



THE SPATIO-TEMPORAL STUDY OF POPULATION DISTRIBUTION IN SOLAPUR DISTRICT: A GEOGRAPHICAL ANALYSIS

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Abstract

The present study investigates the spatio-temporal distribution of population in Solapur district of Maharashtra between 1991 and 2011. The district exhibits uneven population distribution influenced by physical, economic, and social factors. North Solapur recorded the highest population growth, largely due to its role as the district headquarters and the concentration of industrial and commercial activities. In contrast, tahsils such as Mangalwedha, Karmala, and South Solapur showed relatively low growth, attributed to limited irrigation and industrial development. The study highlights that the growth pattern is closely linked to geographical conditions, availability of irrigation facilities, urbanization, and migration. Overall, the findings emphasize the role of socio-economic transformation and infrastructural development in shaping regional demographic trends.

Keywords: - Population distribution, Spatio-temporal analysis and Solapur district

Introduction: -

Significance of human resources has an impact on regional development; thus, it is referred to as the wealth of the nation. Humans do not play a passive role in nature, but they perform an active role determining the capacity to think, imagine, skills, creativity, and behave accordingly. It influences the economic activity of men and determines the economic patterns of resource utilization. Humans play the role of producers and consumers in economic activities. The economic development of any region depends on the scientific and technological advancement of its people. Humans are a very dynamic essential resource, providing essential inputs of labor and skill in the process of utilization of natural resources. (D.N. Ligade, 2017)

The goal of a geographer as an analyst of the population is to understand regional differences in the earth covered by the people. Just as areal differentiation is the theme of geography in particular variation, the distribution of populations from one locality to another and from region to region is related to numerous physical as well as cultural factors. The stage of economic development and social and political factors also play a role as effective as others in the distribution of the population. (Nitya Nand 1966) An important aspects of

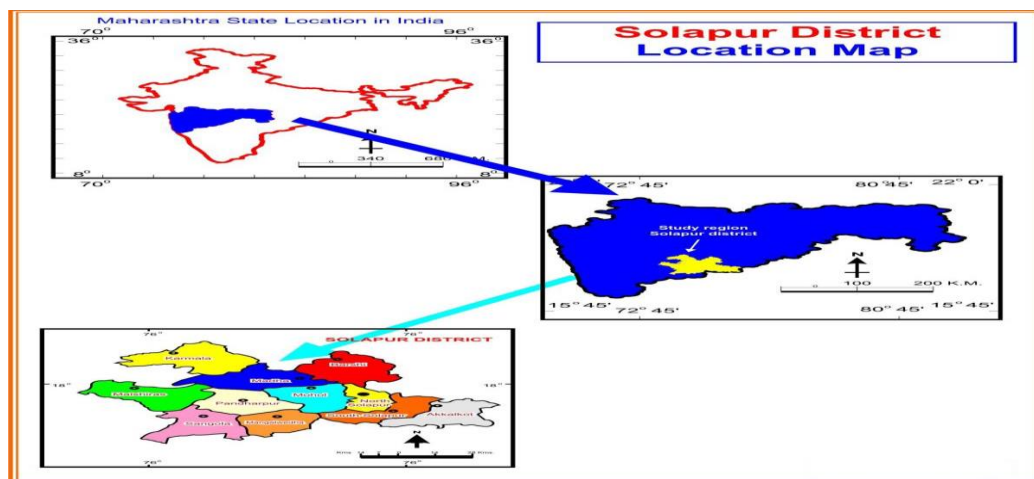
the world's population is its uneven distribution. India's population is highly concentrated in some pockets, such as highly urbanized and industrialized areas and areas of high agricultural prosperity. Fewer people live in high mountains, arid lands, thickly forested areas, and cold polar areas. The imbalance between trends of population and development places the population of a region in inadequacies of amenities and results in hunger, malnutrition, poverty, low standard of living, unemployment, overcrowding in schools, hospitals, etc. (Mishra, 1995).

There is a close correlation between relief, usability of land, patterns of transportation networks, nature of economic activities, and spatial distribution of the population. Due to the impact of relief, the population is very small along the hilly regions and along the foothills of the Solapur district. The valleys of major rivers, such as Bhima, Nira, Bhogavati, and Maan, have relatively large populations.

Study Region:

For the present investigation Solapur District was selected as the study region. Geographically, the Solapur district is located between 17°10' North to 18°32' North latitude and 74°42' East to 76°15' East longitude. It covers an area of 14,895 sq. km. The district is situated on the southeastern fringes of the state of Maharashtra, and is bounded to the north by the Ahmednagar and Osmanabad districts, to the east by the Osmanabad and Gulbarga districts of the state of Karnataka, to the south by the Sangli and Bijapur districts, and to the west by the Pune and Satara districts.

