

SPATIAL DEVELOPMENT OF HUMAN RESOURCES IN MAHARASHTRA STATE INDIA



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Objective : Study is based on following objectives – 1) To appraise the human resources in terms of quality and quantity. 2) Delimitation of human resource regions within the study region with consideration of important population aspects. 3) To study and find out the levels of human resource development in the study region. 4) To suggest some remedial suggestions for balanced regional development in the study region.

Geographical personality of the study region : Maharashtra state is one of the developing state in India. This state having special identical impact on socio-economic development of India. The state of Maharashtra lies between the North latitudes 15° 36' to 22° 1' and 72° 41' to 80° 9' East longitudes covering the area 307690 sq. kms. The state is bounded on the north and north east by Gujrath, Madhya Pradesh, on the east by Chatisgarth to the south and south east by Karnataka, Andhra Pradesh and Goa and on the west by the Arabian sea. Geographically it forms a part of the "Penin Sular shield" of India, which is considered as very old and stable part of the earth's crust. There are 34 districts and four administrative divisions in M.S. Physiographically Maharashtra state divided into three major parts i.e. Kokan Coastal region, Western Ghat and Deccan Platzau region. Kokan region is narrow strip of land lies between Arabian sea and Western Ghat, Western Ghat, Sahyadri mountain is parallel to Arabian Sea coast. The north-south length of Sahyadri mountain range is 440 kms and width varies from region to region i.e. 48 kms. Number of offshoots from Sahyadri mountain ranges passes towards the eastern side and form a water divide between Krishna, Koyana, Godavari, Bhima and Tapti rivers. These rivers originates from Western Ghat and drain their in Deccan Pleateau region of Maharashtra State. The eastern large basaltic Deccan plateau are occupied the 90% area of Maharashtra State. Maharashtra having mansoonal climate 15 June to 15 Sept. rainy season, rainfall is highest along the coast more than 300 cms but it decreases towards the eastern side of Deccan plateau. Eastern part of the state also receive high rainfall from

south west mansoon, winter is mild and summer is very hot in various part of the state. There are regional variations in soil types, lateratic soil, alluvid soil, montainous soils influence agricultural prosperity within the state. Industrially Maharashtra is one of the developed state in India large industrial estates. Transport and communication facilities are varies from region to region, variations in natural cultural, economic element influence unbalance economic development in India. The total population of the state was 96852.247 according to 2001 census with population density 314 person per sq. km it varies from region to region. The proportion of working population is 43.46% with sex ratio 922 females per thousand males. Today 57.60% rural and 42.39% urban dwellers in Maharashtra State.

Research Methodology :

1) District wise secondary data of demographic socio-economic variables are used for present study and collected from census of India's Maharashtra 1991, 2001. 2) To know the levels of human resource development Kendall's Ranking coefficient method is used. 3) Cloropleth and isopleth methods have been adopted for the representation of co-efficient index.

Explanation :- A country can achieve its social and economic objectives through human resource development and to provide social and economic justice to the citizen of the country. In India development process our goals are to remove proverty, raising living standard of people, reducing income gap, increase labour efficiency and food self sufficiency. United nations research institute for social development has suggested some indicators of economic developments i.e. (i) economic (ii) social (iii) Demographic. In many demographic societies survey and research work will provide a preliminary estimate of the degree of wide human resources have been developed educational levels of population. Education are closely associated with skill level and social character of population. Education level creates proficiencies on communication skill level reflect the

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programme in the productive side of the economic of social character reflect the except of participation in social and political life.

In the present study the human resource development in Maharashtra State in India with quality and quantity of various population parameters are used and shown in Table I. Some of the socio-economic indicators like population density, sex ratio, population growth rate, non-agricultural workers, working population, populations per primary health center, school spacing, literacy rate, human development indicators, district domestic product, pacca road connectivity are considered for the study. The Kendall's ranking coefficient index method is used in this research work.

$$\text{Kendall's Co-efficient Index} = \frac{\sum R}{n}$$

Where SR = sum of rank
n = number of variables.

