disparities in socio-economic development have been brought out using the Z-score and composite standard score (CSS) computed at the district level.

Based on the 16 variables, the composite standard score has been classified in the following categories:

<i>Development category</i>	<i>Composite score</i>
Very high	More than 1.0
High	0.5 to 1.0
Moderate	0 to 0.5
Low	-0.5 to 0
Very low	Less than -0.5

The co-efficient of variation (C.V.) has also been computed to find out the trend of regional disparities at individual and sectoral level of socio-economic variables.

The spatio-temporal variations in the levels of socio-economic development have been shown with the help of choropleth maps. In present study a methodology has been developed to maintain the homogeneity in the unit of analysis so that the trend and pattern of regional disparities in socio-economic development can be analysed systematically and can depict the real characteristics and changes in the study area.

There have been changes in the administrative boundaries of districts between 1971 and 2011 in the study area. The districts of 1971 have been taken as base districts for the present study and the newly carved districts of census year 1991 and 2011 have been clubbed in the districts of base year.

The following criteria have been applied in present study:

- i) The newly created districts of census year 1991 and 2011 were clubbed in parent district from which they have originated. This criterion has been applied for the districts which have been carved out from single parent district.
- ii) If the newly created district has been carved out from multiple parent districts, the criterion of more than 50 percent area covered has been applied. The districts accounting for more than 50 percent administrative area in any of the constituent parent district

(multiple cases) have been clubbed with the same.

RESULTS AND DISCUSSION

The spatio-temporal variations in the level of socio-economic development have been divided into the following five categories.

Higher value of composite standard score shows the higher level of development and vice-versa.

i) Areas of Very High Socio-economic Development (>1.00)

It is evident from the Table 1 and Figure 1 that only four districts namely, Delhi, Chandigarh, Haridwar, Shimla and Lahul & Spiti, in the study area have witnessed very high socio-economic development in 1971. These areas together accounting for 2.25 percent area supported about 7 percent of total population of the study area in 1971. Table 1 and Figures 2 and 3 exhibit that in 1991 and 2011 there was not even a single district registering very high socio-economic development in study area. The higher socio-economic development in these areas during early 1970s could be attributed to multiple factors. Shimla and Delhi happen to be the centres of political, administrative and socio-economic activities even prior to the independence of the country. Historically, these were well developed by British due to their political, administrative and geostrategic importance and compulsions. Chandigarh happens to be the first planned city of independent India where the literacy, urbanisation and health sector received prime attention. Due to these reasons Chandigarh observed very high socio-economic development in 1971. Very high socio-economic development in a notified tribal district of Lahul & Spiti in 1971 may be attributed to low population base, large geographical area, higher work participation, sex-ratio and availability of better health infrastructure. Haridwar registered very high socio-economic development in 1971 due to statistical fallacy and non-availability of data of some indicators. The disappearance of districts in more than 1.00 standard score category in 1991 and 2011 clearly indicates declining regional disparities in socio-economic development in the study region during the study period.

ii) Areas of High Socio-economic Development (0.5 to 1.00)

Table 1 and Figure 1 exhibit that in 1971, Dehradun was the only district registering high socio-economic development in north-west India. The number of the districts with high socio-economic development has increased to 6 in 1991 (Table 1). Figure 2 shows that Lahul & Spiti, Chandigarh, Ludhiana, Hisar, Delhi and Karnal districts observed high socio-economic development in 1991. These districts accounted for 3.89 percent area and about 12 percent of the population of the study area. In 2011, the same districts along with Bathinda district of Punjab registered high socio-economic development (Fig. 3). These districts together accounted for 5.26 percent of area supporting 17.15 percent population of the study area. The inclusion of Dehradun, Chandigarh and Delhi in high socio-economic development category in 1971 was epiphenomenon of British efforts and resultant socio-economic development. Besides, relatively low population base, establishment of educational and research institutions of national importance also contributed in high socio-economic development of Dehradun.

