Address
· Vikram Nagar, Boudhi Chouk, Latur.
· Tq. Latur, Dis. Latur 413512 (MS.)
· (+91) 9922455749, (+91) 8999250451

Email
· aiirjpramod@gmail.com
· aayushijournal@gmail.com

Website
· www.aiirjournal.com

A study of Infrastructure Development in Aurangabad Division of Maharashtra State

Avhad Baban Arjun,
Assistant Prof,
Dept of Geography,
MGVs M.S.G, Arts, Comm & Science College,
Malegaon Camp (MS)

Abstract

Infrastructure refers to the facilities, activities, and services which support the operation and overall all development in the area. There is a direct link between infrastructure, agriculture and economic development of a country. In this paper an attempt has been made to study the infrastructure development in Aurangabad division of Maharashtra state. The present study is based on secondary data. For this study district wise data has been collected. This data has been collected from Socio-economic abstract of Maharashtra state also. To examine the infrastructure development in the study region M. G. Kendall (1939) ranking coefficient method has been applied. There are three district namely Aurangabad, Beed, Osmanabad belong to the highly developed category of the development. Jalna, Parbhani, Latur district categorized in low development category.
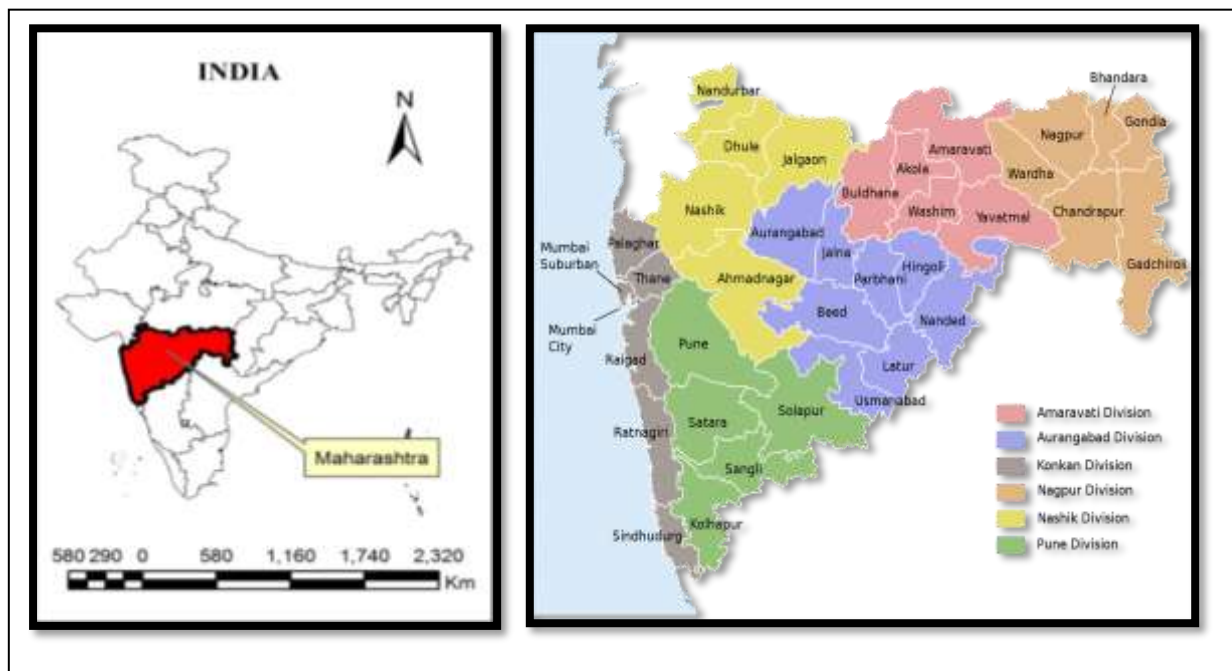
Introduction

Infrastructure refers to the facilities, activities, and services which support the operation and overall all development in the area. There is a direct link between infrastructure, agriculture and economic development of a country. The concept of infrastructure is essentially a flow of service out of a certain stock of infrastructure facilities created over a length of time (Ghosh and De, 1998: 3039). Infrastructure is a compound of two words: infra and structure. Infrastructure is a substructure of the superstructure. The availability of infrastructure services is pre-condition to rapid growth in every country. The study by Aschauer (1989) is said to show that public infrastructure has a significant positive impact on private sector growth and it is one of the works which link infrastructure and economic growth.

