GOLDEN RESEARCH THOUGHTS

LEVELS OF SOCIO-ECONOMIC DEVELOPMENT IN RATNAGIRI DISTRICT OF MAHARASHTRA STATE



K. C. Ramotra¹ and Madhura P. Vardam²

¹Professor, Department of Geography, Shivaji University, Kolhapur. ²Associate Professor and Head, Department of Geography, D. B. J. Collage, Chiplun, Dist. Ratnagiri.

Abstract:

Development means a new spatial relationship among members of a community and between them and their environment. The development of socio-economic infrastructure indicates the quality of life of people of a particular area. In view of this, it is necessitated to ascertain tehsil level development in Ratnagiri district considering various socio-economic indicators. The main concern of this study is to insight into the spatio-temporal patterns of development at tehsil level of Ratnagiri district during the last forty years from 1971 - 2011 and at village level it is based on fieldwork (2012). It is found that socio-economic development is mainly confined to Ratnagiri and Chiplun tehsils of Ratnagiri district. Ratnagiri is the headquarters and industrial centre of the district and Chiplun has an industrial nodal point that diffuse the development. The tehsils like Khed, Guhagar and Dapoli are moderately developed and Lanja, Sangmeshwar and Rajapur are relatively backward while Mandangad is most backward tehsil. It is inferred that the tehsils which were backward in 1971 were also found lagging behind in 2011. The values of socio-economic variables considered for their development have increased but the relative positions of the backward tehsils more or less, remained the same barring a few. It is suggested that the tehsils which are backward need to addressed with priority to augment their rate of development to bring them at par with the advance ones.

Keywords: Socio-economic indicators, measurement, development index, developed areas, backward areas,

INTRODUCTION

Development means a new spatial relationship among members of a community and between them and their environment. It is a national thought for the development of weaker sections of the society through the transformation of the economic and socio-spatial structures of their production activities. Development is therefore, a multi-faceted phenomenon affecting a region and its people nearly in every aspects of life (Ramotra, 2008 p.345). In view of this, Ratnagiri district which is the coastal district of Maharashtra state include nine tehsils, it is necessitated to ascertain the level of development with some socio-economic indicators.

OBJECTIVES

- 1. To measure the levels of development to identify the lagging areas and to suggest the road map for their improvement in the study area.
- 2. To investigate the major obstacles in the development of the region and to set the priorities for mitigating the regional imbalance.

STUDYAREA

Ratnagiri District which is maritime district of Konkan division and the district lies between 16°13' to 18°04' north latitude and 73°02' to 73°52' east latitude. The district occupies an area of 8,201 sq. km that constituted only 2.67% of the total area of the state. The district is surrounded by Raigad district in the North, Arabian Sea towards the west, Sindhudurg district in the south and Sahyadri Mountain on the east. The Ratnagiri city is the headquarters of Ratnagiri district and by road it is 370 km away from Mumbai, which is capital city of Maharashtra. The district has nine tehsils namely i. Mandangad ii. Dapoli iii. Khed iv. Chiplun v. Guhagar vii. Ratnagiri vii. Sangmeshwar viii. Lanja and ix. Rajapur. Total population of the district is 16,12,6,72 with 7,59,703 (47.10%) males and 8,52,9,69 (52.90%) females as per 2011 census. This makes 1.7% of state's population.

DATA BASE

The major research work is based on primary and secondary sources of data. As far as possible the change in their socio-economic conditions in view of the developmental processes is to ascertain from 1971 to 2011. The secondary data for tehsil level of Ratnagiri district is collected from the district census hand-book, gazetteers, internet, Socio-Economic Abstract. Primary data is generated by conducting the fieldwork in the villages of nine tehsils of Ratnagiri district to bring out the ground realities of socio-economic condition of the villages in the district; therefore sample survey was conducted in the district and selected twelve villages and took random samples of households from each of the nine tehsils of Ratnagiri district, so total twelve villages were selected. These sample villages were selected on the basis of the population growth to represent different types of economy in space. One was selected from coastal area with fishing economy and six from the remote areas and foot hills region of Sahyadri with an agricultural economy. Remaining five villages are selected which are located on or near highway with mix activities.