The study reveals that between 1971 and 1991, the agriculture sector especially the growth in cropping intensity and improvement in road infrastructure have contributed in high level of socio-economic development in these areas and continued to be so in 2011. The study reveals that due to declining inequalities and improvements in socio-economic life, the share of both

area and population has increased in category of high level of socio-economic development during the study period.

iii) Areas of Moderate Socio-economic Development (0 to 0.5)

Table 1 represents that in 1971, about 37 percent of the total districts have witnessed medium level of socio-economic development (0 to 0.5). Figure 1 represents that majority of the districts of Punjab, Utrakhand, Himachal Pradesh and some parts of Haryana and Jammu and Kashmir registered medium level of socio-economic development in study area. Ajmer district of Rajasthan also witnessed moderate socio-economic development in 1971. The share of moderately developed areas has increased to 38.26 percent in 1991 (Table 1). It is evident from the Figure 2 that the geographical distribution of these districts remained almost same except a few changes. Dehradun, Rohtak, Mahendergarh Jhunjhunun, Gurgaon, Alwar, Kota and Bathinda districts also observed moderate development in 1991. The share of the districts with moderate level of socio-economic development has slightly increased to about 38 percent in 2011 (Table 1). Figure 3 shows that the distributional pattern remained unchanged between 1990s and 2011. Ganganagar district of Rajasthan entered as a new district in this category in 2011. It has been observed that about 37 percent of the total population witnessed medium level of socio-economic development in 1971 which increased to 39.65 percent in 2011. The study reveals that different state governments shifted

Table 1: North-west India: Districts by socio-economic development

Development category	No. of districts			Area (sq km)			Population		
	1971	1991	2011	1971	1991	2011	1971	1991	2011
Very High	5	-	-	15208 (2.25)	- (0.00)	- (0.00)	4563607 (6.95)	- (0.00)	- (0.00)
High	1	6	7	3088 (0.46)	26723 (3.89)	35094 (5.26)	577306 (0.88)	13384792 (12.20)	29162534 (17.15)
Moderate	30	34	33	245620 (36.75)	263002 (38.26)	251757 (37.73)	25639233 (39.07)	44909420 (40.94)	67420983 (39.65)
Low	4	7	6	65769 (9.84)	69822 (10.16)	102113 (15.30)	1831519 (2.79)	2529218 (10.16)	12797007 (7.53)
Very Low	35	28	29	338903 (50.70)	327935 (47.70)	278363 (41.71)	33013778 (50.31)	48879864 (47.70)	60667269 (35.68)
Study Area	76	76	76	668408 (100.00)	687482 (100.00)	667327 (100.00)	65625443 (100.00)	109703294 (100.00)	170047793 (100.00)

Source: Computed by authors based on Census Data
 Figures in the parentheses show the percent to the total

their focus to develop the backward areas rather than highly developed areas.

iv) Areas of Low Socio-economic Development (-0.5 to 0)

Table 1 reveals that in 1971, only four districts namely Doda, Jaisalmer, Jalor and Banswara witnessed low socio-economic development in

North-west India. These districts covered about one-tenth of the total area and about 3 percent of total population. The share of area remained almost unchanged in 1991 but the share of population increased to about 10 percent of the total population. However, Srinagar, Baramula, Sirohi and Barmer emerged as new districts in the category of low socio-economic development in 1991. The share of such districts has further

