



Assessment of Regional Disparity at Micro Level: a study of Talasari and Dahanu Tahsils of Rural Thane, Maharashtra

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Abstract

The Thane district of Maharashtra displays a significant differential regional development, especially between the rural and urban areas. The current article makes an attempt to analyse the type of regional disparity and level of development in rural Talasari and Dahanu tahsils of Thane district of Maharashtra. It is based on secondary data published by Govt. as well as non-government agencies. A composite index of development has been formulated based on various physical, demographic, social and economic variables and by weighting each of them with a score of 1 to 5 (i.e. low to very high). The lowest cumulative score indicates less development and vice versa. The study shows that the disparity increases from the coastal part to the interior and that majority of the settlements are functionally and infrastructurally very poor. As both these tahsils are industrially backward, economically underdeveloped and socially isolated, any developmental effort has to be specifically focused on the issue of infrastructure.

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Introduction

Identifying the level of regional disparity has been a major issue of Indian planning, be it at micro or macro level and even between rural and urban areas. The basis of disparity can be physical factors coupled with economic and socio-cultural potentials and opportunities. Hence, an attempt has been made here to find methodologies to identify the regional disparities at micro level by taking the case of rural Talasari and Dahanu tahsil of Thane district of Maharashtra, India. The study area displays widespread disparities in the levels of poverty, unemployment, infrastructure, transport, communication, irrigation, agriculture, industry and finally, the standard of living. The rural areas of

Thane district, particularly in the north and northeastern parts stand out as the less developed areas. Though being well within a reasonably short distance from the country's economic capital, Mumbai, the region does not show expected level of development.

For a general understanding of regional disparities, the researches of Das (2002), Dholakia (2003), Bhattacharya and Sakthivel (2004) are very important. Wishlade and Douglas (1997) have described and explained the types of disparities i.e. physical disparities, economic disparities and social disparities. They also identified the indicators of regional disparity and accordingly analyzed the determinants of disparity in the European

countries. Nidagundi (2007) has studied the regional disparities of Gulbarga division based on urban percent, rural-urban ratio, urban growth rate, average sizes of urban centers, urban density, urban concentration, accessibility and transport connectivity. Suryawanshi and Sawant (2011) have studied the regional disparities of Thane district at micro level. Ziari (2006) also computed the level of development of Iran based on natural index, socio-economic index and composite index. Considering the regional disparities in Iran, he has recommended the required strategies for the development of that region.

Objectives

The sole aim of the current research is to find methodologies to identify the pattern of disparity and then prepare the composite matrices of development status for Talasari and Dahanu tahsils in rural Thane, Maharashtra.

Database and Methodology

The research is purely an outcome of secondary data mainly Govt and Non-Govt. publications. Census data (Village Directory) has been used for preparing social and economic profile of the Talasari and Dahanu tahsils. Besides, many reports and government publications viz. Gazetteer, Socio-economic Abstracts, periodicals have also been taken into consideration. Survey of India (SOI) Topographical map Nos 46D/12, 46D/16, 46H/4, 47A/9, 47A/13 47/E/1 on 1:50,000 scale have been used to evaluate the physiographic conditions and the variables such as elevation (contours), drainage, forest land, village locations, roads, railways, schools, health centres, etc. These have been digitised using AutoCad and subsequently processed on GIS platform. False colour composites (FCCs) of the region prepared from LISS III digital data have been employed in identifying the actual coverage of natural vegetation. The elevation data available in raster format from Shuttle Radar Topographic Mission (SRTM) data (with 90m ground resolution) has been used for visual representations of selected areas. The data has been analysed at village level for all the variables measuring disparity. Table 1 shows the variables and the weights given to derive the composite score.

Based on this, a composite index has been prepared for the physical, demographic, social and economic variables by denoting a score ranging between 1 and 5 (i.e. low to high). Development is directly proportional to the composite index value, i.e., lower values represent lesser development and higher value higher development. This enables the analysis of regional disparities in a better way.