Coefficient index is calculated for each district of Maharashtra state is given in Table I. The table shows the ranks for each district for all variables as per its value e.g. high population density indicates first rank, low density gets last rank. The eleven variables ranking of district done as shown in table. Afterword co-efficient index is calculated by above formulas for each district. There are regional variations in co-efficient index of various districts. The co-efficient index is classified and interpretation gives the proper results.

Spatial Variations of Human Resource Development in Maharashtra :- The ranking co-efficient index for the 34 district of Maharashtra state is calculated by Kendall's ranking coefficient index method. With the consideration of important socio-economic variable like population density, sex ratio, growth rate of population, non-agricultural workers, working population, population per primary health center, school spacing, literacy rate, human development indicator, domestic products, pacca road are consider to measure coefficient index Table I. Spatial distribution of coefficient index is shown in figure with the help of choropleth method, Mumbai, Pune and Nagpur district having very low coefficient index i.e. 6.9, 9.5 and 9.9. The lower the coefficient index shows the higher level of human resource development and higher coefficient indicates the low level of human resource development. The medium coefficient index i.e. 10 to 15 are observed in 35.29% district of the state with medium level of human resource development

Gondia, Aurangabad, Kolhapur, Solapur, Satara, Sangal, Ahmednagar, Nashik, Sindudurg, Ratnagiri, Raigad, Tane district having moderate human resource development in the Maharashtra. The higher the coefficient index 15 to 20 is observed in 26.47% district of the state with lower level of human resource development rate Nandurbar, Jalgaon, Hingoli, Latur, Akola, Amravati, Wardha, Bhandra, Chandrapur district with lower level of human resource development. The highest ranking coefficient index is observed in 29.41% district of the state with lowest level of human resource development, Dhule, Jalna, Parbhani, Beed, Nanded, Usmanabad, Buldhana, Washim, Yawatmal and Gadchiroli districts with lowest level of human resource development in the state.

Levels of Human Resource Development :- Using the Kendall's ranking coefficient index the human resource regions are delimited as shown in Figure. With the help of coefficient index Maharashtra can be classified into four district human resource development regions. Ø Dynamic region. Ø Active region. Ø Prospective region Ø Problem region

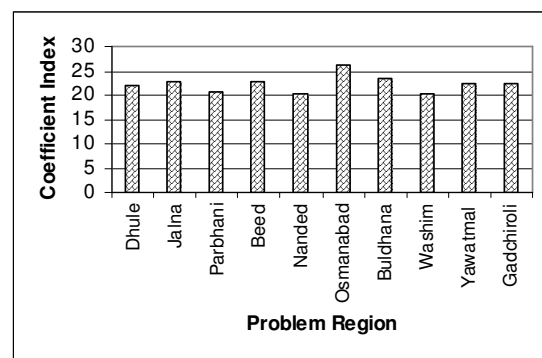
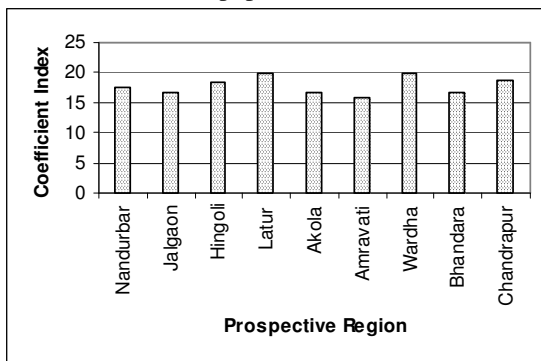
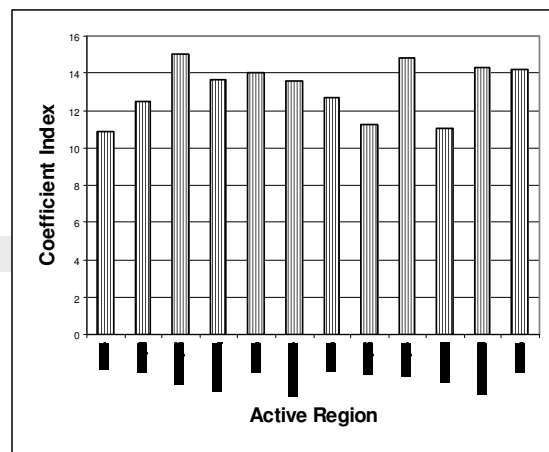
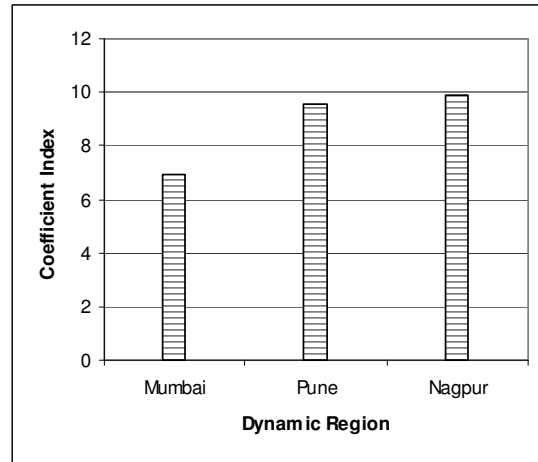
Dynamic Region : In the level of human resource development, the dynamic region is with higher non-agricultural workers, higher working, population, high population density, high urban population, higher literacy, good accessibility, higher human development indicator, higher domestic product, high population growth rate, good health and educational facilities. The dynamic region covers the Mumbai, Pune and Nagpur three districts of the Maharashtra state. Mumbai district is highly dynamic area with coefficient index 6.9. Mumbai is getting as multifunctional city, capital of Maharashtra state, industrial, transport, commercial cultural. Center in the state, Pune district is also dynamic district in the state with coefficient index is 9.54. Pune emerge as industrial center, transport center, commercial center, educational center, cultural center in the state. The third dynamic district is Nagpur a central place of the India, multi-functions, industrial development, road, air, railway transport center, trading center, educational center, cultural center administrative function. Nagpur is one of the fast growing city in Maharashtra State as well as in India.