Household schedule was prepared in which questions related to basic information on development and about migration were asked from the household members in all villages. About 7 per cent to 15 per cent households in sample villages were interviewed. Thus, in all 405 households were interviewed by the researcher. Composite index of development at tehsil level was computed on the selected indices. Literacy rate is computed for the population above 6 years.

METHODOLOGY

The present study is based on primary and secondary data. For assessing the overall change in the levels of development at tehsils level of Ratnagiri district during 1971, 1981, 1991, 2001 and 2011 and pattern of their development in the sample villages of nine tehsils of Ratnagiri district (2012), composite indexes are constructed. For measuring their development fourteen indicators are selected for tehsils level and ten for the village level. For constructing the composite indexes at tehsil and village levels, the values of different indicators if added directly may affect the overall development index; therefore, before aggregating such values the biasness or scale affect has been removed by applying the method of normalization. Though there are several techniques of normalization, the technique of division by mean, suggested by Kundu (1980), has been used for the calculation of development index. The observations for each indicator have been divided by their corresponding mean value without affecting the relative position of the tehsils or villages in the series. Thus the obtained normalized values for the component indicators have been added together to give rise to component scores of development for each tehsil or village. After arranging these composite index values in descending order, the tehsils and villages, as the case may be, are grouped into first three categories for tehsils while all four categories for villages as given below:

1.Developed 2. Moderately developed 3. Backward 4. Very Backward

LEVELS OF DEVELOPMENT IN RATNAGIRI DISTRICT

The development of socio-economic infrastructure indicates the quality of life of people of a particular area. The availability of all socio-economic infrastructures solely does not mean for the development unless and until it is adequately available corresponding to the population size and extent of area (Ali and Varshtry, 2010).

Socio-economic development of a region is measured in terms of population, per capita income, adult literacy, life expectancy and other socio-economic factors. Economic Development is a process of change that affects people's lives. It involves an improvement in the quality of life as perceived by the people undergoing change (The free encyclopaedia, Jan 2008).

Development is both qualitative and quantitative. The quantitative indicators are numerical indicators of development and they include Gross National Product, Per Capita Income, unemployment rates, energy consumption and percentage of Gross National Product in primary industries. Qualitative indicators include description of living conditions and people's quality of life, they are useful in analysing features that are not easily calculated (The free encyclopaedia, Jan 2008).

In view of this, it is necessitated to ascertain tehsil-wise level of development in Ratnagiri district through various socio-economic indicators.

The main concern of this study is to get an insight into the spatial-temporal patterns of development at tehsil level in Ratnagiri district during the last forty years period from 1971 - 2011 and village level analysis is based on fieldwork data conducted in 2012. The socio-economic development is based on secondary and primary data. Moreover, field survey provided first hand grass root level information and brought out hidden realities, which were not visible at tehsil level. Therefore, the attempt is also made to measure their levels of development at tehsil and village level in Ratnagiri district.

At tehsil level composite indexes of development for the years 1971 to 2011 are based on following fourteen socio-economic indicators.

1. Population density, 2. Percentage of urban population, 3. Literacy rate, 4. Percentage of population in a tehsil to the total population of the Konkan region, 5. Percentage of villages with educational facilities, 6. Percentage of villages with medical services, 7. Percentage of villages with drinking water supply, 8. Post and Telegraph Office per 10,000 populations, 9. Number of telephones per 10,000 population, 10. Percentage of communication by bus stops, railway station and water ways, 11. Approach by pucca road, 12. Percentage of villages with electricity supply, 13. Work participation rate, 14. Percentage of area under irrigation.