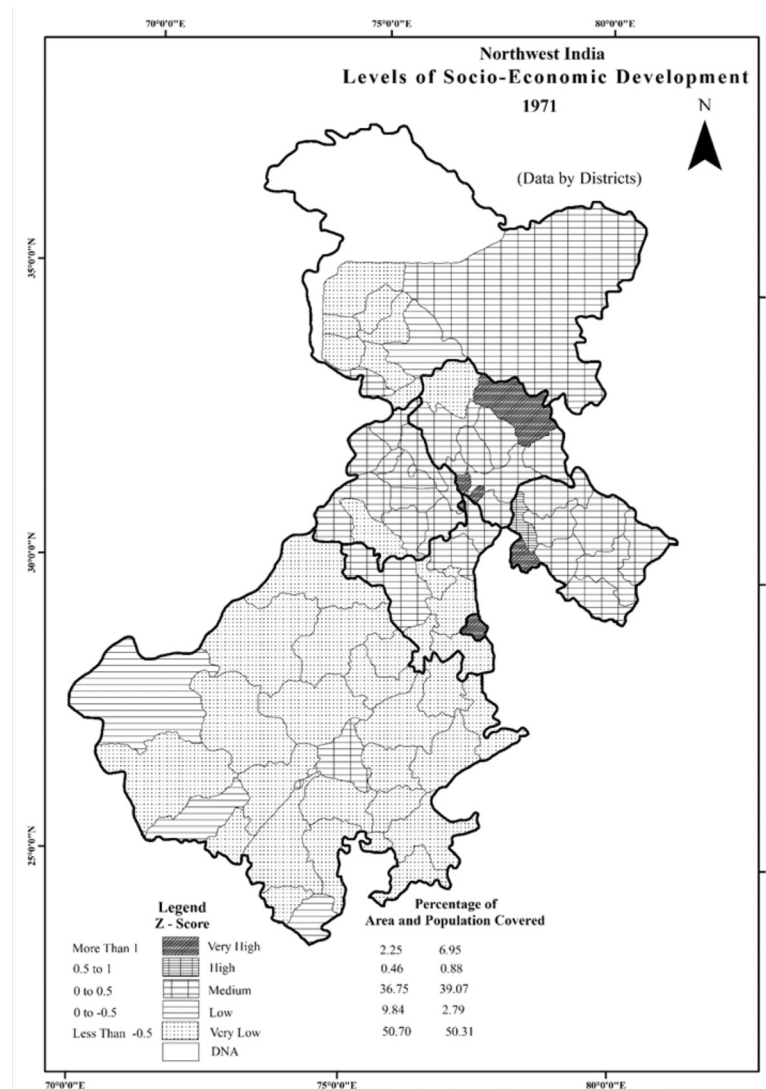


Fig. 1. Northwest India: Levels of socio-economic development 1971

Source: Composed by Authors based on Census Data

increased to about 15 percent in 2011 covering about 7.53 percent of total population in 2011 in these areas. The same geographical areas concentrated in central-western and south-western parts of Jammu and Kashmir and Rajasthan witnessed low level of socio-economic development in study area. The study reveals that these areas have registered multi-sectoral backwardness

due to various social, economic and physical factors. Extreme temperature, desertic conditions (Thar desert), extreme geographical locations, rural economy with less economic resources, rugged topography road inaccessibility and relatively less communication services together contributed to low socio-economic development in these areas.

