

Spatio - Temporal Analysis of Industrial Hubs Development in Himachal Pradesh: Large and Medium Enterprises

Ravi Kumar and Anurag Shankhan, New Delhi.

Abstract

Himachal Pradesh, despite having sufficient resource potential, is one of the least industrialized state of India. Only about 8 percent of the total population is engaged in industries and manufacturing sector. Cultivation of crops, horticulture, animal husbandry and forestry form the basic occupation of the people. The geographical setting, difficult terrain, severe winters, vast distances from the major markets of the country, lack of transport and storage facilities and other historical factors have been the obvious hindrances in the industrial development. The region however, enjoys certain advantages for industrial development such as cheap labour, tax holiday, positive support from the state government and cheap hydroelectricity. Whatever industrial development has taken place in the state is of recent origin. Present paper deals with the Spatio - temporal analysis of the industrial hubs development in different years during 1983-84, 1991-92, 2001-2002 and 2012-13 in large and medium enterprises in different districts of Himachal Pradesh. The two parameters used for the analysis were industrial units and industrial worker employed in the state. The result of the study shows that, Himachal Pradesh has shown positive development in the case of industrialisation.

Key Words:Enterprises, Hubs,Industrialisationand Spatio – temporal.

Introduction

Industrialisation means the growth of manufacturing industry with a view of making economic development, i.e. raising the standard of living by harnessing a region's natural resources and transforming them into production wealth (Chaudhari, 1966). Industrialisation promotes the economic growth of the society and directly influences the commerce, trade, communication, human resources, social and cultural environment, availability of technical assistance and the indigenous research too (Hoeischar and Howk, 1969). Industrialisation in the

hill states like Himachal Pradesh require proper government support through special packages and policies as the constraints are more in setting new industries in such hill states. Mittal *et al.* (2008) in their study have recommended measures for addressing such critical constraints on achieving rapid and inclusive growth. Study also identifies different sectors where hill districts have a comparative advantage, and suggest policies to exploit this comparative advantage. The process of industrialisation has many aspects and industrial clustering/hubs are one of them. The concentration of industrial

hubs in few pockets of a region had been highlighted in this study. “Hub” is “a center place of activity or interest, central point around which things turn around”. The industrialisation is the result of long-term process of development of industrial activities in a particular region. It boosts the economic growth and brings the benefits of socio-economic transformation. It effects the social, political, technological and economic environment of the country. Industrialisation not only influences the growth of national output & income but also influences the national life & the social, political & cultural pattern.

Industrialisation in Himachal Pradesh

Himachal Pradesh is one of the fastest growing states in India. Its per capita Gross State Domestic Product (GSDP) was estimated at US\$ 1,903.5 during 2012–13, as compared to the national per capita GDP of US\$ 1,414.2 (Himachal Pradesh State Report, 2013). Industrialisation in Himachal Pradesh started with the beginning of British rule, but at a very slow rate. During British government, only traditional handicraft and cottage industries were established in the state. However, during post-independence period (1948-1971) apart from small scale units, a few medium and large scale units were established in state. Himachal Pradesh has made significant achievements in the field of industrialisation in the past few years. The notification of special package of incentives for the State, the flow of investment in the state has increased manifold resulting in very

good response for setting up new industrial ventures. Sharma *et al.* (2008) found that infrastructure is important for sustained economic development and concluded that the impact of Industrialisation in the development of different infrastructure facilities in Himachal Pradesh has been positive. Study reflect the process of Industrialisation has made significant improvement in the social and economic infrastructural facilities in nearly villages of industrial areas. In order to provide infrastructural facilities to the entrepreneurs the Himachal Pradesh state Govt. has already developed 41 industrial areas and 15 industrial estates with all basic amenities. An amount of 1,135.61 lakh is being spent on development of industrial infrastructure in the State. To facilitate the availability of land to prospective entrepreneurs, the Government has constituted a land Bank comprising nearly 7,817.01 bighas of Government and Private land which is available for setting up of industry in the state. Efforts are being made to identify more land for industrialisation.