Active Region :- Active human resource region means a region with high level of active development in various functions. Those districts having ranking coefficient 10 to 15 all these districts are considered as active region of the state, majority 35.29% district of the state passes through this stage of human resource

development in the state. Thane, Ratnagiri, Raigarh, Nashik, Dhule, Ahmednagar, Satara, Sangali, Solapur, Kolhapur, Aurangabad and Gondia districts are the progressive district in Maharashtra. Higher development in various functions during short duration is the specialty of active region, speedy industrial development, high population density, higher non-agricultural workers, higher active population, high human development index, high domestic product, good accessibility and health service influence to develop active region in various districts in Maharashtra.

Prospective Region : Prospective region is those area with high resource potentials but lower development due to lower level utilization of various resources. Technological and socio-economic backwardness badly influence utilization of resources and development of economic base of the region. Those districts of Maharashtra state with ranking coefficient index lies between 15 to 20, such district are included as prospective region. There are nine districts included in this level of human resource. Nandurbar, Jalgaon, Hingoli, Latur, Akola, Amravati, Wardha, Bhandara, Chandrapur are the district with great prospects for future development, lower development of educational, medical, transport and communications with lower industrial and urban development. This region having great future for further development of resources. In future proper planning and human resource certainly influence planned utilization of various land, water and other resources. This region having great future for further development of human resource in the Maharashtra State.

Problem Region :- Those district having ranking coefficient index more than 20 an considered as problem region of the state. Problem region is those region with lack of infrastructures facilities, shortage of health and educational facilities, lower accessibility, lower urban development badly influence socio-economic and industrial development. Problem region is includes, Dhule, Jalna, Parbhani, Beed, Nanded, Usmanabad, Buldhana, Washim, Yawatmal, Gadchiroli district of the Maharashtra state. Lower level of working population, lower industrial workers, lower urban population, lower health, educational and transport facilities reflects the lower development



of human resource in these region.

