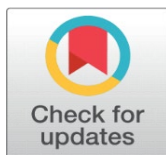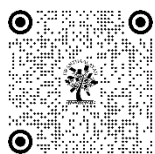# HUMAN RESOURCES DEVELOPMENT IN NASHIK DISTRICT: A GEOGRAPHICAL ANALYSIS

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ABSTRACT

The present investigation studies the human resources development in the Nashik district through a geographical analysis. It is based on secondary data collected from socio-economic abstracts of the Nashik district (2021-22), District census handbook (2011) & District Gazetteers. This study took into account a wide range of human resources development indicators, including the total population, sex ratio, child sex ratio, percentage of tribal population, percentage of schedule cast population, literacy rate, female literacy rate, population density, percentage of the working population, primary health centers, numbers of sub-centers, numbers of doctors, numbers of nurses, per capita electricity consumption, and number of banks.

The Min-Max Normalization Index technique is applied to analyze the human resources development of tribal communities. The human resources development in the study region reflected the regional diversity under analysis. Nashik and Malegoan exhibited high levels of human resources development. The tahsils of Niphad, Peint, Igatpuri, Dindori, Sinnar, Baglan, Triembak, Surgana, and Kalwan recorded moderate human resource development. Yeola, Chandwad, Deola, Nandgoan, Tahsil have recorded the lowest human resources development. Thus, the uneven human resource developments in the Nashik district affect physical features like topography and rainfall, as well as manmade features like population composition, medical facilities, literacy level, infrastructural facilities, urbanization, agriculture, and industrial growth. The present paper gives a geographical analysis of the human resources development in the Nashik district.

Keywords: Human Resources Development, Literacy, Education Facilities, Population Density, Child Sex Ratio, Infrastructural Facilities, Working Population)

1. INTRODUCTION

Numerous research papers and articles have been published about the level of human resources development. Pagar S.D. and Suryawanshi D.S. [1] have analyzed the Spatial Analysis of Human Resource Development in the Nashik District, Maharashtra. The study revealed that the levels of human resource development are not uniform in the study region. The level of human resource development is high in urbanized tahsils (Nashik and Malegaon) which promotes human resource development. Darade J.U. [2] studied the Appraisal of Human Resource Development in Ahmednagar District, He observed the geographical social, and economic factors that affected human development as well as population distribution, and human amenities. Gadekar, D. J., & Mhaske, P. H. [3] have studied the A Temporal Study of Human Resources Development in the Akole Tehsil. Gavit, & Choudhari.[4] have written a research paper on the Study of Human Resource Development in the Jalgaon District of Maharashtra. Shejul, M. E., & Gadekar, D. J. [5] have studied the Temporal Analysis of Human Resources Development (HRD) in Pathardi Tehsil of Ahmednagar District. He observed that the human resources development has not been as successful as it should be Pathardi tehsil as well as sex ratio is decreasing and literacy is increasing, but the literacy rate of women is very low than that of men. Mishra & Chatterjee G [6] stated that geography plays a significant role in HRD, linking socio-economic parameters to spatial planning, which can enhance development outcomes. Ubale and Patil [7] have written a research paper on Human Resource Development in Kolhapur

District, Maharashtra. He observed that the Kolhapur district also shows that, the human resource development is medium level due to the imbalance in distribution of natural resources and its proper utilization. Mali K. A. [8] has written a research paper on the Levels of population resource development in Jalgaon District, Maharashtra.

2. STUDY AREA

The Nashik district is located within the upper Godavari basin and the partly Tapi river basin, spanning from 19°35' to 20°52' North latitudes and 73°16' to 75°56' East longitudes. It comprises a distinct geographical unit covering an area of 15,530 square kilometers. According to the 2011 census, the population of Nashik district was 6,107,187, with tribal people accounting for 1,564,369 (25.62%). The district, situated in the *Khandesh* and North Maharashtra regions, comprises 1,929 villages and 18 towns. Nashik District shares its borders with Jalgaon and Aurangabad Districts to the east, Dhule District to the north, Thane District to the southwest, Ahmadnagar District to the south, and Dang District to the northwest.