The share of industries and services sector respectively has increased from 1.1 and 5.9 per cent in 1950-51 to 5.6 and 12.4 per cent in 1967-68, 9.4 and 19.8 per cent in 1990-91 and to 10.7 per cent and 15.0 per cent in 2007-08. In year 2012 total 494 Medium & Large Scale Industrial Units were registered with the Department of Industries, Government of Himachal Pradesh with total investment of Rs.11009.50 crores and employment of about 59,143 persons (Annual Administrative Report, 2012).

Study Area

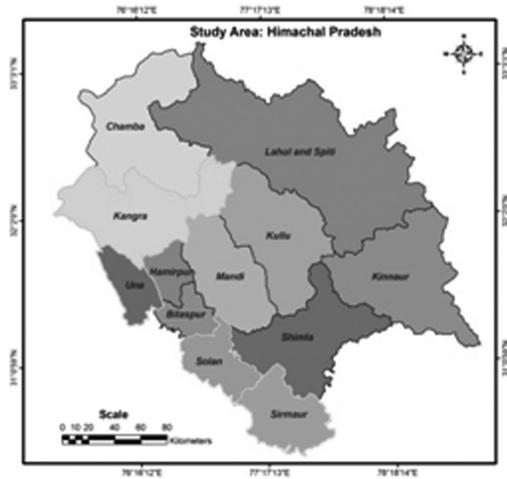
Himachal Pradesh is located in the northern part of the India. Himachal Pradesh is situated between 30° 22' 40" to 33° 12' 20" north latitudes and 75° 45' 55" to 79° 04' 20" east longitudes. It has an international border with Tibet in the east, Indian states of Jammu and Kashmir in the north, Punjab in the west and southwest and Haryana and Uttar Pradesh in the south. The state forms part of western Himalayan Zone. It has a hilly terrain, mountainous and undulating topography with altitude ranging from 350 to 6,975 meters above mean sea level. Total geographical area of the state is 55,673 sq. kms.

Objective of the Study

- To study the District wise Spatio-temporal distribution/development (1984 to 2012) of industrial hubs development in terms of units and employment in Medium and Large Scale Enterprises.

Database and Methodology

Study covered the development of industrial hubs in Himachal Pradesh in terms of units and employment in Medium and Large Scale Enterprises (1984-2012). The present study is based on primary and secondary data. The primary data was collected through Questionnaire by conducting survey and using observation and interview method also. The analysis of district wise Spatio-Temporal distribution was calculated through weight of industry viz. the number of industrial units in the district and number of industrial employed workers in the district. The Composite District Industrial Development Index was calculated with the



help of the following formula: $\{(F_i/F) * 100 + (W_i/W) * 100\} / 2$

Where, F_i = Number of industrial units in the District, F = Total number of industrial units in the State, W_i = Number of industrial workers in the District, W = Total number of industrial workers in the State

The composite district industrial development index was therefore calculated for each district independently and the districts in a state were then ranked in terms of the composite index. The best performing districts in Large Industrial sector, ranked 1st, 2nd, 3rd was selected for the study as the district most boom in attracting industry.

Results and Discussion

Large and Medium scale industries play an important role in the national economy, keeping in mind this both the central and state government have taken active steps to develop, promote and progress their growth. District wise distribution analysis of Spatio-Temporal Analysis of registered industrial units and the industrial workers employed

was done for getting the developmental status of the Medium and Large Scale Industries in Himachal Pradesh from the period 1984 to 2012.

District wise Spatio-Temporal Analysis of Medium and Large Scale Enterprises (1984)

The result of the study shows the uneven distribution of large and medium sector

Industrial development in the Himachal Pradesh. As in the year 1984 total 42 industrial units (71.19 per cent) were located in Solan district, followed by Sirmaur with 06 industrial units (10.17 per cent) and Una with 05 industrial units (8.47 per cent). The industrial hubs were developed mainly around the centres namely Baddi, Nalagarh, Parwanoo, Paonta Sahib, Kala Amb, Mehatpur, Amb and Tahliwal.

