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Spatial Pattern of Socio-Economic Development in Rural Area – A Case Study of Tehsil Amroha

Abstract

Development is a composite index of all the socio-economic facilities existing in an area. Every component of development is created out of human needs, thought and actions. It is the value added process that leads to the accomplishment of a specific goal. The development of the rural area depends on the used of socio-economic facilities on the way of scientific method and the used of minimum resources to find out the maximum achievement. Rural development aims at integration of the low income segments with the rest of the rural community by ensuring them a better participation in the production process and a more equitable share in the benefits of development.

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Introduction

Development depends on the use of physical and human resources. These resources are the base of socio-economic development create a platform for development. Economic development involves the process through which a country or region achieves economic growth in addition to structural transformation of its economy. Economic development reflects the underlying qualitative, structural and institutional changes that are needed to expand a nation's potentials and capabilities in the utilization of scarce economic resources. Educational institutions play an important role in social development because literacy and educational institutions have positive correlation. So literacy is an important factor in social development. In spite of social development literacy play an important role in economic development because the wages and works of the literate person are differ from the illiterate person. There are some other factors of social development. These are culture, tradition, quality of food and types of food, dresses, lifestyle etc.

Socio-economic development is considered as a symbol of progress and prosperity of any country or society. The world has been consistently striving to attain fast economic development through rapid industrialization on green revaluation, rainbow revolution, liberal economic policies and new legislation.[1] Although all revolutions are responsible for development but they are not success in sustainable development. "Rural development is a process of sustained improvement in material and social welfare of the 'Total Population' with clear emphasis on those living outside the urbanized areas and its comprehensive nature growth out of the need to attack multiple causes of poverty and dualism found in rural areas."[2]

Study Area

Tehsil Amroha is a part of District Amroha. It is situated between 28°54' to 29°06' North latitude and 78°28' to 78°39' East longitude. The study area is bounded from the North district Bijnor, from East district Moradabad, from South-East district Sambhal, from North-West Tehsil Dhanaura and South-West Tehsil Hasanpur.It has 796.70 sq.km. geographical area. It has 395 villages and 20 Nyay Panchayats. It has 2 Block and 8 police station. Gangan river created natural boundary between Tehsil Amroha and district Moradabad. Gangan, Van and Sont are the main river of the study region. These rivers are based on rainfall. N.H.-24 passage through in the study region. The study region is 120 km far from the national capital (Delhi) and 395 km far from the state capital Lucknow. The study region is connected from the national capital and state capital by the road and railways transport facilities.

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As per 2011 census Tehsil's total population is 5.64 lakh. The density of population is 708 persons per sq.km. The sex ration of the Tehsil Amroha is 914/1000. The level of literacy is 57.27% total, 66.91%, male and 46.73% female. Growth of population is 20.28% from 2001-11. The study area has 62.37% Hindu population, 35.20% Muslim, 0.55% Christians, 1.05% Sikhs, 0.11% Budhists and 0.14% Jain. It has 18.83% schedule caste population of the total population.

Objectives of the Study

Socio- economic changes in rural area is an indicator of development and the result of use of physical and human resources in scientific ways. Mostly resources (physical and human) are present in the study area but the rate of development is very slow. Illiteracy, poverty, unemployment, migration, low production, casteism and old farming systems are main causes of backwardness of the study area. Some objectives are selected to find out the result.

These are as followings

1. To find out the backward area in the study area.
2. To find out the levels of socio-economic development in the study area.
3. To examine the role of agriculture in rural development.
4. To analyses the spatial pattern of socio-economic facilities.

Data Base and Methodology

The present study is based on both primary and secondary sources. Secondary sources include published data from different governmental agencies. Primary data have been collected from the survey, investigation and observation method. Primary and secondary data has been used to analyse the spatial levels of socio-economic development in the study area.

Regional disparities in the levels of socio-economic development have been examined using Z-score or standard score technique. In this method each variable has got standardized. The scores measure the departure of individual observations expressed in a comparable form. It is a linear transformation of the original data based on the composite mean Z-score the index of development of each component aerial unit has been estimated.