Location Map- Nashik District
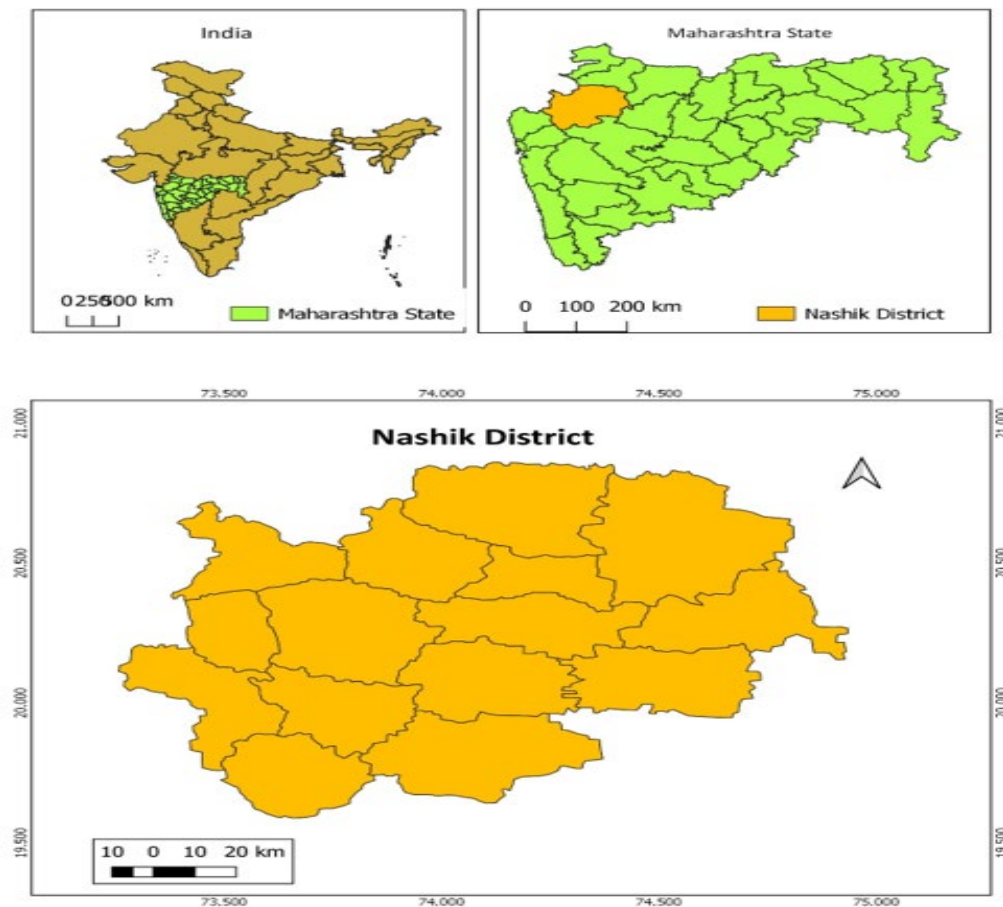
OBJECTIVES:
1) To find out the levels of human resource development in the Nashik district.
2) To find out the cause behind regional disparities in the human resource development of in the Nashik district.
3) To suggest remedial suggestions for human resource development in the Nashik district.

DATA SOURCE AND METHODOLOGY:
This study is based on secondary data. Secondary data has been obtained from socio-economic abstracts of the Nashik district (2021-22), District census handbook (2011) & District Gazetteers. The collected data was processed and edited

for analysis using various statistical methods presented in tables. To calculate the level of human resource development, use the Min-Max Normalization Index method. The formula is used;

$$Variable\ Index\ = \frac{Xi - Min\ X}{Max\ X - Min\ X}$$

Where:
Xi= value of the variable Min
X= Minimum value of X in the scaling Max
X= Maximum value of X in the scaling

Different indicators included in components of human resource development have been scaled and normalized to take a value on a scale ranging from 0 to 1. The scaled least achievement corresponds to zero whereas the best achievement corresponds to 1.