At village level, their development is measured in terms of the following socio-economic indicators: 1 Literacy rate, 2. Percentage of workers in non-agricultural sector, 3. Annual per capita income of household (in Rs.), 4. Percentage of households living in pucca houses, 5. Percentage of households having three rooms or more than three, 4. Built up area more than 500 sq. feet and ownership of houses, 5. Percentage of households having housing amenities like bathroom, latrine, electricity, telephone, mobile, etc., 6. Percentage of households having fuel for cooking like LPG or Gober gas, 7. Percentage of households having drinking water 8. Percentage of households having assets like Radio, CD/ VCD, television, fridge, fan, bicycle, two-wheeler, four-wheeler. For assessing the overall change in the levels of development of districts level of Konkan region and tehsil level in Ratnagiri district in 1971, 1981, 1991, 2001 and 2011 and pattern of development in 12 sample villages of nine tehsils of Ratnagiri district (2012), composite indexes are constructed. For measuring their development fourteen indicators are selected for tehsil level and ten for the village level. For constructing the composite indexes at tehsil and village levels, the values of different indicators if added directly may affect the overall development index, therefore, before aggregating such values the biasness or scale effect has been removed by applying the method of normalization. Though there are several techniques of normalization, the technique of division by mean, suggested by Kundu (1980), has been used for this purpose. The observations for each indicator have been divided by their corresponding mean value without affection the relative position of the tehsils or village in the series. Thus obtained, normalized values for the component indicators have been added together to give rise to component scores of development for each tehsil or village. After arranging these composite index values in descending order, the tehsils and villages, as the case may be are grouped into first three categories for tehsils while all four categories for villages as given below: Developed, moderately developed, backward, and very backward.

Levels of Socio-Economic Development at Tehsil level in Ratnagiri District, 1971

Table 1 revealed that at tehsil level there were two tehsils, viz., Ratnagiri on 1st rank and Chiplun on 2nd position and composite index values were 18.81 and 17.37 respectively which were identified as the developed tehsils in terms of fourteen indicators of socio–economic development in 1971. Ratnagiri was one of the less urbanized districts in the Konkan division in 1971 but whatever it was, was mainly concentrated in Ratnagiri (19.90%) and Chiplun (16.72%) tehsils. The share in the total district's population in Ratnagiri (13.80%) and Chiplun (15.85%) tehsils, density (204 and 186) and literacy rates (50.1 and 47.2) were higher than the district average. Besides this, the other socio-economic factors like education, medical, post and telegraph office, transport, etc. were also with high intensity in both of these tehsils. In other four tehsils, for instance, Khed wherein educational, medical and communication facilities are better and in

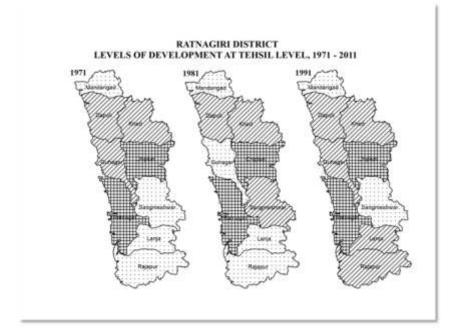
www.aygrt.isrj.org

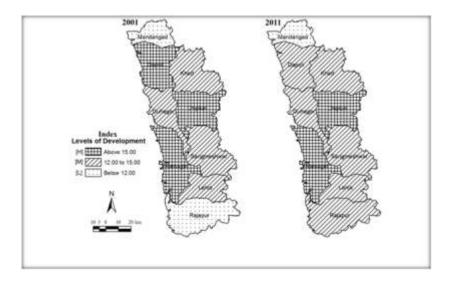
Guhagar, Dapoli and Sangmeshwar, population proportion, density of population, educational facilities are also comparatively good but literacy rate, percentage of urban population and medical facilities are bit low and occupying 3rd to 6th position respectively. All tehsils were in the moderately developed category. The remaining three tehsils, viz., Mandangad, Rajapur and Lanja were on the margins of development and occupied 7th, 8th and 9th position and identified as backward tehsils due to lower composite index value below 12 in almost all socio-economic indices in the district in 1971

