CHAPTER IX
CONCLUSION AND SUGGESTION
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"The study of central places in Parbhani District." has been accomplished with a view of identification, evolution, distribution, occupational structure, functional organization, centrality and hierarchy of central places. The study also includes the case studies of selected central places from each level of hierarchy and role of central places in regional development and planning.

There is not uniformity in natural resources in the entire study region for the growth and development of central places. The northern and southern part of the study area consists of Ajanta ranges and Balaghat ranges respectively. It is less developed because of physiographic conditions. The remaining parts of the study region endowed with plain topography and it is well developed in transportation network. The total population of the study region is 1,835,982 (2011 census); the total area is 6511 sq.km. and 830 inhabited villages are located. It is observed that the characteristics of transport, demographic and economic are responsible for the developing nature of the area. Parbhani district is irrigated so it is agriculturally well developed region. Because of it, the cultivation of all kinds of food crops, oil seeds and especially banana in horticulture is cultivated in the region. Along with the growth of agro based industries, it is famous for trading commodities as turmeric and fruits.

The economy of the region has agrarian base. Out of the total working population nearly three forth of the (78.85 percent), working population is engaged in primary economic activities, especially in agriculture and one fifth in secondary and tertiary sectors of economy. Out of the total gross cropped area in the study region 18.18 percent area
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is under irrigation (2008-2009). Irrigation has played an important role in transforming the agricultural landscape and life of the rural people in the study region. Jaikwadi project, Siddheshwar project and other sources of irrigation played a vital role in transforming cropping pattern of the study region. The study region has fairly good system of road and rail network. Transport plays an important role in growth and distribution of central places. It is also important for the economic development of the region and rural-urban interaction. The road density of the region per 100 Sq. Km. is 94.16 which varies from tahsil to tahsil. According to 2011 census, rural population constitutes 68.96 percent and residing in 830 rural statements, on the other hand urban population constitutes 31.04 percent and residing in 8 urban settlements. The average population density is 295 per sq. km. and literacy rate is 75.22 percent according to 2011 census. All these physical and socio-economic factors of the region assert their influence on the evolution, growth and special distribution of central places in the study region.

The central places indentified on the basis of method evolved by the author, are 77, of which 69 central places are rural and 08 central places are urban. For the identification of central places information about the functions and services is obtained from district census handbook (2001) and used for identification of central places.

The study of evolutionary history of settlements in the area, gives us an answer of why a few villages grow and attain the status of central places, while others continue to exist as rural settlement. The history and growth characteristics of central places in the study area reveal certain features. In the growth of central places physical, social, economic and political factors play an important role in different historical periods. In ancient times when agriculture and animal husbandry were the important occupations most of the central places developed in the fertile lands along
the river banks, for example Pathri, Sailu, Parbhani etc. During the medieval period, with the introduction of coin and trade, the mobility of people increased and transport played an important role in the evolution and growth of central places. At the same time defense was a very important consideration and many of the central places occupied strategic positions for example, Pathri, Valurgram etc.

In modern times' agricultural prosperity, density of settlements and population, development of transportation, growth of industries and commerce, and government policies played an important role in the growth and evolution of central places, for example, Bori, Jintur, Gangakhed, Manwat, Zari, Takli etc.

Distribution of central places is influenced by relief, agricultural development, urbanization, industrialization, accessibility, settlement and population density and levels of economic development. The nearest neighbor analysis indicates that the central places are of regular pattern random manner where the degree of regularness is 1.317. Most of the central places in the study region are in the regular pattern random manner having the range of 1.00 to 1.50. High correlation is observed among industrialization transportation, development of agriculture, population density and distribution of central places. It is observed that, the value, coefficient of correlation between percentage of village approach by pucca road and percentage of central places to total settlements is \( r = 0.59 \) which is considerably high. It is also observed that co-efficient of correlation values for the relationship between settlement density and central place density \( r = 0.65 \) and population density and central place density \( r = 0.75 \) are also high.