Table 1: District wise industrial development in Medium and Large Industrial Sector in Himachal Pradesh (1984 to 2012)

Composite District Industrial Development Index of Medium and Large Scale Industries (1984)										
Sr. No.	Districts	Number of Units			Number of Employment			Workers per	*CDID Index	Overall Rank
		No. of Units	Percentage of Units	Rank	Number of Workers	Percentage of Workers	Rank			
1	Solan	42	71.19	1	6139	67.71	1	146.17	69.45	1
2	Sirmaur	6	10.17	2	1716	18.93	2	286	14.55	2
3	Una	5	8.47	3	325	3.58	4	65	6.03	3
4	Bilaspur	2	3.39	5	743	8.19	3	371.5	5.79	4
5	Kangra	3	5.08	4	83	0.92	5	27.67	3	5
6	Mandi	1	1.69	6	61	0.67	6	61	1.18	6
	Total	59			9067			153.68		
Composite District Industrial Development Index of Medium and Large Scale Industries(1992)										
1	Solan	76	67.86	1	10353	67.76	1	136.22	67.81	1
2	Sirmaur	22	19.64	2	2847	18.63	2	129.41	19.14	2
3	Una	6	5.36	3	693	4.54	4	115.5	4.95	3
4	Bilaspur	2	1.79	5	827	5.41	3	413.5	3.6	4
5	Kangra	4	3.57	4	423	2.77	5	105.75	3.17	5
6	Mandi	1	0.89	7	105	0.69	6	105	0.79	6
7	Kullu	1	0.89	6	32	0.21	7	32	0.55	7
	Total	112			15280			136.43		

Composite District Industrial Development Index of Medium and Large Scale Industries (2002)										
1	Solan	138	72.25	1	21345	72.65	1	154.67	72.45	1
2	Sirmaur	30	15.71	2	4343	14.78	2	144.77	15.24	2
3	Una	8	4.19	3	903	3.07	4	112.88	3.63	3
4	Kangra	6	3.14	4	791	2.69	5	131.83	2.92	4
5	Bilaspur	3	1.57	6	1221	4.16	3	407	2.86	5
6	Shimla	4	2.09	5	541	1.84	6	135.25	1.97	6
7	Mandi	1	0.52	7	186	0.63	7	186	0.58	7
8	Kullu	1	0.52	8	52	0.18	8	52	0.35	8
	Total	191			29382			153.83		
Composite District Industrial Development Index of Medium and Large Scale Industries (2012)										
1	Solan	339	68.62	1	43523	73.59	1	128.39	71.11	1
2	Sirmaur	100	20.24	2	7947	13.44	2	79.47	16.84	2
3	Una	32	6.48	3	3683	6.23	3	115.09	6.35	3
4	Kangra	8	1.62	4	1069	1.81	4	133.63	2.22	4
5	Shimla	6	1.21	5	937	1.58	6	156.17	1.51	5
6	Bilaspur	5	1.01	6	1663	2.81	5	332.6	1.3	6
7	Mandi	2	0.4	7	186	0.31	7	93	0.36	7
8	Kullu	1	0.2	8	110	0.19	8	110	0.19	8
9	Hamirpur	1	0.2	9	25	0.04	9	25	0.12	9
	Total	494			59143			119.72		

*Composite District Industries Development Index (CDID)

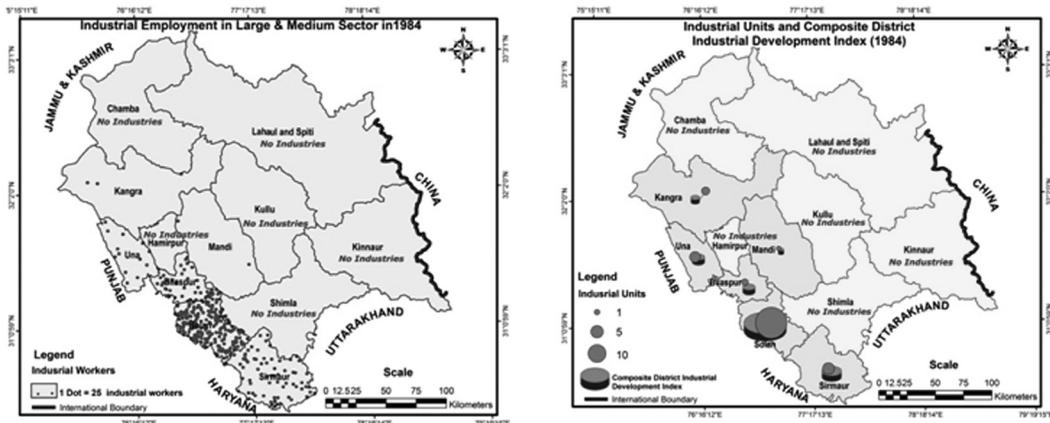
Source: Compiled from various published sources and information collected from Directorate of Industries, Himachal Pradesh.