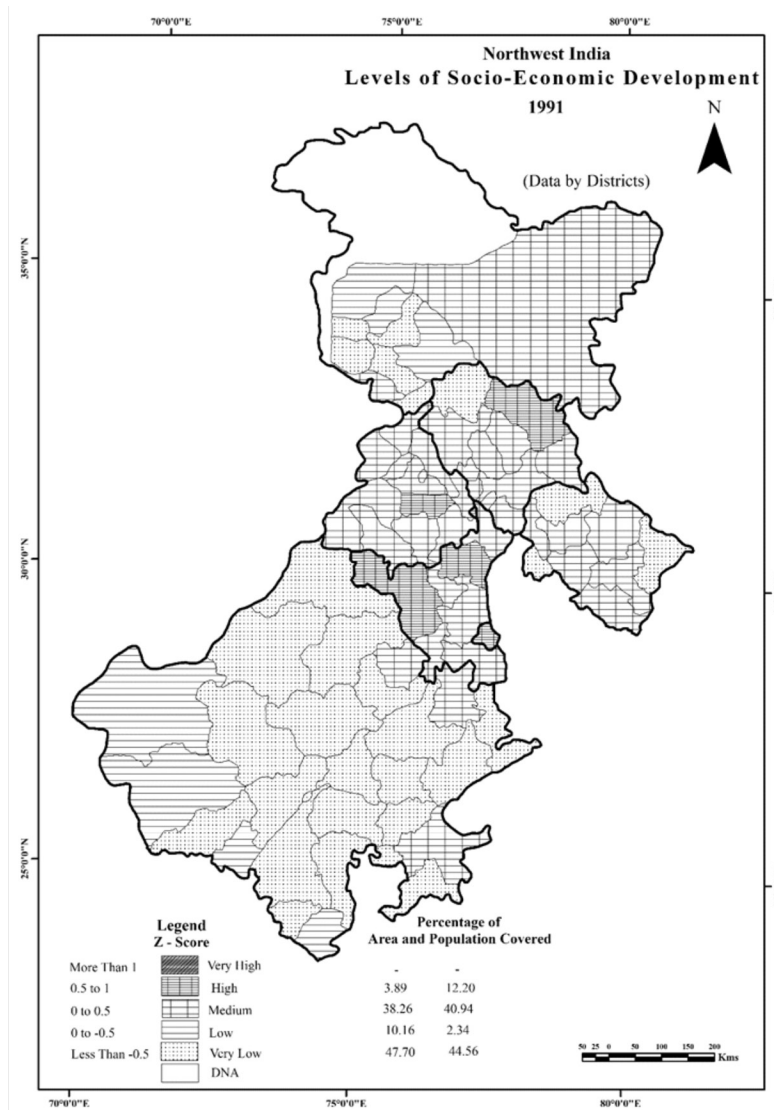


Fig. 2. Northwest India: Levels of socio-economic development 1991

Source: Composed by Authors based on Census Data

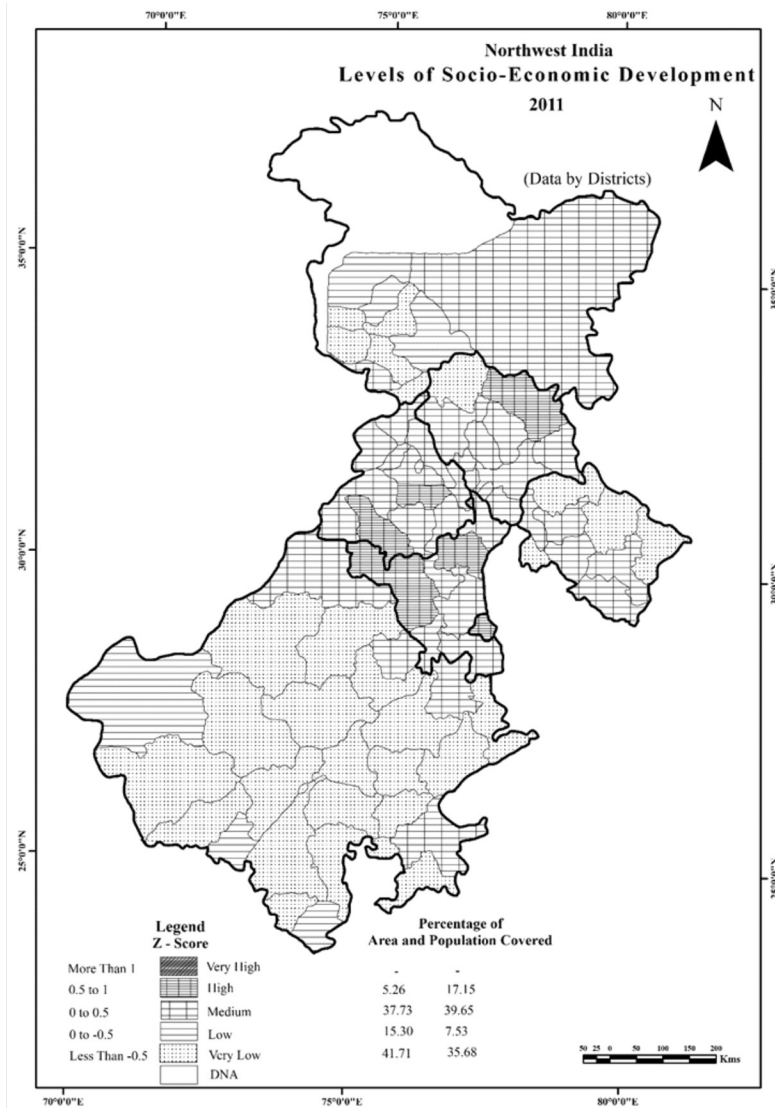


Fig. 3. Northwest India: Levels of socio-economic development 2011

Source: Composed by Authors based on Census Data

v) Areas of Very Low Socio-economic Development (< -0.05)

Table 1 represents that in 1971, about 50 percent of total districts in north-west India registered very low socio-economic development. These districts were mainly concentrated over the large parts of Rajasthan and central-western parts of Jammu and

Kashmir (Fig. 1). Central and south-eastern districts of Haryana along with Bathinda district of Punjab and Chamba district of Himachal Pradesh witnessed very low socio-economic development. These districts accounted for about 50 percent of total population of the study area in 1971. The share of these districts decreased to about 48 percent of total area supporting equal

proportion of population in 1991 (Table 1). The districts of Haryana moved up to next category of development due to significant improvement in agriculture sector and its impacts. Uttarkashi, Pithoragarh and Haridwar reported decline in socio-economic development score due to more pace of development in other districts and more thrust on backward districts during 1980s and 1990s. The share of such districts further decreased to about 42 percent in 2011 constituting about 36 percent of total population (Table 1). The study reveals that the already backward areas continued to be so in 2011 also. Surprisingly, the geographical distribution of these districts has remained same in 2011 also. Chamoli district of Uttarakhand has also observed very low socio-economic development in 2011. Majority of the districts of Rajasthan have been observed backward during the study period. Illiteracy, low education standard, rural economy with dependence on agriculture, tribal population, climatic conditions, poor road connectivity, less agricultural output, vast expanse of barren land, and political unwillingness have contributed in chronic backwardness of these areas. The district of Jammu & Kashmir also registered very low socio-economic development in study area. The study endorses the theory of Kuznets (1955) which tells inequalities increases during the early stage of development and