The Study Area

The tahsils of Talasari (area = 291km², population density = 417 persons/km²), and Dahanu (area = 1196 km², population density = 227 persons/km²) are located on the northwestern part of the Thane district of Maharashtra comprising 15 tahsils in total (Fig. 1). The Talasari tahsil contains 46 villages, while Dahanu tahsil 167 villages and 2 towns (Fig. 1a). These tahsils are industrially backward, economically underdeveloped and socially isolated. Although, these have enough potentials for development, its economic resources need to be judiciously harnessed with proper socio-economic empowerment to the local people.

The study area spreads between the Arabian Sea in the west and the Shayadris (Western Ghat) in the east. The entire region has undulating topography with westward general regional slope. The Western Ghats that separates the Konkan region from the plateau runs almost parallel to the coast. The coastline is characterised by smooth rolling topography with a few estuaries. The major rivers of the Talasari and Dahanu tahsils are Bhekariya, Jogani, Kangan, Jahi Vadvali, Gholvad, Sakhartond, Parora, Gaunda, Valau, Suseri, Khari, Vavanhal, Goljara, Arodhara and Surya. There are also some water supply and irrigation projects, for example, near Varkhande village on Vadavali river (Talasari and Dahanu). The towns of Kalyan, Bhiwandi and Vasai are now a part of the bustling Mumbai mega city. But the remaining vast rural tract is characterised by rugged topography and inaccessible terrain, settled mainly by the tribal people who are socially isolated and lead a poor life.

Discussion

The fact that the rural Talasari and Dahanu tahsils are underdeveloped is obvious. However, it was thought appropriate to assess the developmental

levels and find the degree of disparities in the level of development within Talasari and Dahanu tahsils.

a) Physiographic Composite Index

In preparing the physiographic composite index, four variables have been taken and an index value has been calculated. The calculated composite index of physical indicators clearly shows that the disparity increases from the coastal area to the interior of study area. The scores of composite index signify inverse relationship. The higher the score, the lesser the disparity. Therefore, the coastal areas with composite scores more than 10 signify low physiographic composite index and it proportionally increases towards the hilly interior highlands longitudinally along the east. Ruggedness in the topography, heavy rainfall and high drainage density are the major terrain characteristics of the interior Ghat region showing low composite score e.g. Baradi, Warpada, etc (Talasari tahsil). The plains with certain geographical advantages show high composite index (19 to 20) clearly signifying low level of disparity, e.g., Asangaon, Sawara, Jamshed, Tava, Shaensari, Dabhadi (Dahanu) and Uplat, Girgaon, Doharpada, etc (Talasari).

b) Demographic Composite Index

The demographic composite index is based on percentage of tribal population, literacy rate, population density and sex ratio. The study clearly reveals distinct zones of highly developed (>15), moderately developed (10 - 15) and less developed (3 - 10) regions. In the coastal parts of Dahanu which have favorable demographic factors i.e. higher levels of literacy, less proportion of tribal population and favorable sex ratio, the villages show higher degree of demographic development, e.g., Gholwad, Asangaon, Bade Pokharan and Dahanu (M) (Dahanu tahsil). The central part of Dahanu tahsil (e.g., Nagzari, Kosbad and Dehane) and of Talasari tahsil (e.g., Zari, Uplat Kurze and Vasa) has been classified as demographically less developed as they are characterised by dominance of tribal population, low literacy rate and unfavorable sex ratio. The villages of Bordi, Aine, Vangaon and Agwan (Dhanu) and Vevaji, Sambha, Anwir and Patil Pada (Talasari) are moderately developed.

c) Social Composite Index

Social composite index has been measured through health services, road length and educational facilities. It shows high degree of polarized development (score >12) in and around the peripheral areas of Brahmanpada, Kajali, Sutarpada, Vilatgaon (Talasari) and Gholwad, Jingaon, Raitui, Vyahali, Kaskh, and Chinchale (Dahanu). However, there are also few pockets of development sporadically spread over the study area. However, the facilities need to be increased as majority of the study area comprising Varwade, Anwar, Ibhadpada, Talasari, and Baradi (Talasari) and Vangaon, Dabhon, Aine, Vivalvedh, Pavan (Dahanu) have typically low social composite Index (< 9).