Finding and Suggestions :- Ø Human resource development in Maharashtra state is not even. Ø Urbanized, accessible, industrialized, good education, health, transport facilities districts Mumbai, Nagpur and Pune having highest level of human resource development. Ø Unaccessible, lower industrialized, lower educational, health, transport districts with lower development of human resource in the Maharashtra state in India. Ø Unbalanced economic development

occurred due to uneven utilization of human resources in the state. Ø Socio-economic and industrial planning should be done so that planned use of human resource. Ø For proper planning of human resource, public awareness it is essential to implement public human awareness programme like cycle rally, street play, documentary films, competition etc. Ø Government should keep resource study as compulsory course at various levels. Ø Resource management, research institutes may be develop in the state.

Table – II : Ranking coefficient Index

Sr. no.	Coefficient Index	Level of Human Resource Development	% of district	Types of Regions
1)	Less than 10	High Level	8.82	Dynamic region
2)	10 to 15	Medium Level	35.29	Active region
3)	15 to 20	Lower Level	26.47	Prospective region
4)	Above 20	Very lower level	29.41	Problem region

Table – I : MAHARASHTRA – RANKING CO-EFFICIENT INDEX

Sr. No.	District	Population Density	Sex Ratio	Growth rate	Non agri workers	Working population	Popula PHC	Schools spacing	Literacy rate	Human deve. Ind.	Domestic product	Pacca road	SR	Co-eff. index
1	Mumbai	1	34	1	1	34		1	1	1	1	1	76	6.9
2	Thane	2	33	2	2	32	27	4	5	2	2	9	120	10.9
3	Raigad	8	8	13	5	28	19	22	12	5	3	14	137	12.45
4	Ragnagiri	26	1	14	10	13	29	21	18	16	9	8	165	15
5	Sindhudurg	33	2	34	12	8	5	28	7	8	6	7	150	13.63
6	Nashik	6	30	5	7	23	23	5	19	12	8	16	154	14
7	Dhule	24	16	24	20	24	25	15	25	28	32	10	243	22.09
8	Nandurbar	17	6	9	31	11			34	34	33	17	192	17.45
9	Jalgaon	7	27	26	22	26	16	12	16	13	16	3	184	16.72
10	Ahmadnagar	18	19	12	18	10	7	6	17	10	19	13	149	13.54
11	Pune	3	32	4	4	29	6	2	6	3	5	11	105	9.54
12	Satara	16	4	31	17	6	12	10	11	9	17	6	139	12.63
13	Sangali	9	10	23	16	4	15	14	14	6	9	4	124	11.27
14	Solapur	15	23	29	8	16	4	9	26	17	14	2	163	14.81
15	Kolhapur	4	14	21	6	5	26	7	13	7	7	12	122	11.09
16	Aurangabad	13	31	3	9	18	1	20	22	11	10	19	157	14.27
17	Jalna	25	13	19	28	20	2	29	32	31	34	18	251	22.81
18	Parbhani	16	15	27	25	25	11	27	30	22	25	5	228	20.72
19	Hingoli	22	12	15	33	7			31	23	26	33	202	18.36
20	Beed	27	29	16	27	21	8	16	29	21	24	34	252	22.9
21	Nanded	14	17	10	24	27	13	17	28	29	31	15	225	20.42
22	Osmanabad	30	28	28	29	22	10	25	27	27	29	32	287	26.09
23	Latur	12	25	6	23	30	3	19	24	19	27	31	219	19.9
24	Buldhana	19	15	20	30	12	14	24	15	26	30	23	228	23.42
25	Akola	10	22	11	13	31	17	13	4	24	20	20	185	16.81
26	Washim	28	21	25	34	19			21	30	21	25	224	20.36
27	Amaravati	23	20	18	19	9	21	8	3	15	15	24	175	15.9
28	Yawatmal	32	18	17	26	14	20	18	20	32	28	22	247	22.45
29	Wardha	29	24	30	15	17	18	26	8	14	12	26	219	19.9
30	Nagpur	5	26	7	3	33	22	3	2	4	4	21	109	9.9
31	Bhandara	11	5	32	21	3	24	11	9	18	22	29	185	16.81
32	Gondia	21	3	33	14	2			10	20	23	30	156	14.18
33	Chandrapur	31	9	22	11	15	9	23	23	25	11	27	206	18.72
34	Gadchiroli	34	7	8	32	1	28	30	33	33	13	28	247	22.45

Source : Authors

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