decreases as the economy strengthened. Myrdal (1957), Williamson (1965), Friedman (1966) and Alonso (1980) further supported the same theory. In Indian perspective Minocha (1983) found that after the independence, the government has witnessed some changes but continuously favoured and supported the metropolitan cities and large urban centres. Similar trend has also been witnessed in the study area also. Raj and Thakur (2020) have also found the same trend that metropolitan urban centres and politically important administratively headquarters observed comparatively high development and other hinterland areas witnessed moderate to low level of development. same trend has also witnessed in the north-western states of India.

Variable Wise Regional Disparities (1971-2011)

Different regions of a country grow with different rates resulting in disparities in socio-economic

life (Raj and Thakur 2020:8). The spatial disparities in socio-economic development in the study area are corollary of both physical controls and human led processes. The co-efficient of variation in literacy rate has witnessed about 25 percent point decrease during the study period. Thus, the pace of decrease in disparities in literacy rate was higher between 1971 and 1991 than during the next two decades in study area. But, overall disparity in the literacy has declined during the study period. The co-efficient of variation in male literacy registered about 20 percent point decline 1971 and 2011. Thus, regional disparities in male literacy witnessed more than three-fold decrease during the study period. The regional disparities in female literacy rate have also registered more than 3.5 times decrease. The study finds higher regional variations among females than their male counterparts in the study area. It has been observed that the disparities in female literacy declined at faster rate between 1971 and 1991 than 1991 and 2011. It may be attributed to government policies oriented at upliftment of women in the country. The study reveals that the co-efficient of variation in urbanisation was about 96 percent in 1971 and declined to about 75 percent in 1991 and about 72 percent in 2011. Thus, the study shows that during 1970s and 1980s there were notable disparities in urbanisation which declined with the passage of time. The pace of decline was more intense between 1971 and 1991 than 1991 and 2011.