Table 1- The level of human resource development was grouped under four heads:

Category	Composite human resource development score
High human resource development	More then 0.60
Moderate human resource development	0.41 to 0.59
Low human resource development	Below 0.40

(Source: Compiled by the Researcher)

Table 2- Indicators of human resource development

No of indicator	Human Resource Development Variable
X1	Total Population
X2	Sex Ratio
X3	Child Sex Ratio
X4	Percentage of tribal population
X5	Percentage of scheduled cast papulation
X6	Literacy Rate
X7	Female Literacy Rate
X8	Population density
X9	Percentage of the working population
X10	Primary Health Centers
X11	Numbers of Sub-centers
X12	Numbers of Doctors
X13	Numbers of Nurses
X14	Per capita electricity consumption
X15	No of banks

(Source: Compiled by the Researcher)

3. RESULT AND DISCUSSION

Levels of Human Resource Development:
Based on the Min-Max score method of each tahsil of the in Nashik district, human resource development levels were ascertained and grouped into three levels: High, Moderate, and Low. Lower-level values of the composite index indicated a lower rate of human resource development, and higher values of the ranking composite index indicated a higher rate of human resource development.

I) High Level of Human Resource Development Region:
The Min-Max Index indicates a high level of human resource development (above 0.50). In the Nashik district, only two tehsils are categorized as high-level human resource development regions: Nashik (0.62) and Malegaon (0.51). A detailed assessment of fifteen human resource development indicators in Nashik tehsil classifies nine as high. A similar evaluation

in Malegaon tehsil reveals that nine out of fifteen development indicators fall into the high category. Factors such as the high population, high child sex ratio, Scheduled caste population, high literacy rate, high female literacy rate, high population density, number of primary health centers, numbers of sub-centers, number of doctors. numbers of nurses and numbers of banks contribute to the high level of human resource development in these tehsils

Table: 3 Nashik districts: Level of Human Resource Development Indicators

Tehsil	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15
Surgana	175816	1001	960	96.51	0.37	68.15	61.01	214	55.4	8	39	21	37	110.96	12
Kalwan	208362	963	918	68.95	3.40	68.5	61.41	241	54.6	9	49	20	48	636.04	34
Deola	144522	919	858	20.84	9.04	81.96	75.25	263	53.6	5	25	12	17	813	34
Baglan	374435	939	870	40.02	4.96	77.45	71.07	258	52.1	11	53	22	35	667.17	68
Malegoan	955594	949	912	10.15	7.78	83.39	78.48	525	39	23	55	89	203	1013.78	80
Nandgoan	288848	932	892	15.27	7.44	80.91	73.34	265	44.9	5	21	11	16	566.41	38
Chandwad	235849	932	850	19.99	8.67	82.09	74.86	247	54.1	5	31	10	16	973.11	27
Dindori	315709	955	905	55.57	6.23	77.52	69.68	239	51.4	10	29	25	61	1370.8	61
Peint	119838	988	988	96.44	0.51	71.03	62.94	215	55.8	7	66	16	30	772.07	14
Triembak	168423	975	972	80.2	4.46	68.91	60.37	187	50.6	7	35	20	36	749.95	33
Nashik	1755491	904	868	10.42	7.90	88.98	84.59	1970	37.4	31	30	73	343	1023.35	331
Igatpuri	253513	965	922	40.47	6.11	77.43	68.08	271	44.4	8	49	19	31	2471.58	45
Sinnar	346390	924	863	13.35	6.98	82.68	74.9	257	51.5	7	36	15	21	2837.95	60
Niphad	493251	936	846	19.42	9.16	83.63	77.08	470	50	10	53	25	28	1310.11	136
Yeola	271146	937	878	10.72	9.83	82.71	75.44	256	51.5	6	25	15	14	647.1	22

(Source: Compiled by the Researcher)