In the remaining other districts of the state including Bilaspur, Kangra and Mandi only six (10.17 per cent) industrial units were established in year 1984 (Table 1 & Map 1). Solan and Sirmaur district together accounted for 86.63 per cent and remaining other districts contributed 13.37 per cent of the employed industrial workers in the case of industrial employment in the state in year 1984. However, the analysis also shows that the six districts namely Chamba, Hamirpur, Kinnaur, Kullu, Lahaul & Spiti and Shimla were having no industrial units and no industrial worker was found to be

employed in these districts in year 1984.

In the case of composite district industries development index which represents the association between the industrial units and industrial workers of the districts, Solan was in rank 1 (42 industrial units position and 6,139 employed workers contribution), Sirmaur and Una reflected together 11 industrial units (rank 2, 3) whereas lowest industrial development was observed in the Mandi district which reflected just 1 industrial unit and with the composite district industries development index value 0.28 per cent in year 1984 (Table 1 & Map 1).

Map 1: Spatio - Temporal Variation of industrial Workers employed and Composite District Industries Development Index of industrial units in Medium and Large Industrial Sector -1984

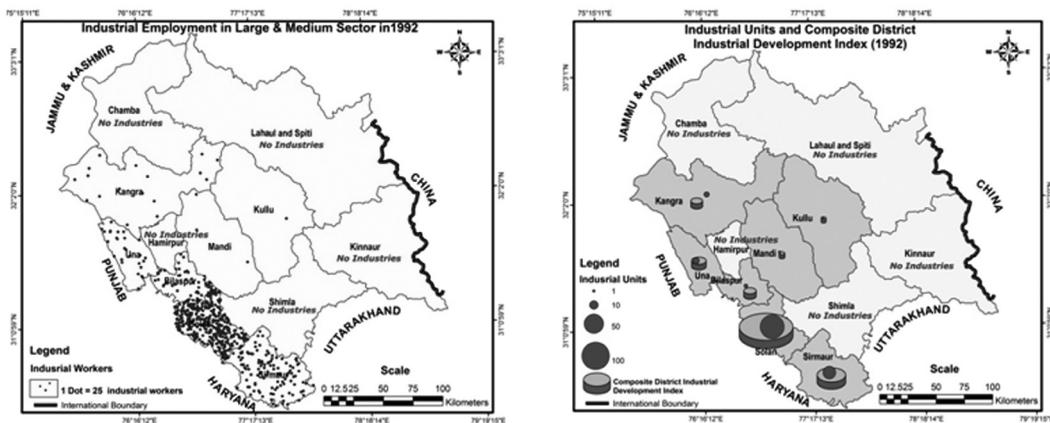


District wise Spatio-Temporal Analysis of Medium and Large Scale Enterprises (1992)

The analysis of the data shows that in year 1992, Solan district reflected 76 industrial units & 10,353 employed workers ranked 1 in the composite district industries development index. Followed by Sirmaur and Unadistricts which reflected together 28 industrial units and employed workers 3,540 (rank 2,3) with the composite district

industries development index value 24.08 per cent. Remaining four districts; Bilaspur, Kangra, Mandi and Kullu were having 8 industrial units and 1,387 employed workers with the composite district industries development index value of 8.11 per cent. The district wise Spatio temporal analysis shows industrial inequality within the state is greater when viewed in terms of the distribution of industrial workers employed than the distribution of registered industrial units (Table 1 & Map 2).