The model of Z-score is as follows–

$$Z_i = \frac{X - \overline{X}}{\sigma}$$

Where,

Z_i = The standard score or Z-score of ith variable

X = The individual observation

$\overline{X}$ = The mean of variable

σ = Standard deviation

The model of composite mean Z-score is thus–

$$C.S. = \frac{\sum Z_{ij}}{N}$$

Where,

C.S. = The composite mean Z-score

Z_{ij} = Z-score of an Indicator j in area i, and

N = The number of variables.

Hypothesis

The following hypothesis have been formulated to test the ground reality and also to give a specific direction to the solution of the problems in the present study

1. Socio-economic facilities are responsible for the development of rural area.
2. Agriculture and agricultural based industries play an important role in rural development.

Levels of Socio Development in the Study Area

"Development potential depends upon the interaction of demographic potential, resource potential and infrastructural potential".[3] On the basis of composite Z-score of 6 variables (Primary School, Senior Basic School, Intermediate College, Total Literacy, Female Literacy and Schedule Caste's Literacy) the index of socio development of each component has been estimated. On the basis of the composite Z-score the study area has been categorized into five groups. Nyaypanchayat Kaural (1.32), Gajasthal (1.04), Kheda (1.17) and Papsara (1.69) are in very high category. These Nyaypanchayats have very high levels of socio-development in the study area. Nyaypanchayat Kakrali (-2.28), (–0.77), Shahpur (-0.69) and Deeppur (-0.73) are in very low category. These Nyaypanchayats have very low levels of socio-development in the study area. Levels of socio development of the study area is given below–

Table-1
Levels of Socio-Development in Tehsil Amroha (2015)

| Sr.No.	Category	Levels	Nyaypanchayat
1.	Very High	>1.00	Kaural, Gajasthal, Kheda, Papsara
2.	High	0.50 – 1.00	Jalalpur Ghana
3.	Medium	0 – 0.50	Zamnakhas, Avvalpur, Bahadurpur Khurd, Chandnagar, Deorhi Urf Hadipur, Salamatpur, Rajabpur
4.	Low	-0.50 – 0	Nanhera Alyarpur, Buderna, Kailbakri, Sivora
5.	Very Low	< -0.50	Kakrali, Patai Khalsa, Shahpur, Deeppur

Source- Computed by the Authors on the basis of 2015 Census.

According to the above table the levels of socio development is very low in the study area. 4 Nyaypanchayats have very low socio development. They are in the range of less than -0.50 score of the levels. Only 4 Nyaypanchayats are in very high category. They have > 1.00 socio development. 7 Nyaypanchayats are in the range of 0 – 0.50 and 4 Nyaypanchayats are in the range of -0.50 – 0. So the level of socio development is very poor in the study area. Social facilities are not present in the study area in the ratio of the population and the social service

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centers are Far/FAR from the settlements. Social   facilities are out of reached from the poor people.