Table: 4 Nashik districts: Min-Max score of Human Resource Development

Tahsil	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	C.S
Surgana	0.03	1.00	0.90	1.00	0.00	0.00	0.03	0.02	0.98	0.12	0.40	0.14	0.07	0.00	0.00	0.31
Kalwan	0.05	0.61	0.57	0.68	0.32	0.02	0.04	0.03	0.93	0.15	0.62	0.13	0.10	0.19	0.07	0.30
Deola	0.02	0.15	0.10	0.12	0.92	0.66	0.61	0.04	0.88	0.00	0.09	0.03	0.01	0.26	0.07	0.26
Baglan	0.16	0.36	0.19	0.35	0.49	0.45	0.44	0.04	0.80	0.23	0.71	0.15	0.06	0.20	0.18	0.32

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Malegoan	0.51	0.46	0.52	0.00	0.78	0.73	0.75	0.19	0.09	0.69	0.76	1.00	0.57	0.33	0.21	0.51
Nandgoan	0.10	0.29	0.37	0.06	0.75	0.61	0.54	0.04	0.41	0.00	0.00	0.01	0.01	0.17	0.08	0.23
Chandwad	0.07	0.29	0.03	0.11	0.88	0.67	0.60	0.03	0.91	0.00	0.22	0.00	0.01	0.32	0.05	0.28
Dindori	0.12	0.53	0.47	0.53	0.62	0.45	0.38	0.03	0.76	0.19	0.18	0.19	0.14	0.46	0.15	0.35
Peint	0.00	0.87	1.00	1.00	0.01	0.14	0.11	0.02	1.00	0.08	1.00	0.08	0.05	0.24	0.01	0.36
Triembak	0.03	0.73	1.00	0.81	0.43	0.04	0.00	0.00	0.72	0.08	0.31	0.13	0.07	0.23	0.07	0.31
Nashik	1.00	0.00	0.17	0.00	0.80	1.00	1.00	1.00	0.00	1.00	0.20	0.80	1.00	0.33	1.00	0.62
Igatpuri	0.08	0.63	0.60	0.35	0.61	0.45	0.32	0.05	0.38	0.12	0.62	0.11	0.05	0.87	0.10	0.36
Sinnar	0.14	0.21	0.13	0.04	0.70	0.70	0.60	0.04	0.77	0.08	0.33	0.06	0.02	1.00	0.15	0.33
Niphad	0.23	0.33	0.00	0.11	0.93	0.74	0.69	0.16	0.68	0.19	0.71	0.19	0.04	0.44	0.39	0.39
Yeola	0.09	0.34	0.25	0.01	1.00	0.70	0.62	0.04	0.77	0.04	0.09	0.06	0.00	0.20	0.03	0.28

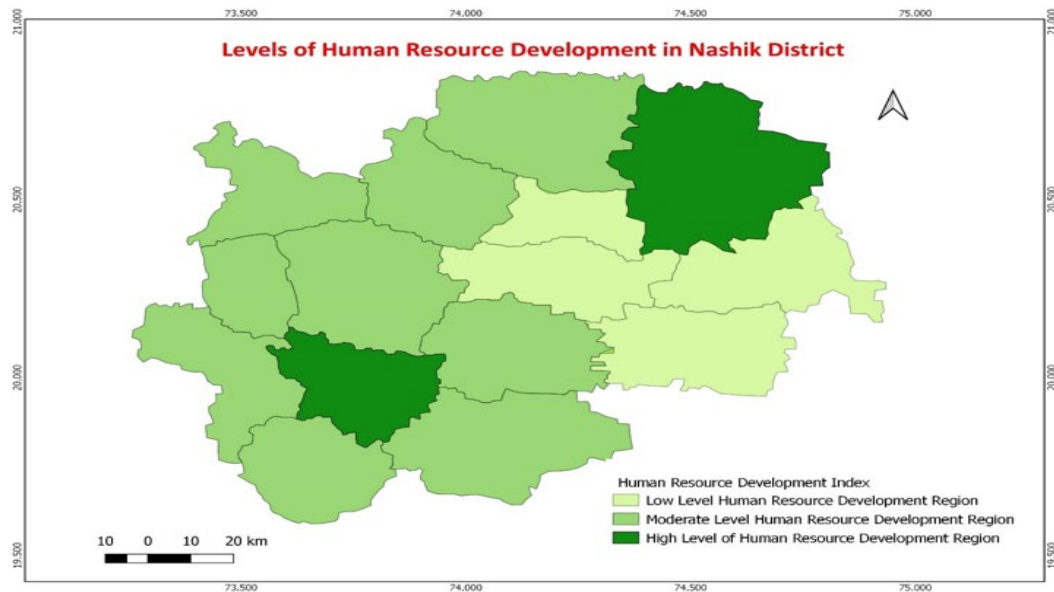(Source: Compiled by the Researcher)