Maps 2: Spatio- Temporal Variation of industrial Workers employed and Composite District Industries Development Index in Medium and Large Industrial Sector -1992

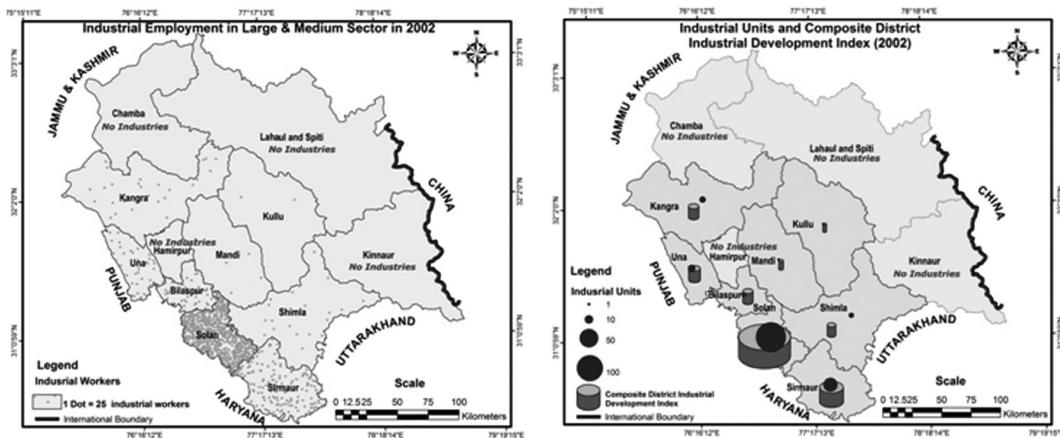


District wise Spatio-Temporal Analysis of Medium and Large Scale Enterprises (2002)

In year 2002 about 79 industrial units and 14,102 industrial workers were increased

in comparison to the year (1992-2002). As per the calculated district wise Composite index and ranking of the industrial units and employment pattern of the state Solan district with 138

Map 3: Spatio- Temporal Variation of industrial Workers employed and Composite District Industries Development Index in Medium and Large Industrial Sector -2002



Industrial unit & 21345 employed workers ranked 1. Sirmour and Unadistricts were together having 38 industrial units & 5246 employed workers and were found in rank 2&3 with the composite district industries development index value of 18.87 per cent. The Spatio temporal analysis revealed the industrial inequality within the state is greater when viewed in terms of the distribution of industrial workers employed than the distribution of registered industrial units (Table 1 & Map 3).

and employment pattern for the year 2012 the Solan district with 339 industrial units & 43, 523 total employed industrial workers ranked 1 with the composite district industries development index value of 71.11 per cent. Followed by Sirmour and Unadistricts which reflected together 132 industrial units & 11,630 employed industrial workers ranked 2 and 3 with the composite district industries development index value of 23.19 per cent. The study also found that most of the industrial workers in the state were found to be employed in the Solan, Sirmour and Una districts in 2012 (Industrial units no. increased from 191 to 494 from year 2002 to 2012 in these districts). Solan and Sirmour districts also together accounted for 87.03 per cent of

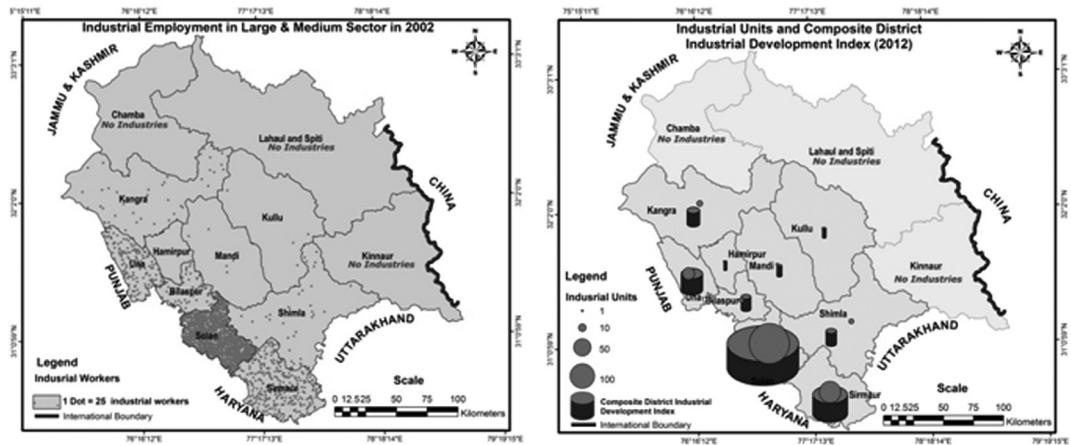
District wise Spatio-Temporal Analysis of Medium and Large Scale Enterprises (2012)