Fig. 1
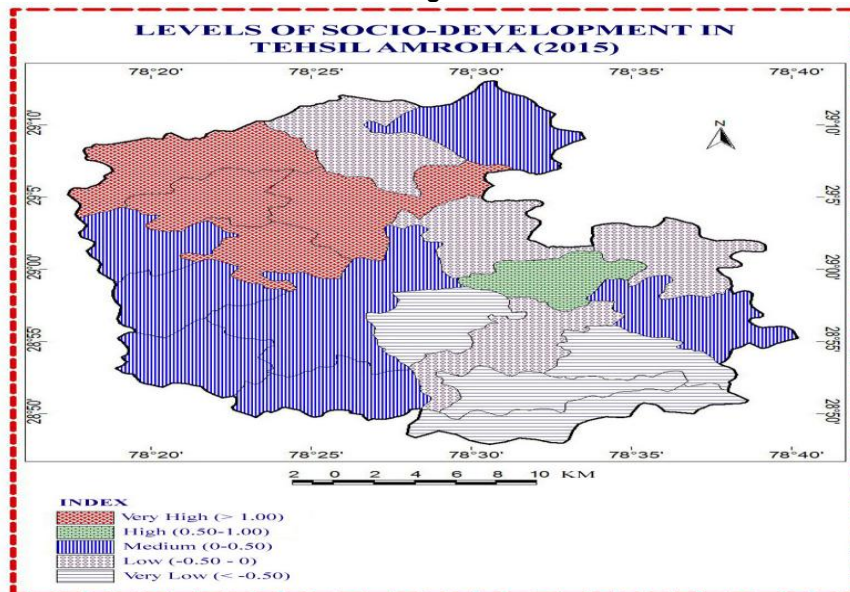
Economic Development

"Development means quantitative as well as qualitative change. Since it means change, which has meaning only when seen against something at a particular time, it carries a meaning which is not only relative but also subjective. Only a given type of quantitative – cum – qualitative change is considered to be development in a positive sense.If the change is not of desired quality and quantity. It is either mal-development or negative development."[4] The levels of economic development in the study area has been estimated on the basis of 15 variables Z-score and composite Z-score.The levels of economic

development is 0 in the study area. Composite Z-score is -0.05 in Block Amroha and 0.05 in Block Joya. Working population, agriculture workers, households workers. Other workers, productivity, crop intensity, regional rural banks, nationalized banks, co-operative societies, fertilizers distribution centers, seeds distribution centers, agricultural instrument manufacturing centers, post offices and savings banks, transports and literacy has been selected variables to find out the levels of economic development in the study area.The levels of economic development is given below in the table.

Table-2
**Levels of economic Development in Tehsil Amroha (2015)**

Sr.No.	Category	Levels	Nyaypanchayat
1.	Very High	>1.00	Papsara
2.	High	0.50 – 1.00	Kaural, Kheda, Sivora
3.	Medium	0 – 0.50	Zamnakhas, Gajasthal, Deorhi Urf Hadipur, Patai Khalsa, Deeppur
4.	Low	-0.50 – 0	Nanhera Alyarpur, Buderna, Kailbakri, Kakrali, Jalalpur Ghana, Rajabpur, Shahpur
5.	Very Low	< -0.50	Avvalpur, Bahadurpur Khurd, Chandnagar, Salamatpur

Source- Computed by the Author on the basis of Census of 2015

According to the above table the levels of economic development is very high (1.42) in Nyaypanchayat Papsara and very low (-0.68) in Nyaypanchayat Salamatpur. 45% Nyaypanchayats have positive economic development levels and 55% have negative economic development levels in the study area. 11 Nyaypanchayats have negative economic development in the study area. These Nyaypanchayats are Nanhera Alyarpur (-0.45),

Buderna (-0.48), Kailbakri (-0.11), Avvalpur (-0.66), Bahadurpur Khurd (-0.57), Chandnagar (-0.63), Kakrali (-0.39), Jalalpur Ghana (-0.25), Rajabpur (–0.27), Salamatpur (-0.68) and Shahpur (-0.25). Levels of economic development is not equal in the study area due to the economic facilities. Economic facilities are far from the poor people in the study area and have more distance of each service center in the study area.

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Fig. 2

LEVELS OF ECONOMIC DEVELOPMENT IN TEHSIL AMROHA (2015)
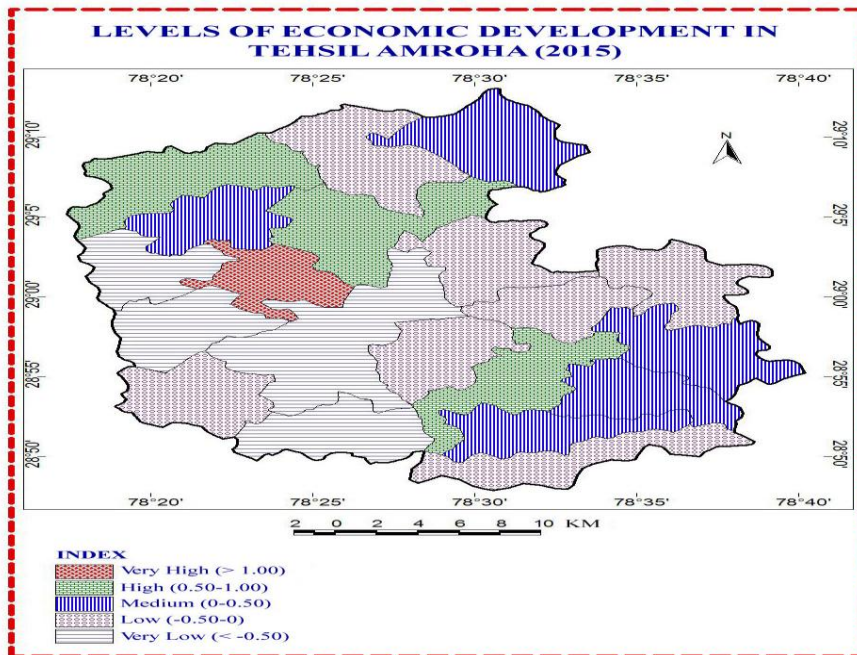
Levels of Agricultural Development