Figure no 1- Levels of Human Resource Development in Nashik District

II) Moderate Level Human Resource Development Region:

The moderate level of human resource development ranges between 0.31 and 0.49 min-max score. In Nashik district nine tehsils under the moderate-level human resource development region: Niphad (0.39), Peint (0.37), Igatpuri (0.36), Dindori (0.35), Sinnar (0.33), Baglan (0.32), Triembak (0.31), Surgana (0.31) and Kalwan (0.30). A detailed assessment of fifteen human resource development indicators in Niphad tehsil classifies five as high, three as moderate, Peint tehsil five as high, Igatpuri tehsil five as high, four as moderate, Dindori tehsil four as high, four as moderate, Sinnar tehsil five as high, one as moderate, Baglan tehsil two as high, five as moderate, Triembak tehsil four as high, two as moderate, Surgana tehsil four as high, one as moderate, and Kalwan tehsil five as high, one as moderate. These tehsils exhibit a high

and moderate sex ratio, child sex ratio, working population, number of sub-centers, and literacy rate. However, these tehsils do not observe sufficient levels of other human resource development indicators.

III) Low Level Human Resource Development Region:
 The low human resource development region ranges below 0.30 min-max scores. Yeola (0.28), Chandwad (0.28), Deola (0.26), and Nandgoan (0.23), are under the low human resource development region in Nashik district. A detailed assessment of fifteen development indicators in Yeola, Chandwad, and Nandgoan, tehsil classifies ten as the lowest level; while Deola, tehsil classifies eleven as the lowest level. Only the Percentage of Scheduled cast papulation, Literacy Rate, Female Literacy Rate, and working population demonstrate high levels. In contrast, other indicators, including total population, sex ratio, child sex ratio, percentage of tribal population, population density, primary health centers, number of sub-centers, number of doctors, number of nurses, per capita electricity consumption, and no of banks exhibit moderate and lowest levels.

4. CONCLUSION

The level of human resource development is not uniform in the Nashik district. It is high in urban and administrative regions (Nashik, and Malegaon). While low human resource development lowest rainfall and the eastern arid region (Yeola, Deola, Chandwad, and Nandgoan). low rainfall, low medical facilities, less banking availability, lowest per capita electricity consumption, and population structure contribute to these tehsils' low human resource development. The moderately developed tehsils mostly concentrate on the north and western parts of the study region. The moderate human resource development of these tehsils is influenced by factors such as uneven rainfall, less developed agriculture and industry, medical facilities, and population structure. Thus, the uneven human resource developments in the Nashik district affect physical features like topography and rainfall, as well as manmade features like population composition, medical facilities, literacy level, infrastructural facilities, urbanization, agriculture, and industrial growth.

5. SUGGESTIONS

There is an urgent need to increase literacy levels, increase child sex ratio, medical, electricity, and banking facilities, and agriculture and industrial development to enhance the quality of life where human resource development is lowest in developed tehsils in the study region. Nashik and Malegaon tahsils have achieved good progress in the human resource development in the study region, but the working population and child sex ratio are still low compared to other tahsils of the study region. Therefore, this point needs to be considered in future planning, which requires special attention from planners when framing plans. In moderately and less developed tehsils, less developed infrastructural facilities like education, electricity, banking, and medical facilities are affected. In this region, it is required to develop infrastructural facilities for these tehsils.

CONFLICT OF INTEREST
None.

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