

# **Regional Disparities in the Level of Economic Development in Nashik District: A Geographical Analysis**

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

The present investigation was studying the regional disparities in level of economic development of Nashik district a geographical analysis. It was based on secondary data collected from different government organizations and in government reports. The data covered 2021-22. All the sectors of economic development indicators, cropping intensity, irrigation intensity, area under crops, electricity usage, working population, road distances, percentage of BPL family, were considered for this study. The Z score method was applied in analysing the measurement of economic development. The studied regional diversity which was found in economic development in the study region. High development was found in Nashik, Malegoan, Niphad and Baglan.tahsil while moderate economic development was recorded in Chandwad, Dindori, Sinnar and Yeola tahsils. Surgana, Kalwan, Deola, Nandgoan, Peint, Triembak and Igatpuri tahsil have recorded the lowest economic development. In comparison to other regions, Thus, physical features like topography,

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soil, rainfall, forest cover and manmade features like concentration of tribal population, percentage working population, crop and irrigation intensity were affected by uneven economic development in this study region. The present paper gave the geographical analysis of economic development in Nashik district during the period of 2021-22.

**Keywords:** *Economic development; cropping intensity; irrigation intensity; working population; regional disparity.*

## 1. INTRODUCTION

A number of research papers and research articles were published relating to the level of economic development. R. B. Patil and Sandeep Sutar [1] has analysed regional disparities in the economic development of Kolhapur district, a geographical analysis. According to the study, his observations were that the imbalance in irrigation facilities and infrastructural facilities mostly affected economic development. H. Nagaraj and Krishna Murthy [2] have studied Geographical Analysis of Regional Disparities- of Chitradurga District, Karnataka. Arundhati Patil and Dhanashree Shinde [3] wrote a research paper on levels of economic development in Maharashtra. His observations were the regional disparity in economic development in all districts. K. L. Gaikwad [4] has written a research paper on Economic Development of Marathwada in a, "A Case study of District Domestic Product and Road Development. While R. P. Shinde [5] has written a research paper on regional Disparities In The Levels of Economic Development In Districts of Maharashtra. Ramphul Ohlan [6] has an analysis on the Pattern of Regional Disparities in Socio-economic Development in India: District Level Analysis. M. R. Singariya [7] has analysed the Population Growth and Economic Development in Rajasthan: A Principal Component Analysis Based Approach.

### 1.1 Study Area

Nashik district located on partly upper Godavari basin and tapi river basin. It lies between 19°35' and 20°52' North latitudes and between 73°16' and 75°56' East longitudes, forms a distinct unit covering 15,530 sq. km geographical area and according to 2011 population a population of Nashik district was 61,07,187 persons. It accounts for 5.05 percent of the total area of the state and 5.43 percent of the total population of the state. The district includes 1929 villages and 18 towns. The district occupied the khandesh and north Maharashtra. Its surrounded by, Dhule District in the north, Jalgaon, Aurangabad Districts in the east, Thane District in the south-west, Ahmadnagar District in the south and Dang district in the north-west.

### 1.2 Objectives

- 1) To find out the regional disparities in level economic development of Nashik district.
- 2) To find out the cause behind regional disparities in economic development of Nashik district.

## 2. MATERIALS AND METHODS

This study is based on secondary data. The study requirement of statistical information was obtained from census handbook record of the local bodies; statistical department Government of Maharashtra, meteorological department as well as socio-economic abstract of Nashik district in 2021-22. The collected data was processed and edited for analysis by applying different statistical methods which presented through tables. For calculating level of economic development by using Z score method. The formula is thus;