Table 1 Ratnagiri District: Tehsil Level Development, 1971-2011

| 1971 | | 1981 | | 1991 | | 2001 | | 2011 | |
|-------------|-------|-----------|-------|-----------|-------|-----------|-------|-------------|-------|
| Districts | Comp. | Districts | Comp. | Districts | Comp. | Districts | CompI | Districts | Comp. |
| | Index | | Index | | Index | | ndex | | Index |
| Ratnagiri | 18.81 | Ratnagiri | 25.79 | Ratnagiri | 15.70 | Ratnagiri | 17.05 | Ratnagiri | 18.81 |
| Chiplun | 17.37 | Chiplun | 16.85 | Chiplun | 15.89 | Chiplun | 15.75 | Chiplun | 17.22 |
| Khed | 13.59 | Khed | 13.96 | Guhagar | 14.71 | Dapoli | 15.33 | Dapoli | 13.99 |
| Guhagar | 13.48 | Dapoli | 13.70 | Khed | 14.12 | Khed | 13.50 | Sangmeshwar | 12.80 |
| Dapoli | 13.34 | Sangmeshw | 12.34 | Lanja | 12.45 | Guhagar | 13.19 | Khed | 12.90 |
| | | ar | | | | | | | |
| Sangmeshwar | 12.60 | Guhagar | 11.14 | Rajapur | 12.32 | Lanja | 12.92 | Rajapur | 12.47 |
| Rajapur | 11.46 | Rajapur | 10.72 | Dapoli | 12.13 | Sangmeshw | 12.49 | Lanja | 12.36 |
| | | | | | | ar | | | |
| Mandangad | 11.46 | Mandangad | 9.38 | Sangmesh | 11.31 | Rajapur | 11.91 | Guhagar | 12.31 |
| | | | | war | | | | | |
| Lanja | 9.47 | Lanja | 9.27 | Mandanga | 9.12 | Mandangad | 10.14 | Mandangad | 10.73 |
| | | | | d | | | | | |

Source: Based on Census Handbook of Ratnagiri District, 1971 to 2011





Levels of Socio Economic Development at Tehsil level in Ratnagiri district, 1981

Table 1 and Fig 1 indicated that at tehsils level the socio-economic development is mainly confined to Ratnagiri and Chiplun tehsils and has been grouped (more than 15.1) in the developed category of development index in 1981 also. The factors responsible for the development of Ratnagiri (index 25.79) and Chiplun tehsils (index 16.85) are high proportion of population (15.31% and 15.53%), percentage of urban population (22.27% and 16.50%), literacy rate (50.13% and 47.24%), transport and communication facilities for both the tehsils and in Ratnagiri tehsil, the percentage of area under irrigation (20.18%) has augmented. As many as three tehsils, viz., Khed, Dapoli and Sangmeshwar emerged as moderately developed (12.1-15.00) one as the social facilities like medical and education were comparatively better. The position of medical facilities is the best in Khed tehsil and in case of post and telegraph and pucca roads also performing better. Only, Guhagar tehsil shifted from 3rd position to 6th position, that is from moderately developed in 1971 to backward in 1981 because of declined in percentage of pucca roads, medical and educational as well as telephone and telegraph facilities. Remaining three tehsils namely Rajapur, Mandangad and Lanja are in backward category as the development index value was below 12.00. The lowest percentage of post and telegraph offices, approach by pucca road, power supply, etc. in the district are responsible factors for low level of development in these tehsil in 1981.

From above discussion it is found that percentage of many amenities are high in Ratnagiri and Chiplun tehsils hence in developed category followed by Khed, Dapoli and Sangmeshwar tehsil as in moderately developed category. The tehsils like Rajapur, Lanja, Mandangad and Guhagar were identified as low level of development.