The shape of the district resembles that of a flying eagle. The proportion of area of Solapur district as compared to Maharashtra is about five (5%) per cent. It is administratively subdivided into 11 types. The soils in the district can be classified into three main types. These are black, coarse grey, and reddish soils. Agro-climatically, the entire district is under a rain shadow area. Rainfall is uncertain and scarce. The average rainfall for the district was 545.4 mm.



Objective:

The main objectives of this paper are as following,

- 1) To spatio-temporal study of population distribution in the study region
- 2) To study the factor responsible for distribution of population in Solapur District.

Database and Methodology:

The study was conducted in the Solapur district in Maharashtra state. For this study, only secondary information was collected from different sources. Secondary data, such as information related to the tasil-wise population and geographical information collected through the Agriculture Department and Socio-Economic Review and District Statistical abstract of Solapur District from 1991 to 2011 were used.

Result and Discussion:

The population in any region is not uniformly distributed. Geographical, economic, political, and historical factors play a significant role in influencing the distribution and density of populations. It may be emphasized that these factors act totally and not individually. The total population of Solapur district was 4315527 persons in 2011, out of the total population of the district 32.40 per cent lived in urban area and 67.60 lived in rural areas. Table No. 01 shows the Tahsil-wise distribution and population density.

Table No. 2.7**Distribution of Population in Solapur District (1991 &2011)**

Sr. No	Tahsil	Population		
		1991	2011	Changes
1	Karmala	194600	254777	60177
2	Madha	250176	323727	73551
3	Barshi	302158	372416	70258
4	North Solapur	784361	1056312	271951
5	Mohol	200900	276656	73756
6	Pandharpur	317348	442173	124825
7	Malshiras	350346	485440	135094
8	Sangola	230246	323418	93172
9	Mangalwedha	148893	206147	57254
10	South Solapur	187157	260046	72889
11	Akkalkot	262872	314415	51543
12	Distract	3231057	4315527	1084470

(Source: Compiled by researcher on the basis of Socio-economic Abstract of Solapur District 1991 and 2011)