d) Economic Composite Index

The synoptic view of the Talasari and Dahanu tahsils show that there is large disparity in economic development (11 - 15). A few pockets scattered all over the region and the whole of the coastal region show high economic development as industrialization and urbanization have positively sprawled over in the rural areas of Vasai, Palghar, Bhiwandi and Ambarnath. In contrast to this, the backward villages of Zari, Kawada (Talasari) and Dhamangaon, Nagzari, Shilonde, Diwashi, Chinchale, Raitali, Chandwad, Urse, Pawan and Shensari (Dahanu) show poor economic conditions with higher tribal population percent, lower income levels and poor agrarian economy.

e) Composite Index for Development Status

Each composite index has been summed up for each village to compute aggregate composite index to show the overall status of development. The aggregate score ranges from 27 to 59. Based on this, five categories of development status have been identified, as follows a) very low (27 - 37), b) low (38 - 41), c) moderate (42 - 45), d) high (46 - 51) and e) very high (52 - 59) (Fig. 2). The spatial pattern shows that the coastal zone and the shadow zone of the Mumbai Metropolitan region (i.e., Patilpada, Udhwa, Sutarpada, Shrirgaon and Chchad of Talasari tahsil and Bordi, Gholwad, Dahanu, Varor, Chincani, Asangaon, Vangaon, Kasakh and Dapchari of Dahanu tahsil) and parts of Bhiwandi

and Ambarnath stand out as the highly developed region with greater accessibility, plain lands, higher proportion of non-agricultural population, etc. Moderately developed region is marked beyond the coastal plain toward the central region, precisely along the NH - 3 (Mumbai - Agra), and NH - 8 (Mumbai - Ahmedabad), and also in Upalt, Vevaji, Talasari, Zai, Bramhanpada (Talasari) and Chikhale, Kainad, Manipur, Agwan, Saiwan (Dahanu). The explanatory factors are moderate connectivity and moderate accessibility, relatively favourable topography, moderate infrastructural facilities, and positive demographic indicators (Table 2). The region showing poor or very poor development is located in the north and north eastern parts of the taluka, which is physiographically rough with poor accessibility. Thus, barring the villages along the national highways, a large number of villages fall in this category with lack of facilities in respect of transport, communication, health and education.

Conclusion

Talasari and Dahanu are industrially backward, economically underdeveloped and socially isolated. However, they are good examples of contrasting regional development. The south- western part of Dahanu is an urbanized region. The deprivation of development is not only due to ruggedness of topography but also due to poor settlement, small population and low demand. Compared to this, the plains are relatively developed due to its natural and cultural advantage. Therefore, any developmental efforts must focus on the needs of the deprived regions, often characterized by tribal populace, rugged terrain and socioeconomic isolation. Further, a detailed database of resources and infrastructure needed for planning is lacking.

The sub-regions of the study area are endowed with rich natural, social and cultural resources that need to be assessed and accordingly harnessed. This area-specific planning actually holds the key to the development of such economically poor and socially marginalized tribal groups. The grass root level planning with broad base and perspective is likely to bring rich dividends in future.

Strategies should be carefully formulated

for balanced regional development. For this, Govt. needs to adopt holistic approach that would be transparent, decentralized and based on peoples' participation. Thus, the major recommendations are to develop strong infrastructural base with linkages in the poorly developed regions of the study area, to identify growth points and centers or service centers to enhance growth and development at micro level, and to empower the local populace to transform manpower resources into productivity.

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Table – 1: Variables and Weightage of Composite Index

Indicators	Variables	1	2	3	4	5
1) Physical	Relative Relief (m)	> 400	250 - 400	100 - 250	50 - 100	< 50
	Slope (degrees)	> 25	15 - 25	7 - 15	3 - 7	< 3
	Drainage Density (km / sq. km)	0 - 0.1	0.1 - 0.4	0.4 - 0.8	0.8 - 1.4	1.4 - 5.2
	Forest Cover (%)	> 80	51 - 80	31 - 50	1 - 30	0
2) Demographic	Tribal Population (%)	> 85	65 - 85	45 - 65	25 - 45	< 25
	Density (persons /sq km)	> 400	300 - 400	200 -300	100 - 200	< 100
	Sex Ratio (females/'000 males)	< 750	750 - 850	850 - 950	> 1050	950 -1050
	Literacy (%)	< 45	45 - 60	60 - 75	75 - 90	> 90
3) Social	Education (No. of Schools)	0	1	2 - 3	4 - 5	6 - 11
	Health (distance: km))	-	>10	5 - 10	< 5	0
	Road Density (km / sq. km)	< 5.3	5.4 - 9.4	9.5 - 13.0	13.1-16.6	> 16.6
4) Economic	Income ('000 Rs.)	< 50	50 -120	120 - 275	275 -700	> 700
	Non Ag. Workers (%)	<15	15 - 30	30 - 45	45 - 60	> 60
	Commercial Bank (availability)	0	0	0	0	? 1