$$z_i = \frac{x_i - \bar{x}}{sd}$$

Where,

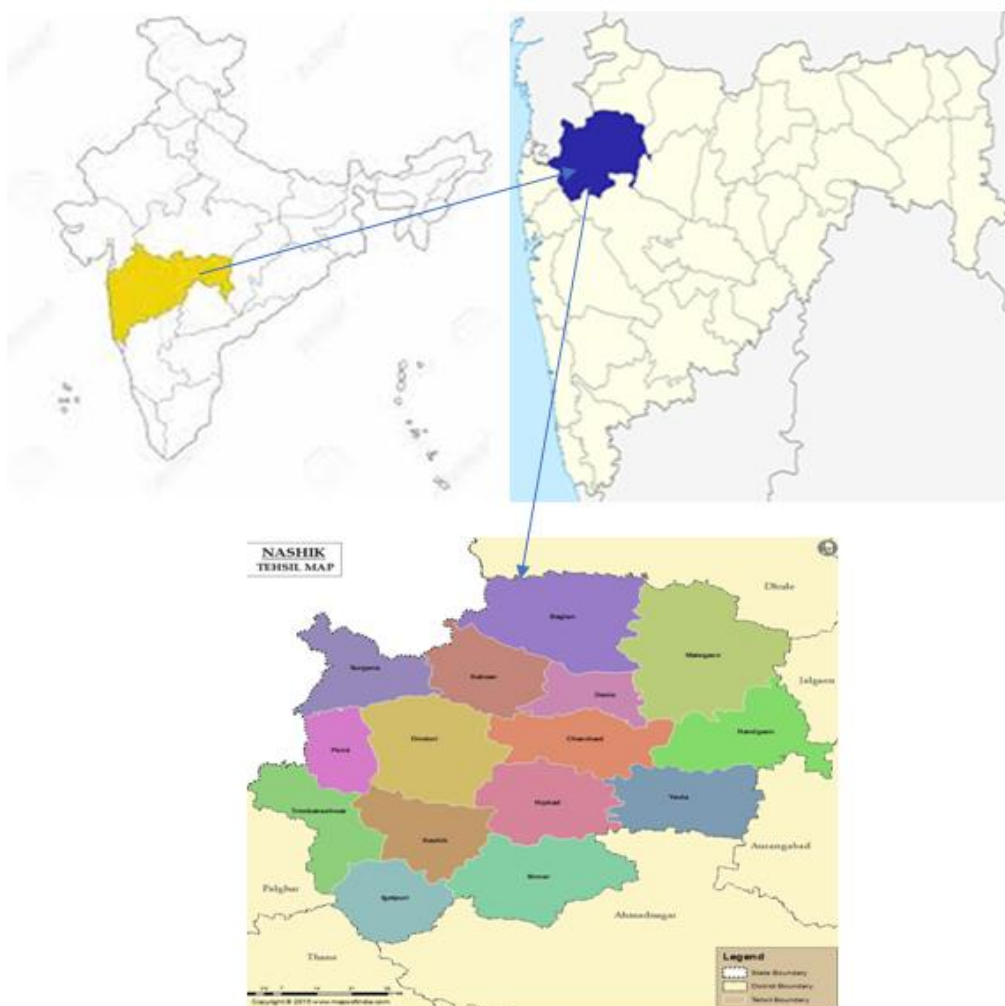
Z<sub>i</sub> is the standard score of the i<sup>th</sup> variable;  
 x<sub>i</sub> is the original value of individual observation;  
 $\bar{x}$  is the mean of variable  
 SD stands for the standard deviation.

In first step tahsil wise z-score of each economic development indicator has been calculated. The values so obtained are added district wise and averages was taken to calculate the composite z-score as the index of development, by the formula;

$$c_i = \frac{\sum Z_{ij}}{n}$$

Where,

c<sub>i</sub> refers to composite index of z-score;  
 Z<sub>ij</sub> stands for the sum of z-scores of variable j in observation i;  
 N symbolizes the number of variables



**Map 1. Location map- Nashik district**

The level economic development was grouped under four heads:

- 1) High development - (composite score Above 3 Z score)
- 2) Moderate development - (composite score 0-3 Z score)
- 3) Low development - (composite score below 0 Z score)

### 3. RESULTS AND DISCUSSION

#### 3.1 Levels of Economic Development

On the basis of Z score method of each taluks in Nashik district, levels of economic development were ascertained and grouped them into three levels of development – High, Moderate and Low. Lower level values of composite index indicated the lower rate of development and higher value of ranking

composite index indicated the higher rate of development.

##### 3.1.1 High levels of development

By the secondary data of different indicators (Table 1) it shows that the high development was found in four taluks namely Nashik, Malegoan, Niphad and Baglan. The factors who were in favour of this development have been besides Nashik being the head quarter of the district Malegoan, Niphad and Baglan having irrigation facilities. These taluk get the first and second rank in many indicators. Specifically, Irrigation Intensity, cropping intensity, Use of Electricity, % Of Working Population, Road Distance and No of Hospital components), when) combined the interplay of these indicators has led these talukas in to high development. The ranking composite value index when more than 3 it indicates that there is high economic development.

**Table 1. Indicators of economic development**

No of indicator	Economic
1	Cropping Intensity
2	Area Under Crop
3	Irrigation Intensity
4	Use of Electricity
5	Road Distance
6	% Of Working Population
7	% Of BPL Family
8	No of Hospital