"Rural development has suffered for lack of cumulative economic policy covering both agricultural and industrial sectors."[5] Seven variables have been taken into account for the analysis of levels of agricultural development. Which are productivity, crop intensity, fertilizers stores, seeds stores, agricultural instruments manufacturing centers, agricultural labour and co-operatives societies. Levels of agricultural development has been calculated on the each variables Z-score. Levels of agricultural development is 0.04 in the study area. The score of agricultural development in Block Amroha is -0.24 and 0.20 in Block Joya. The levels of agricultural development is not equal in the study area. The highest levels of agricultural development is 1.57 in Nyaypanchayat Papsara and the lowest levles is -1.14 in Nyaypanchayat Chandnagar. On the basis of the levels of agricultural development the study area has been divided into five category. These are as–

Table-3
Levels of Agricultural Development in Tehsil Amroha (2015)

| Sr.No.	Category	Levels	Nyaypanchayat
1.	Very High	>1.00	Papsara, Sivora, Deeppur
2.	High	0.50 – 1.00	Nill
3.	Medium	0 – 0.50	Zamnakhas, Kailbakri, Koral, Kheda, Deorhi Urf Hadipur, Kakrali, Patai Khalsa, Shahpur
4.	Low	-0.50 – 0	Nanhera Alyarpur, Buderna, Gajasthal, Rajabpur
5.	Very Low	< -0.50	Avvalpur, Bahadurpur Khurd, Chandnagar, Jalalpur Ghana, Salamatpur

Source- Computed by the Author on the basis of 2015 Census.

According to the above table 3 Nyaypanchayats Papsara (1.57), Sivora (1.43) and Deeppur (1.36) are in very high score category and 8 Nyaypanchayats Zamnakhas (0.14), Kailbakri (0.12), Koral (0.19), Kheda (0.19), Deorhi Urf Hadipur (0.20), Kakrali (0.43), Patai Khalsa (0.25) and Shahpur (0.16) are in medium score category. Nyaypanchayat Nanhera Alyarpur (-0.49), Buderna (-0.48), Gajasthal (-0.13) and Rajabpur (-0.35) are in low score category. 5 Nyaypanchayats have very poor score of agricultural development. These Nyaypanchayats are Avvalpur (-1.03), Bahadurpur KHurd (-0.68), Chandnagar (-1.14), Jalalpur Ghana (-0.64) and Salamatpur (-0.97). Although the levels of agricultural development is not good here but the resources are available here.So the levels of agricultural development can be increased to use the resources.