The co-efficient of variation in work participation was 32.58 percent in 1971. It has progressively decreased to 19.20 percent in 1991 and 19.11 percent in 2011. The study reveals the decreasing trend of disparities in work participation rate during study period. But, the pace of decrease was relatively higher between 1970s and 1990s than during next two decades. Table 2 portrays that in 1971, the co-efficient of variation in male work participation has remained unchanged between 1971 and 2011. In 1971, the disparities in female work participation were very high. The co-efficient of variation in female work participation was about 128 percent in 1971. It significantly decreased to about 55 percent in 1991 and about 45 percent in 2011. The study reveals the progressive decline in regional disparities in north-western region of India. The study finds that the sex ratio has experienced the least regional disparities among all the variables chosen for investigation. The co-efficient of variation

in sex ratio varied from 9.26 percent in 1971 to about 8 percent in 2011.

Regional disparities in availability of health institutions have decreased during the study period. The co-efficient of variation in availability of health institutes per size of population was about 86 percent in 1971 which declined to 66 percent in 2011. The study represents that the coefficient of variation in availability of patient beds in health institutes remained unchanged that is 83 percent during the study period. Although, there has been increase in numerical strength of beds per size of population but the rise in population growth outpaced their availability to the patients in the study area. Table 2 shows that in 1971, the co-efficient of variation in road density was 273.14 percent in study area. It has increased to 298 percent in 1991 and slightly declined to about 282 percent in 2011. The study shows notable regional disparities in road density during the study period. The disparities in road density have not decreased significantly during the study period. It may be attributed to the fact that the northern mountainous states of Jammu & Kashmir, Himachal Pradesh and Uttrakhand along with some bordering districts of Rajasthan witnessed very low road density than very high road density of Delhi and Chandigarh. The administrative size of the districts has also been one of the factors for higher regional disparities in road density during the study period. The smaller districts have witnessed relatively higher road density in the study area and vice-versa.

The study reveals that in 1971, the co-efficient of variation in student-teacher ratio was 88.2 percent. It has decreased to about 30 percent in 1991. But surprisingly it has increased further to about 48 percent in 2011. The fluctuating behaviour of regional disparities in pupil-teacher ratio may be attributed to a gap in increasing enrolments and shortage of primary teachers in the study area. The universalization of primary education and declining drop-out rates and large number of teaching vacancies at the primary level also led to still higher regional disparities in teacher-taught ratio. In 1971, the co-efficient of variation in area under irrigation was about 78 percent. It slightly decreased to about 75 percent in 1991 and about 68 percent in 2011. This shows the clear picture of decreasing disparities in area under irrigation among north-western states of India. Various government

Table 2: North-west India: Co-efficient of variation among socio-economic variables (1971-2011)