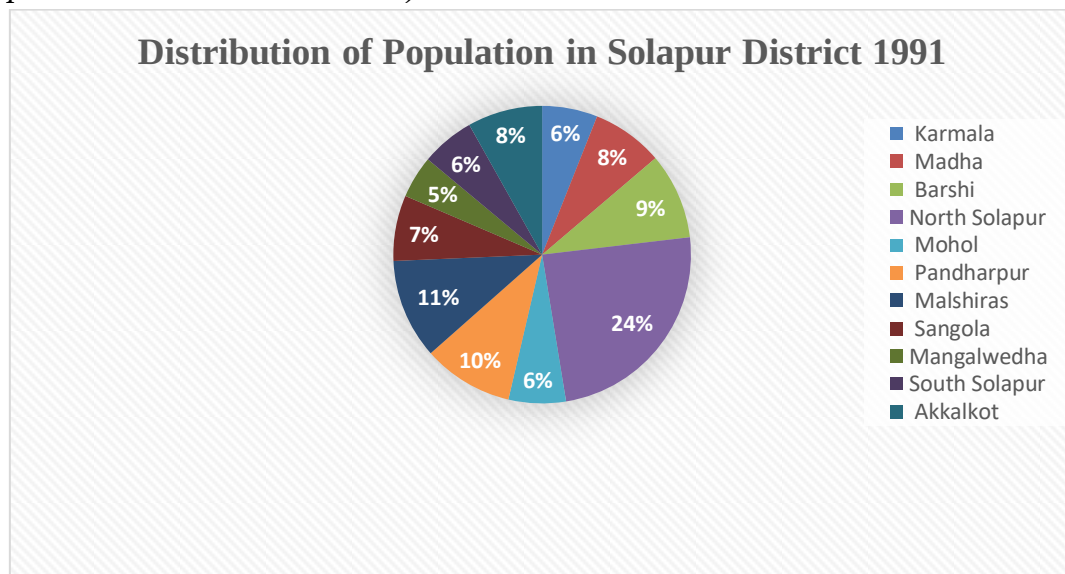


Fig.01

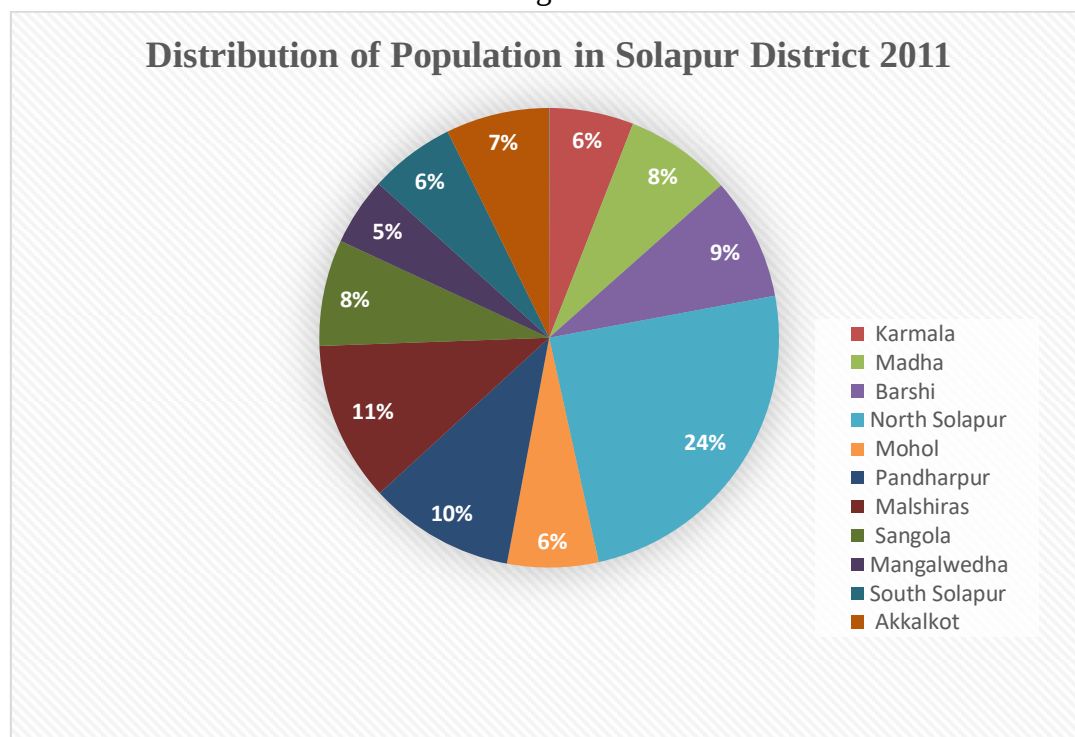


Fig.02

The table no.01 reveals that tahsil wise distribution of the population in the study region in 1991 and 2011. In 1991, the total population was 3231057 persons in the Solapur district. The highest population was found in North Solapur (784361), followed by Malshiras (350346), and Pandharpur 317348 person. This is because North Solapur is the district headquarters and has a high population and migration of people for business and industrial purposes, whereas Malshiras tahsil also has a high population due to the development of the sugar industry and irrigation facilities. The lowest population was found in

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Mangalwedha (148893), South Solapur, and Karmala tahsil because of less development of irrigation facilities and industries. Other tahsils were found to have a moderate population distribution.

During the year 2011 North Solapur tahsil has also the largest population in Solapur district, the reason is already discussed above, which is 1056312 (24.47 %) persons of total population of Solapur district, followed by Malshiras 485440 (11.24 %) persons and Pandharpur 442173 (10.24%) persons. Mangalwedha, South Solapur, Mohol, and Karmala tahsil have a small population in the Solapur district because of less development of irrigation facilities and industries. (fig. No. 1 & 2). Other tahsils, such as Akkalkot, Madha, Barshi, and Sangola, had moderate population distributions.

The changing patterns of the population in the study region during the investigation period are presented in table no. 01. All tahsils experienced positive changes in population in the study region, and high positive changes were found in North Solapur, Malshiras, and Pandharpur tahsils due to migration in the city and development of the sugarcane industry. Low positive changes were found in Akkalkot and Mangalwedha tahsils. This is because of the combination of geographical, economic, and social factors that make the area less desirable for settlement.

Conclusion:

The study concludes that the population distribution in Solapur District is highly uneven and is influenced by both natural and human factors. Between 1991 and 2011, all tahsils experienced positive population growth, with North Solapur, Malshiras, and Pandharpur witnessing the highest increases due to urbanization, industrialization, and irrigation development. In contrast, Akkalkot and Mangalwedha reported slower growth rates, reflecting the impact of limited agricultural and industrial opportunities. These variations highlight the significance of regional disparities in development, where areas with better infrastructure facilities attract higher populations. Future development planning should focus on balanced growth by strengthening irrigation, agro-based industries, and infrastructure in lagging tahsils to reduce the regional inequality in population distribution.

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