**Table 2. Nashik districts: Regional disparities in the level of economic development indicators**

Tahsil	Z score							Composite index	
	Cropping Area intensity under crop	Irrigation intensity	Use of electricity	Road distance	% of working population	% of BPL family	No of hospital		
Surgana	-0.83	-0.91	-0.44	-0.82	-0.69	-0.42	2.28	-0.43	-2.26
Kalwan	0.04	0.01	-0.3	-0.56	-0.86	1.23	-0.06	-0.35	-0.85
Deola	1.46	-0.47	-1.79	-0.62	-1.07	0.32	-0.89	-0.32	-3.38
Baglan	2.08	1.88	-0.41	-0.19	0.19	0.28	0.06	-0.4	3.49
Malegoan	-0.25	1.58	1.73	0.75	0.76	0.004	-0.51	-0.24	3.824
Nandgoan	-0.3	0.03	0.31	-0.47	-0.31	0.07	-0.21	-0.37	-1.25
Chandwad	0.37	0.47	-0.09	-0.06	-0.26	1.5	-1.33	-0.19	0.41
Dindori	-0.74	-0.25	0.96	-0.17	0.42	-0.4	0.42	-0.21	0.03
Peint	-0.55	-1.04	-1.13	-0.72	-1.09	-1.59	1.46	-0.46	-5.12
Triembak	-1.13	-1.15	-0.24	-0.68	-0.74	-0.61	1.31	-0.45	-3.69
Igatpuri	-1.11	-0.95	0.36	0.4	-0.95	1.67	-0.12	-0.42	-1.12
Nashik	-1.16	-1.17	-0.2	2.88	2.25	-1.29	-0.14	3.35	4.52
Sinnar	0.27	0.47	-0.02	0.86	0.36	0.29	-0.96	-0.36	0.91
Niphad	1.57	0.24	0.18	0.68	0.56	-0.16	-0.76	1.06	3.37
Yeola	0.78	1.27	0.2	-0.43	0.36	0.11	-0.54	-0.21	1.54

Source: Compiled by the Researcher

### 3.1.2 Moderate level of development

This category of development included four talukas namely Chandwad, Dindori, Sinnar and Yeola tahsils. The tahsils having a poor agricultural condition because of the uneven rainfall, Net sown area and irrigation facilities being less. This tehsil was leading in some of the indicators. Good infrastructure facilities were influences in overall development. This tahsils was leading in some of the indicators [8-11]. The Cropping intensity, Use of Electricity, working population, Agricultural development was moderate as well as infrastructure facilities also moderate. Irrigation intensity was good and area under the crop was also good. In the sense of overall development was moderate.

### 3.1.3 Low level of development

In this level group, seven talukas were included namely: Surgana, Kalwan, Deola, Nandgoan,

Peint, Triembak and Igatpuri. These tahsils' development level was low because of physical constraints of undulating topography, the less fertile soil, tribal population and less irrigation. Facilities were also less Agricultural productivity [12-15]. All those seven tahsils have low economic development, but there would be a scope to improvement in this condition. Triembak and Peint tahsils both have low development in all categories.

## 4. CONCLUSION

The analysis of levels of Economic development clearly indicates that there was a regional imbalance in crop intensity, area under the crops, irrigation facilities and infrastructural facilities which are mostly affected the economic development in study region. The Nashik and Malegoan tahsils displayed having mostly concentration of industry in contrast to Niphad and Baglan tahsils has Intensity of cropping,

intensity of irrigation and infrastructure facilities which are highly developed. The Surgana, Peint, Igatpuri, Kalwan and Triembak, tahsils are covered by mountain, hilly and forest region, concentration of tribal population and less infrastructure development, so there was low development. The moderate economic development was found in Chandwad, Dindori, Sinnar and Yeola tahsil were moderate and uncertain rainfall, less crop intensity and area under the crop was less. Thus, physical feature like topography, soil, rainfall, forest covers and manmade feature tribal population, working population, crop and irrigation intensity were affected on uneven economic development in study region.

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

### REFERENCES

1. Patil RB, Sandeep P. Sutar. "Regional disparities in the economic development of Kolhapur district a geographical analysis." The Konkan Geographer Journal. 2014;10:53-58.
2. Nagaraj H, Krishna Murthy. Geographical analysis of regional disparities of Chitradurga District, Karnataka. Trans Institute of Indian Geographers. 2007;29(1).
3. Arundhati Patil, Dhanashree Shinde. Levels of economic development in Maharashtra. He observed that regional disparity of economic development in all district. 2012:1.
4. Gaikwad KL. 'Economic development of Marathwada' a case study of District domestic product and road development. 2014:12.
5. Shinde RP. Regional disparities in the levels of economic development in districts of Maharashtra. International Research Journal of Management Sociology & Humanity (IRJMSH). 2016:212.
6. Ramphul Ohlan. Regional disparities in socio-economic development in India: District level analysis. Social Indicators Research. 2013:212.
7. Singariya MR. Population growth and economic development in Rajasthan: A principal component analysis based approach. International Journal of Social and Allied Research (IJSAR). 2012:16.
8. Pratap S. Birthal, Harvinder Singh, Shiv Kumar. 'Agriculture, economic growth and regional disparities in India. Journal of Economic Development; 2010.
9. Saxena HM. Economic geography. Rawat Publication Delhi. 2016:16.
10. Socio-economic abstract of the nashik District; 2021-22.
11. Available:www.nashik.nic.in
12. Abhiman Das. Socio-economic development in India: A regional analysis, development and society. 1999:345.
13. Government of Maharashtra- Gazetteer of Nashik district
14. Govt.of India Nashik district census handbook; 2011.
15. Ahuja Ravi S, Nikam Ashish A. A study of regional disparities in growth in the state of Maharashtra. International Journal of Business Economics & Management Research. 2015:79.

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