Source: Computed by the author

Table – 2: Development Status

Range of Scores	No. of Villages	(%)	Development Level
27 - 37	40	18.60	Very Low
38 - 41	62	28.83	Low
42 - 45	54	25.11	Moderate
46 - 51	38	17.67	High
52 - 59	21	09.76	Very High
	215	100.00	

Source: Computed by the authors

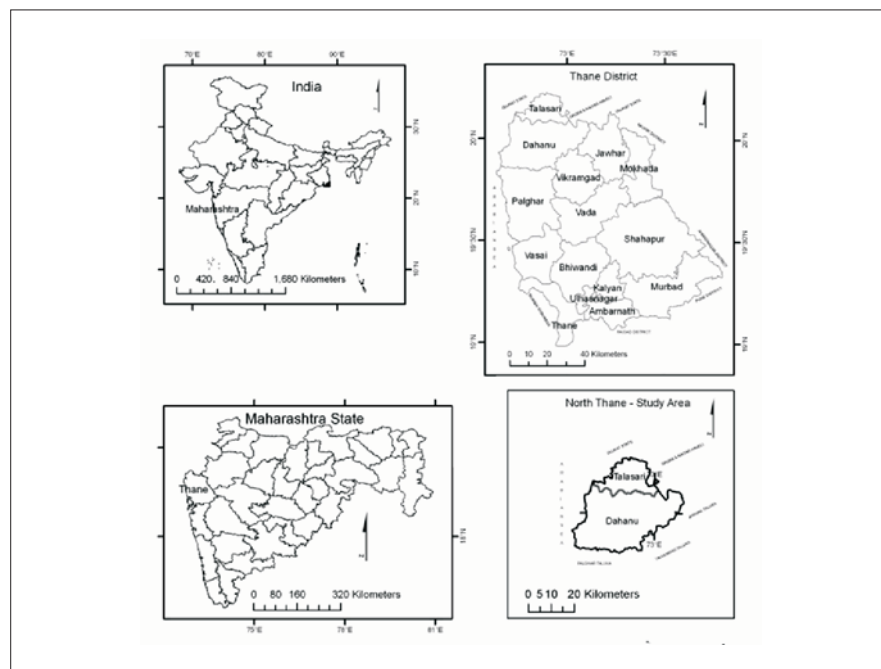


Fig. 1. Location Map of the Study Area

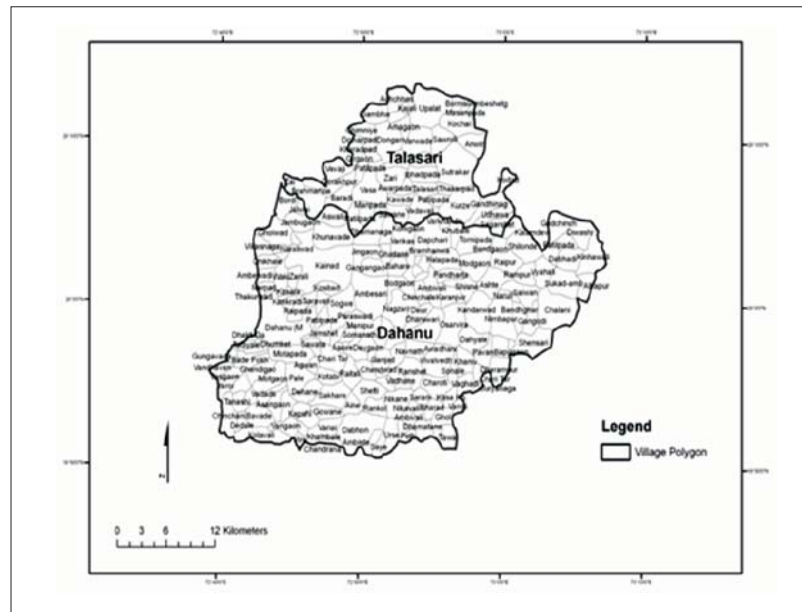


Fig. 2 : Village Level Map - Talsari and Dahanu Tashils

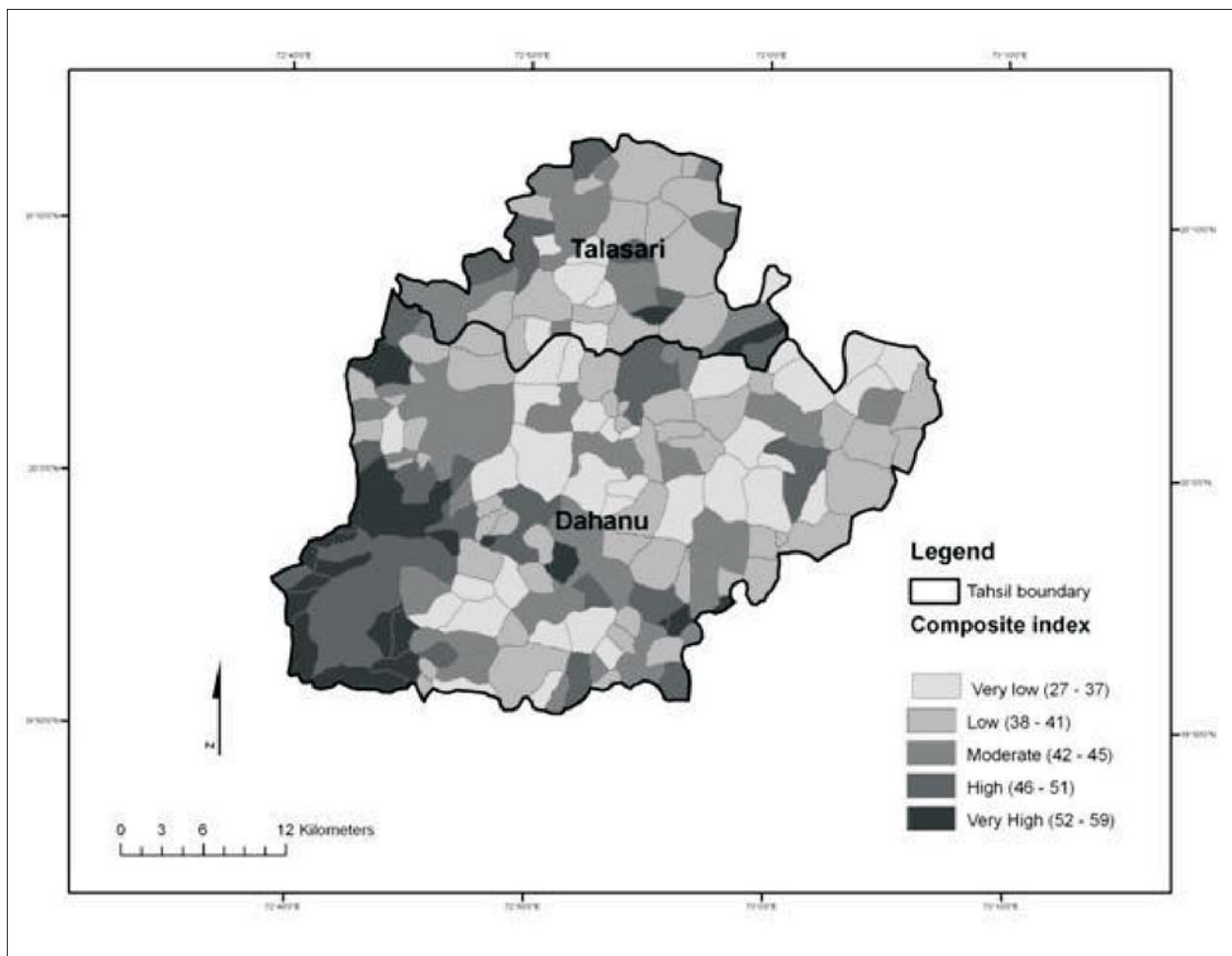


Fig. 3. Regions based on Composite Index for Development Status