Levels of Socio Economic Development at Tehsil Level in Ratnagiri District, 1991

In 1991, it is further found that Ratnagiri tehsil remained on 1st position of development but the composite score has decreased (19.3) in comparison to 1981 (25.79) which is due to decrease in area under irrigation (20.18% to 2.67%) and post and telegraph facilities. Chiplun tehsil was also in developed category in1991, herein the percentage of irrigation (3.83 to 1.06) and power supply have declined hence composite index slightly declined from 16.85 to 15.89 from 1981 to 1991. Khed and Dapoli tehsils remained in moderately developed group in 1991 also but Guhagar, Lanja and Rajapur came up from backward to moderately developed category between 1981 and 1991. Improvement in facilities like educational, post and telegraph, pucca road and power supply have pushed these tehsils up in 1991; while, Sangmeshwar tehsil has gone down from moderately developed to backward group during the same period. Mandangad tehsil as usual remained backward in 1991 also. Except Dapoli tehsil; composite index values of remaining eight tehsils have increased in 1991 from 1981 due to some improvement in infrastructure and socio-economic condition of the people.

Levels of Socio Economic Development at Tehsil level of Ratnagiri District, 2001

In 2001, it is found that as usual Ratnagiri and Chiplun tehsils were in developed category (Table 1). There was little improvement in composite index value of Ratnagiri tehsil (15.70 to 17.05) as well as of Chiplun tehsil (15.75 to 15.89) between 1991 and 2001. For the first time Dapoli tehsil came up in developed category and composite index increased from 12.13 to 15.33 between 1991 and 2001. Tehsils like Khed, Guhagar, Lanja and Sangmeshwar remained in moderately developed category but composite index decreased in case of Khed tehsil (14.12 to 13.50) and Guhagar tehsil (14.71 to 12.92) but slightly increased in Lanja (12.45 to 12.92) and Sangmeshwar tehsil (11.31 to 12.49) from 1991 to 2001. Sangmeshwar tehsil shifted from backward to moderately developed category during the same period. Rajapur and

www.avgrt.isrj.org

Mandangad confined to backward category. Mandangad always remained in backward category but the composite index has increased (9.12 to 10.14) during the last decades. Rajapur tehsil came down from moderately developed group to backward group and composite index decreased from 12.47 to 11.91 in the last decade.

Levels of Socio Economic Development at Tehsil Level of Ratnagiri District, 2011

In 2011, it is found that Ratnagiri and Chiplun tehsils are in the developed category and composite index was above 15. Ratnagiri tehsil was on 1st position and Chiplun on 2nd throughout the four decades right from 1971 to 2011. Ratnagiri is the headquarters of Ratnagiri district and Chiplun industrially developing centre and nodal point of road ways benefits. Dapoli tehsil occupied 3rd position and of course in developed group in 2001, but composite index decreased by net 1.34 (15.33 to 13.99) between 2001 and 2011.

Most of the tehsils in moderate category are Sangmeshwar, Khed, Rajapur, Lanja and Guhagar. Composite index value increased in case of Sangmeshwar and Rajapur tehsils while slightly decreased in respect of Khed, Lanja and Guhagar tehsils. Tehsil Mandangad as usual in backward category but its composite score has slightly increased in 2011 from 2001 (10.14 to 10.73).