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Fig. 3
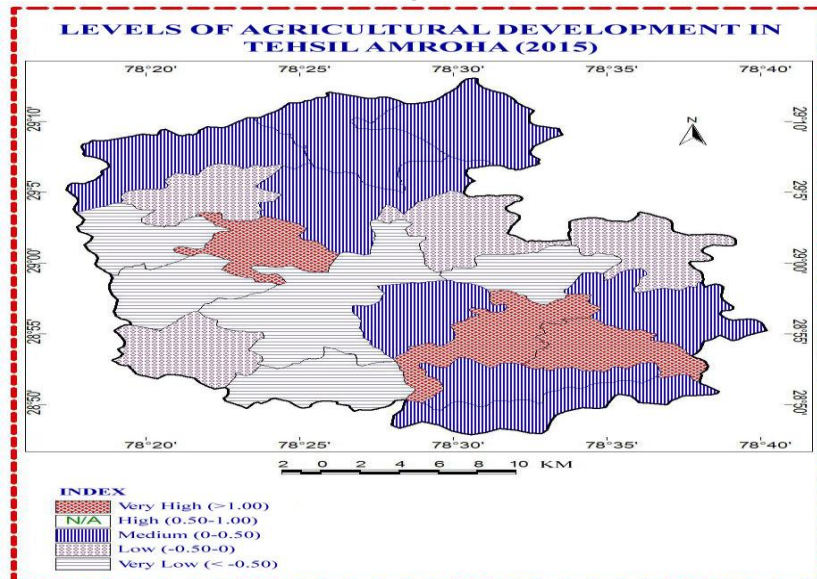
Levels of Socio-Economic Development

Rural development forms a part of the total development process of the nation including that of urban areas, so that the terms of trade between rural and urban areas are as equitable as possible. Rural development, therefore, consists of two major components – the internal and the external, each of which must mutually support the other for harmonious ends. Any change in the rural areas requires structural charges internally and the socio-economic and other changes in its external relations.

"In a developing country, it is necessary to achieve a rapid rate of economic development to fulfill the basic needs and aspirations of the people. However, a rapid rate of economic development can not be achieved without industrialization which requires not only a transformation of the agriculture economy with a view to achieve an increase in national and per capita income but also a transformation of the human resource potential of the country. Rapid industrialization also necessitates import of heavy machines, capital goods, essential raw materials and advanced technology from the development countries."[6]"Disparity in levels of development is prime concern for all those who seek a balanced socio-economic development of the country as a whole. Inter-regional and intra-regional comparisons become necessary, so that the exercise in planning may be directed towards the elimination of imbalances in development also."[7]

In this paper, an attempt has been made to measure, Nyaypanchayatwise, the existing levels of socio-economic development. The result has been calculated on the basis of Z-score and composite Z-score of the socio-economic development indicators. The levels of socio-economic development in the study area is given below.

Table-4
Levels of Socio-Economic Development in Tehsil Amroha (2015)
(Based on Composite Z-Score)

Sr. No.	Nyaypanchayat	Composite Z-score (Socio-Development)	Composite Z-score (Economic Development)	Levels of Socio-Economic Development
1.	Nanhera Alyarpur	-0.11	-0.45	-0.56
2.	Buderna	-0.48	-0.48	-0.96
3.	Zamnakhas	0.22	0.04	0.26
4.	Kailbakri	-0.15	-0.11	-0.26
5.	Koral	1.32	0.80	2.12
6.	Gajasthal	1.04	0.37	1.41
7.	Kheda	1.17	0.58	1.75
8.	Avvalpur	0.08	-0.66	-0.58
9.	Bahadurpur Khurd	0.09	-0.57	-0.48
Total Block Amroha		**0.35**	**-0.05**	**0.30**
10.	Papsara	1.69	1.42	3.11
11.	Chandnagar	0.38	-0.63	-0.25
12.	Deorhi Urf Hadipur	0.08	0.13	0.21
13.	Kakrali	-2.28	-0.39	-2.67

14.	Patai Khalsa	-0.77	0.22	-0.55
15.	Sivora	-0.29	0.89	0.60
16.	Jalalpur Ghana	0.69	-0.25	0.44
17.	Salamatpur	0.37	-0.68	-0.31
18.	Rajabpur	0.10	-0.27	-0.17
19.	Shahpur	-0.69	-0.25	-0.94
20.	Deeppur	-0.73	0.42	-0.31
Total Block Joya		**-0.13**	**0.05**	**-0.08**
Total Tehsil Amroha		**0.08**	**0.00**	**0.08**

Source- Computed by the Author on the Basis of 2015 Census.