As per the calculated district wise Composite index and ranking of the industrial units

the employed industrial workers in the state. The remaining other districts of the state only contributed 12.97 per cent towards the employed industrial workers in the state. The Parwanoo-Baddi-Barotiwalan-Nalagarh industrial areas in Solan district

accounted for the majority of the industrial workers employed in the state. The spatial distribution shows that industrial hubs were found in only few specific locations. The western part of the state can be observed the highly industrial developed in 2012.

Map4: Spatio - Temporal Variation of industrial Workers employed and Composite District Industries Development Index in Medium and Large Industrial Sector -2012



The analysis of the data also shows that the Solan district is the only region falling under the category of highly industrialised region and emergence as major industrial hubs in the state of Himachal Pradesh. This district is having maximum number of industries related with the textile and spinning, chemical products, Electronics, steel products and paper products. The major industrial areas are located in the Blocks namely Baddi, EPIP Baddi. (Ph-I and II), Barotiwalan, Chambaghat, Banalagi, Majhol, Kath Bhatoli, Vakana, Dumehar, Mamling, Dharampur and Parwanoo. These places are well connected to each other with roads and industrial areas like Chambaghat, Parwanoo and Dharampur are

also connected with railway link which are also playing a positive role in the industrial development of the Solan district. This district is also close to state capital where all the government activities are centralized therefore, the entrepreneurs have preference to establish industries in district Solan (Table 1 & Map 4).

Conclusions

On the basis of the study, it can be concluded that in the case of Spatio-Temporal distribution (1984 to 2012) of the Industrial hubs Development in medium and large scale Industries in Himachal Pradesh shows that in 1984 there were total

59 established industrial units with the total industrial workers employed as 9,067 in the state. After that in next eight years (1984 to 1992) 53 new industrial units (making total to 112 units) were established with the 6,213 industrial workers (40.66 per cent) employed (making total of 15,280 industrial workers). This shows that after the period of eight year (1984 to 1992) the industrial development rate was very high. Another fact which can be noted from the study is that, the industrial units increase rate was found to be 47.32 per cent but the total number of workers employed rate remained as 40.66 per cent which is low in comparison to the increase in the case of industrial units. In next decade (1992 to 2002) the modest industrial development growth was observed in the state in comparison to the period between years 1984 to 1992. Around 79 new industrial units (Making total to 191 industrial units) were established (which is 41.36 per cent) with total employed industrial workers contribution 14,102 increased to 48 per cent (29,382 workers). This decade (1992 to 2002) observed the highest growth in the case of employed workers in the industrial sector in the state. The study also observed the highest level of industrial development in medium and large scale industries from year 2002 to 2012. This decade also reflects the highest (29,761 workers) employed industrial workers growth (50.32 per cent). The impact of New Industrial policy and special industrial package announced by the central government can be observed clearly in boosting the industrial development in the state with around 303 new industrial units (61.33 per cent) were established in

this decade. The above discussion clearly shows that the process of liberalization have positive impact on the growth and industrial development in the case of medium and large scale industries in the state. On the basis of the study it is suggested that in order to promote effective and systematic industrial growth the industry department of the state government should formulate effective industrial development policies and strategies on a regular basis as done between years 2002 to 2012. The packages of incentives like interest subsidy, power subsidy, land subsidy, grants in aid for artisans, State capital investment subsidy, incentives for export oriented units, State transport subsidy on plant & machinery etc can attract prospective entrepreneurs.

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Ravi Kumar

Consultant, TSG-Teacher Education,
MHRD, New Delhi

Anurag Sankhian

Assistant Professor (Geography),
Govt. College of Education,
Sector 20 D, Chandigarh.