Indicators	Co-efficient of variation (percent)		
	1971	1991	2011
Total Literacy Rate (X ¹)	39.48	15.55	14.03
Female Literacy Rate (X ²)	75.54	24.90	21.12
Male Literacy Rate (X ³)	30.59	10.22	9.74
Urban Population (percent) (X ⁴)	95.95	75.06	71.85
Total Work Participation Rate (X ⁵)	32.58	19.31	19.11
Male Work Participation Rate (X ⁶)	9.87	8.66	9.92
Female Work Participation Rate (X ⁷)	128.44	54.74	45.56
Total Health Institutes/10000 Persons (X ⁸)	9.26	6.80	7.40
Total Institutional Beds/10000 Persons (X ⁹)	86.02	76.10	66.30
Sex Ratio (X ¹⁰)	83.45	72.65	83.29
Road Density/100 sq. km (X ¹¹)	273.14	298.00	282.26
Student - Teacher Ratio (X ¹²)	88.21	30.30	47.79
Net Irrigated Area / (percent) (X ¹³)	78.41	74.91	68.13
Net Sown Area / (percent) (X ¹⁴)	62.65	64.73	65.42
Irrigation Intensity (percent) (X ¹⁵)	20.35	69.73	26.70
Cropping Intensity (percent) (X ¹⁶)	22.41	25.33	20.77

Source: Computed by authors based on Census Data

initiatives focusing on bringing more area under irrigation in rural and backward regions have contributed in reducing the disparities during the study period.

The study reveals that regional disparities in net sown area have reported minor increase during the study period. In 1971, the co-efficient of variation in net sown area was 62.75 percent which increased to 65.42 percent in 2011. It may be attributed to least expansion and fluctuations in acreage in net sown area during the study period. In 1971, the coefficient of variation in irrigation intensity was about 20 percent. It phenomenally increased to about 70 percent in 1991 and decreased with almost similar pace to 25 percent in 2011. The study infers that the regional disparities in irrigation intensity have witnessed fluctuating trend but are on the decline in the study area. Table 2 exhibits that in 1971, the co-efficient of variation in cropping intensity in study area

was 22.41 percent which slightly increased to 25 percent in 1991. But in 2011, the co-efficient of variation in cropping intensity decreased to 20.77 percent in the study area. The study reveals that the degree of disparities in cropping intensity has not been much higher.

It has been investigated from the study that almost all the variables have witnessed declining trend in spatial disparities among north-western states of India between 1971-2011.

Pattern of Disparities at Sectoral Level (1971-2011)

Disparities in development do not occur in some pre-defined sectors but depend upon the progress of particular sector and area among those. In all 7 sectors namely education, agriculture, economy, health, transport, gender parity and urbanisation have been considered in present study. Education sector is referred as a way to ensure the economic growth. It improves the people’s capacity to improve their living and helps in enabling the capabilities of the masses. Table 3 exhibits that in 1971, education sector had reported the co-efficient of variation of about 58.46 percent. It decreased phenomenally to 20.25 percent in 1991 and further increased to 23.17 percent in 2011. The education sector witnessed the sharp decreasing trend in disparities during 1970s and 1980s but witnessed a gradual rise in 2011. The agriculture sector dominates all the activities in study area. It plays a key role in the socio-economic development of north-west India. The study reveals the notable decrease in disparities in agriculture sector having about 92 percent co-efficient of variation in 1971 which declined to 58.67 percent and 45.26 percent in 1991 and 2011 respectively. The study reveals remarkable decline in regional disparities in agriculture during the study period.

The growth of any region depends on the la-

bour force of that region. The higher proportion of workers in any area generally leads to economic development of that area. The economic sector has witnessed the decreasing trend in co-efficient of variation from about 57 percent in 1971. It sharply decreased to 27.57 percent in 1991 and 24.87 percent in 2011. The pace of decrease in co-efficient of variation was higher during first 20 years than the next two decades. The health is a vital sector of human development and contributes to both social and economic development. In 1971, the co-efficient of variation of health sector was 84.73 percent. It decreased to 74.38 percent in 1991 and remained stagnant (74.79%) in 2011. Earlier, the availability of beds and health institutes remained confined to the core and already developed areas. But after 1990s, the thrust of government shifted towards backward and rural areas resulting into decline but still very high spatial variations.