According to the above table the levels of socio-economic development is 0.08 in the study area.The levels of socio-economic development in Block Amroha is 0.30 and -0.08 in Block Joya. The highest levels of socio-economic development is 3.11 in Nyaypanchayat Papsara and the lowest levels of socio-economic development is -2.67 in Nyaypanchayat Kakrali. Only 8 Nyaypanchayats have positive levels of socio-economic development and 12 Nyaypanchayats are in negative category. These Nyaypanchayats have very poor levels of socio-economic development. The levels of socio-economic development is greater than 1.00 in Nyaypanchayat Koral (2.12), Gajasthal (1.41), Kheda (1.75) and Papsara (3.11).

Fig. 4
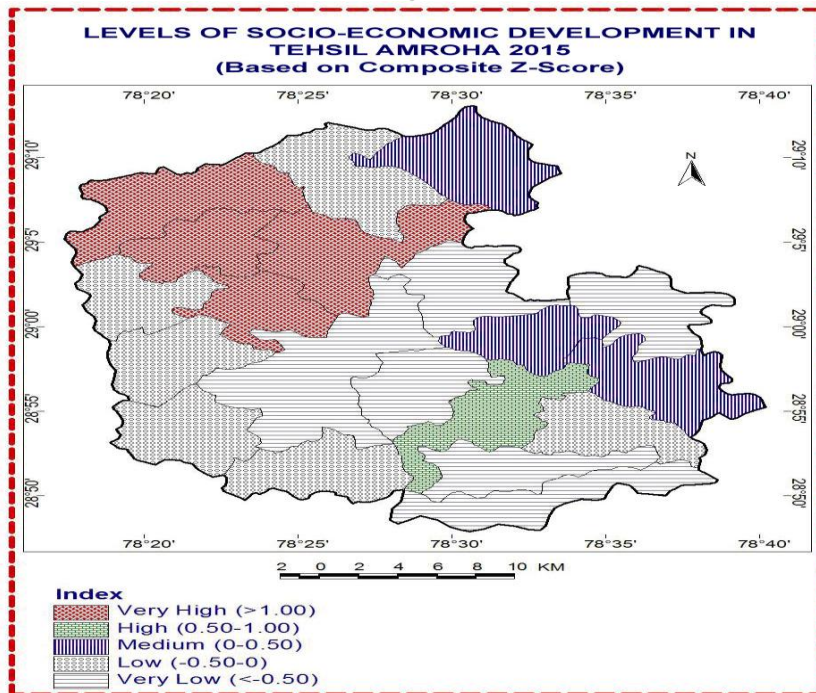
Conclusion

The development of an area is depend on the resources of natural and human. Development is at a process and a goal and that it is a multifaceted complex whole with intricate interrelations. High development level is the result of fulfill socio-economic facilities in the study area. The levels of socio-economic development create a plateform for planning. Nyaypanchayat Koral, Gajasthal, Kheda and Papsara are in very high score (>1.00) category and Nanhera Alyarpur, Buderna, Avvalpur, Kakrali, Patai Khalsa and Shahpur are in very low score (<-0.50) category. Although Nyaypanchayat Nanhera Alyarpur (-0.56), Buderna (-0.96), Avvalpur (-0.58), Patai Khalsa (-0.55) and Shahpur (-0.94) are rich in socio-economic facilities but the levels of socio-economic development is very poor. Levels of agricultural development is 0.04 in the study area. Only 15% Nyaypanchayats are in very high score agricultural development category and 25% Nyaypanchayats are in very low score category. Due to lack of education facilities the rate of literacy is very poor. It have total literacy 57.27%, Male 66.91% and Female literacy 46.73%. On the basis of composite Z-score the Level of socio-economic development is 0.08 in the study area. Service centers are play an important role in area development and helpful to determinate the levels of socio-economic development. In fact, rural areas and peoples have been condemned to suffer from the curses of all three factors which accounts for socio-economic differences in the human world, i.e. inequalities resources, differences in skills and differences in incentives and opportunities to use and create resources. Spatial distribution and spatial organization of socio-economic facilities are essential for area development without spatial organization we

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cannot achieve the high levels of socio-economic development in rural area.

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