Pattern of Development in Sample Villages of Ratnagiri District, 2012

Table 1.2 revealed that out of 12 villages of nine tehsils of Ratnagiri district and of twenty-four indicators it is found that Shiv village in Khed tehsil was identified as the most advanced and Sawari village of Mandangad tehsil most backward. Apart from Shiv, other two developed villages are Khadpoli in Chiplun tehsil and Ukshi in Ratnagiri tehsil. Shiv is very prosperous village among twelve villages. Many people of Muslim community are living in gulf countries for service or business purpose, so the annual per capita income was higher (Rs.1,12,213) the average of villages and per capita income (Rs. 66921) of Ratnagiri district. More than 60.00 per cent people have been living in large and specious houses. The occupation of an individual refers to his profession or type of work. In villages the main work of the people is agriculture but in Shiv village 73.33 per cent people engaged in non-agricultural sector. Regarding improved water supply facilities, it is found that 66.67 per cent families have government or household's own tap water. Regarding household amenities like bathroom, latrine, electricity, telephone and mobile phones, about 70 per cent people having these facilities. More than 73 per cent families were using LPG for cooking and more than 50 per cent families having television and fridge. Therefore, their sound economic position attributed to overall socio-economic development and therefore, it occupies 1st position with 29.36 composite index score. In Khadpoli village of Chiplun tehsil and Ükshi in Ratnagiri tehsil were found relatively better off. Gane-Khadpoli-Maharashtra Industrial Development Corporation (MIDC) of Chiplun is very near to Khadpoli village, so many people engaged in non agricultural and secondary activities (68.18%) beside agricultural activities. Therefore, their high per capita income (Rs. 39492) have attributed to raising their overall socioeconomic status. All most all sample households were possessing pucca house and 47.82 per cent families having more than 500 sq. feet built-up area of the houses. In case of household amenities 100 per cent families were having bathroom and electricity while 82.61 per cent, 95.65 per cent and 56.52 per cent families having latrine, mobile and telephone services respectively. About 69.57 per cent families used LPG for cooking purpose. TV, fridge is common but bicycle and two wheelers are mostly used for conveyance. Main sources of safe drinking water are government and own tap and 100 per cent families have been using both the sources of water. Therefore, Khadpoli in Chiplun tehsil the composite index is 27.87 and occupies 2nd position among these sample villages. Village Ukshi in Ratnagiri tehsil remained on 3rd rank in descending order of composite index and developed category. Though the per capita income of the people is less (Rs 23, 500) than the sample village average because of some economically very weak families, other households whose heads of the family have been living in gulf countries having better amenities and household assets so they are relatively better off. Table 7.3 further revealed that out of 12 sample villages; Sawari village of Mandangad tehsil was identified as very backward. The village is in remote area and agriculturally very backward. Only 13.34 per cent families having big houses and were living pucca houses. Household amenities having medium per cent, housing assets having very less and LPG users are also very less (23.33%) in the village. Though the people agriculturally backward, more than 68 per cent people engaged in agricultural pursuit in the village. People of the village were economically backward as their annual per capita income was as low as Rs. 11,578. Therefore, socially as well as economically, they were found very backward and the composite score is less than 19.00.

Table 7.3 Levels of Development in Sample Villages of Ratnagiri District, 2012

| Tehsils | Name of the Villages | Composite Index | | |
|-------------|----------------------|-----------------|--|--|
| Khed | Shiv | 29.36 | | |
| Chiplun | Khadpoli | 27.87 | | |
| Ratnagiri | Ukshi | 27.25 | | |
| Khed | Musad | 25.25 | | |
| Rajapur | Devache Gothane | 25.26 | | |
| Khed | Wave | 24.66 | | |
| Chiplun | Dadar | 23.88 | | |
| Dapoli | Govtale | 22.66 | | |
| Lanja | Veral | 22.62 | | |
| Sangmeshwar | Ambedu Khurd | 20.00 | | |
| Guhagar | Velneshwar | 19.26 | | |
| Mandangad | Sawari | 18.87 | | |

Source: Fieldwork, 2012

The remaining eight villages were in the moderately developed and backward categories. Four villages i.e. Musad in Khed tehsil, Devache Gothane in Rajapur tehsil, Wave again in Khed tehsil and Dadar in Chiplun tehsil were moderately developed and the other four, viz., Govtale in Dapoli tehsil, Veral in Lanja tehsil, Ambedu Khurd in Sangmeshwar tehsil and Velneshwar in Guhagar tehsil were backward. In Musad, Devache Gothane, Dadar and Wave largest number of families living in pucca and big houses and having household amenities and assets but the people engaged in agricultural pursuit are more and barring Devache Gothane, annual per capita income of the families average was Rs. 39,978 in the surveyed villages. So composite index of these villages is between 23.01 and 27.00 and are considered as moderately developed. The remaining other four villages were having the composite score between 23.00 and 19.01.