Study Area

Aurangabad division is one of the important administrative divisions of the state of Maharashtra. It is one of the six administrative divisions of Maharashtra state. It lies in the Marathwada region of Maharashtra. Aurangabad Beed Jalna Latur Hingoli Parbhani Osmanabad Nanded is the district consisted in this division. It is located on 19º 53' N to 75º 20' E in Marathavad region of Maharashtra. It is geographically covered 64, 590, 58 km2. As per 2011 census 18,731,872 populations has been recorded. The entire Aurangabad division receives rainfall by monsoon wind. The scanty rainfall occurs in entire Aurangabad division. Average annual rainfall is 610 mm in entire Aurangabad division.

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Map No. 1 Location Map of Study Area

Objective
1) To demarcate the infrastructural developed area in Aurangabad Division of Maharashtra State.

Database and Methodology
The present study is based on secondary data. This data has been collected from Socio-economic abstract of Maharashtra state, District statistical handbook etc.

To study the infrastructure development of Aurangabad division of Maharashtra state   district, wise data of different variables have been collected. The collected data have been tabulated in proper format and apply suitable statistical methods for obtaining good results.

M. G. Kendall's Ranking Coefficient Method
To examine the infrastructure development in the study region M. G. Kendall (1939) ranking coefficient method has been applied. In this method, rank has been given according to individual indicator value in tehsil. The average rank of all indicators in tehsil is called the ranking coefficient index. The low ranking coefficient indexes indicate high development in the region whereas the high ranking coefficient index reflects low development.

The formula for ranking coefficient index is as follows:

$$\text{Ranking Coefficient Index} = \frac{R1 + R2 + R3 + \cdots \ldots \ldots Rn}{n}$$

Where,

R= Ranking of indicators

n= Total number of indicators

In order to classify the tehsil according to the development the ranking coefficient index divided into three classes i.e. high, medium and low.

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List of selected indicators/variables of infrastructure development

Length of national highway per 100 Sq. km. (X1)

Length of state highway per 100 Sq. km. (X2)

Length of major district roads per 100 sq. km. (X3)

Length of other district roads per 100 sq. km. (X4)

Length of village roads per 100 sq. km. (X5)

The total number of post offices per 100 sq. km. (X6)

Total numbers of telephones per lakh population. (X7)

Interpretation:

To examine the spatial pattern of infrastructure development of the district, all rank values have been aggregated. The average of all rank is considered as a ranking coefficient index. (Table No-1)

The ranking coefficient index is ranging from 2.28 to 4 According to ranking coefficient index value tehsils have been categorized into three categories.

1. Highly developed
2. Moderately developed
3. Low developed

Table No. 1 reveals that the lowest ranking coefficient index is 2.28 for Aurangabad district. It indicates that it is highly developed district in the Aurangabad division of Maharashtra. Jalna district recorded higher ranking coefficient index value that is 4.00; as a result, it comes under the low developed category.

Sr. No	District	Rank X1	Rank X2	Rank X3	Rank X4	Rank X5	Rank X6	Rank X7	Total Rank	Coefficient of Rank
1	Aurangabad	5	2	1	1	2	4	1	16	2.28
2	Jalna	6	4	2	5	3	7	1	28	4.00
3	Parbhani	2	3	1	5	1	6	4	22	3.14
4	Hingoli	3	1	2	1	4	3	5	19	2.71
5	Beed	5	1	1	6	3	1	1	18	2.57
6	Nanded	3	1	5	3	4	2	1	19	2.71
7	Osmanabad	1	1	5	3	4	2	1	17	2.42
8	Latur	6	5	1	4	2	2	1	21	3.00

Table No- 2 depicts the level of infrastructure development in the Aurangabad division. There are three tehsils namely Satara, Karad and Mahabaleshwar belong to the highly developed category of the development.

There are two distrtict which come under the moderately developed category. It includes Hingoli, Nanded. While Jalna, Parbhani, Latur incorporated in low development category.

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Sr. No.	Level of Development	No. of Tehsil	Name of Tehsil
1	High	03	Aurangabad, Beed, Osmanabad
2	Moderate	02	Hingoli, Nanded
3	Low	03	Jalna, Parbhani, Latur

Conclusion

The infrastructure is essential for the overall development of a particular area. The level of infrastructure development is taken as an indicator of socio-economic development of any region.There are three district namely Aurangabad, Beed, Osmanabad belong to the highly developed category of the development. Hingoli, Nanded district belongs into moderately category of infrastructure development. Jalna, Parbhani, Latur incorporated in low development category.

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