Transport is very important sector for the development of any area. In case of north-west India, the road density has assumed special significance because most of the flow of goods and services depends mainly on the roads due to varying physiographic characteristics. The study reveals that in 1971, the co-efficient of variation in road sector was 273.14 percent. In 1991, it increased to 298 percent and further decreased to 282.26 percent. The study has shown the prevalence of spectacular regional disparities in road density in the study area between 1971 and 2011. The study reveals multi-sectoral regional disparities in the levels of socio-economic development in the study area. The study reveals that almost all sectors have witnessed the decreasing trend of regional disparities in the development in the north-west India. But still some sectors namely road density, health and urbanization have shown the prevalence of spectacular regional disparities. The study calls for ensuring the balanced regional development in north-west India.

Trends in Disparities in Socio-economic Development (1971-2011)

The level of socio-economic development varies from area to area and society to society. Disparities in socio-economic development mainly follow the two trends either this increase or decrease over period of time (Raj and Thakur 2020:9). The study reveals that in 1971, the co-efficient of variation was 71.0 percent It

Table 3: North-west India: Co-efficient of variation at sectoral level (1971-2011)

Year	Sectoral Co-efficient of Variation (percent)						
	Educa- tion	Agri- culture	Econo- my	Health	Trans- port	Sex ratio	Urban- isation
1971	58.46	91.91	56.96	84.73	273.14	9.26	95.95
1991	20.25	58.67	27.57	74.38	298.00	6.80	75.06
2011	23.17	45.26	24.87	74.79	282.26	7.40	71.85

Source: Computed by authors based on Census Data

decreased to 57.9 percent in 1991 and 53.7 percent in 2011 (Table 4). The northwestern states of India have registered decline in the levels of disparities in the socio-economic development during the study period. However, the pace of decrease in the disparities in development was three times higher between 1971 and 1991 than that of the decrease during 1991 and 2011.

Table 4: North-west India: Trends in co-efficient of variation in socio-economic development

Census year	1971	1991	2011
Co-efficient of variation (%)	71.0	57.9	53.7

Source: Computed by authors based on Census Data

It is more evident from the fact that the decrease in the co-efficient of variation was 12 percent points between 1971 and 1991 and slowed down to 4.2 percent during 1991 and 2011. The reducing gap in the levels of development could be attributed to the progressive improvements in some socio-economic variables in the study area. The north-west India has witnessed the same trends in regional disparities as discussed by Kuznets (1955). He argued that with the growth of an economy initially regional disparities increase but after a certain stage there will be decrease. The present study also supports neo-classical paradigm of disparities as propounded by Solow (1956). This theory states that regional disparities are bound to diminish with growth over time. Same trend has also been witnessed in north-west region of India. During 1970s where the disparities in the various socio-economic variables were very high due to the concentration of development in the core areas and administratively prime locations. But with the passage of time the lagged areas have followed the developed regions leading to discernible decline in regional disparities. The observation that government interventions help in minimizing the regional disparities in the backward regions as advocated by Myrdal (1957) also seem to be true among the north-western states of India.

CONCLUSION

It has been found in the study that north-west India has registered a visible improvement in the levels of socio-economic development between 1971 and 2011. Earlier, the higher socio-economic development was confined to few areas due to higher literacy, urbanisation and improvement in health sectors along with historical reasons. The

areas of relatively higher socio-economic development were mainly concentrated in central and some of the north-eastern parts of study area. The backward areas characterized by the low level of socio-economic development were mainly concentrated in the districts of Rajasthan along with some central-western districts of Jammu & Kashmir sharing the international border with Pakistan. But with increasing public attention and initiation of government plans to address regional disparities, the level of regional disparities has narrowed down in the study area.

RECOMMENDATIONS

Given the fact that, during the last 4 decades, the north-western states of India have undergone positive socio-economic transformations. The rural and the backward districts of the study area are still plagued with multi-sectoral spatial disparities. Special plans and focused programmes should be started in these areas. Therefore, the government programmes and policies need to be implemented in minimizing the regional disparities and socio-economic backwardness in the study area.

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