CONCLUSION

In Ratnagiri district at tehsil level, it is found that socio-economic development is confined to Ratnagiri and Chiplun tehsils. Ratnagiri is the headquarters and industrial centre of the district and Chiplun has an industrial and nodal point that benefits the development. Hence the development appears to be partly focusing on the individual centres. It is considered in terms of administrative, industrial and other influences. The tehsils like Khed, Guhagar and Dapoli are in moderately developed and Lanja, Sangmeshwar, Rajapur and Mandangad are backward tehsils.

It is also found that Khed, Chiplun and Ratnagiri tehsils are developed while Mandangad, Sangmeshwar and Lanja are backward tehsils. Except Mandangad tehsil other northern tehsils of the district are developed while southern most tehsils like Sangmeshwar, Lanja and Rajapur are backward in Ratnagiri district. Mandangad is a very backward tehsil in the district.

Thus, the foregoing analysis infers that the inter tehsils disparities in socio-economic development are the consequent of irrational as well as unequal distribution of amenities and facilities. The fruits of the development are mainly enjoyed by the urban and industrial areas. Higher the proportion of agriculture labourers, lower is the level of development. So the urban areas are found on the top of the socio-economic hierarchy, while the areas with low urban population are at the bottom. It shows the strong the relationship between urbanized and industrialized centres with their levels of socio-economic development in Ratnagiri district. It may be concluded that the tehsils which were backward in 1971 were still found backward in 2011. The values of socio-economic variables considered for their development have increased but the relative positions of the backward tehsils more or less, the same barring a few. Ratnagiri as well as Chiplun tehsils are advanced and remaining tehsils are the moderate or backward. All this shows that the impact of development processes on tehsils and villages of Ratnagiri district is positive but not that significant.

SUGGESTIONS

- 1.Industrialization mainly based on local resources is the main sector which helps much development in the less develop tehsils of Ratnagiri district.
- 2.Priority should be given for accelerating the rate of development of the most backward tehsil or village as mentioned above.

- 3. The development should be based on the territorial merit with social justice so as to remove or minimize the regional disparities.
- 4. Industrialization of the region will contribute toward improvements in the level of infrastructure of the region to benefit the agro based, mineral based industries, fish canning industries and tourism sectors also which can enhance the process of development of tehsils and villages at the bottom of development in Ratnagiri district.

REFERENCES

- 1.Ali, M.J. and Varshtry, Deepika, (2010): Factors and Dimensions of Inter-Ward
 Aligarh City, U.P., Indian Journal of Regional Science. Vol XXXXII No. 2, Kolkota.
- 2.Bondre, B. C. (1979-80): Marathwada Levels of Development, Unpublished M. A. Dessertation, Submitted to Bombay University, Bombay.
- 3. Deshpande, C. D. (1992): India A Regional Interpretation, National Book Trust, New Delhi.
- 4. Economic & Political Weekly, (Jan., 2009): Sameeksha Trust Publication, Vol. XLIV No 2
- 5.Mandal, R. B. (1979): Introduction to Rural Settlement, Concept Publishing Company, New Delhi. pp186–190.
- 6.Nare, (1979-80) Levels of Development Tapi Purna Valley, Unpublished M. A. Dessertation, Submitted to Bombay University, Bombay.
- 7. Qazi, S. A. and Qazi, Navaid Shabir, (2007): Geography of the World, S. B. Nangia, APH Publishing Corporation, New Delhi.
- 8.Ramotra, K. C. (2008): Development Processes and The Scheduled Castes, Rawat Publications, Jaipur.