The levels of development are an important factor which influence on the distribution of central places. The study reveals that in the areas of low and very low development where central places are small in size and
widely distributed. In the areas of moderate development medium and large size central places are found large size central place is found in area of high development. About 22.08 percent central places are found in a area of high level development, In the areas of moderate level of development and law level of development, 240.25 and 29.87 percent of central places are located respectively. While 7.80 percent of central places are located in an area of very low levels of development. The size of the central places in terms of population increase with increase in the level of economic development of the area.

Occupational characteristics of central places indicate that small size central places have a dominance of primary activities, especially agriculture. Medium size central places have diversified characters of occupational structure and most of them are dominated by trade and commerce, other services and agricultural activity. The large size central places show a dominance of trade and commerce, other services, transport, storage and communication and manufacturing activity. Occupational association determined by DOi's method for rural central places shows that, 14 central places are nonfunctional, 35 central places are two occupations in combination, 13 central places have three occupations in combination, and 5 central places have five occupations in combination. In the case of urban central places, Pathri and Sonpeth, have three occupations in combination, Purna, Jintur, Sailu and Manwat have four occupations in combination.

Central places are the places of collection and distribution of goods and services have developed several functions and services. The composition of functions and services varies with the central importance of a central place, but the occurrence of grocery shops, restaurants, cloth shops, flour mills, are more common. The lower order central places have a lower order goods and services like post office, high school, dispensary.
and primary health sub-centre. The next higher order central places have some higher order functions besides the lower order ones, a primary health centre, family planning centre, junior college, post and telegraph other etc. The higher order central places are few in number but they possess specialized doctor, administrative services, manufacturing units, workshops, cinema theaters public libraries etc. are found at large places.

Public health juicers are available in the study region through one Civil Hospital, one T.B. Hospital, nine Rural Hospitals, three Dispensaries, thirty two Maternity Homes, thirty eight Family Planning Centers, thirty one Primary Health Centers and two hundred fourteen Primary Health Sub Centers (2010). About 33.13 percent villages are having medical facility and 57.16 percent of rural population served by medical facility.

The number of primary school per 10000 population for the study region as a whole is 8.63 and number of high school per 10000 population is 1.94 Transport function played an important role in the growth and distribution of central places in the study region about 99.54 percent of villages having pucca approach road facility and it serves nearly 99.83 percent of rural population. The post offices are available in 21.2 percent of villages and serving 43.9 percent of the rural population of the study region from the last two decades. The telephone facility in India is considered to be an important indicator of functional importance. The wireless communication facility (Mobile Phone communication) spread in all the parts of study region.

The percentage of rural population served by banking facility in the region is 21.4 percent and there are 143 commercial and co-operative banks in the study region. All urban central places are having a banking facility either by commercial or Co-operative bank or by both of them. Scheduled banks are mostly concentrated in urban centers and large size
rural central places. As compared to scheduled banks, Co-operative banks are widely spread in the entire study area.

Centrality is the measure of importance of the central place in terms of its functional capacity to serve the needs of the people in the surrounding areas of the central place. In the present work centrality of central place is measured by Surplus Function Index Method which is evolved by Deshmukh P.W., Functional Score Method and Location Quotient Method. The result obtained by these methods match each other only to some extent.

The surplus function index method indicates that the higher centrality score of central places is found in the central part of the study region which is occupied by Godavari river and its tributaries, where agricultural prosperity and dense transportation network is more than northern and southern part of the study area.

For determining the hierarchy of central places in the study region, centrality values of central places arranged in the order of their ranks, give a profile with clear cut breaks between the higher order central places. In lower order central places clear cut breaks are not identified in the profile. The breaks for lower order central places are determined by careful observation of their functional magnitude.

The correlation between centrality rank and population rank calculated by Spearman’s Rank Correlation Method and it is $r = 0.25$ which shows high degree positive rank correlation between centrality and population rank.

It is observed that the distributional pattern of central places in the area differs from the theoretical scheme suggested by Christaller. The result indicates that the central places and their hierarchic class orders are not governed by a fixed $K= 3.66$ as is evident from their number in different orders. According to K-4 principle the progression of central
places is 1:3:12:48:192 etc. the K-4 model of the study area reads as 1:3:16:57 etc. The noticeable difference from the theoretical number in progression is found in third and fourth order due to spatial differences in physical and socio-economic conditions prevailing in the study area. Though the principle of K-4 hierarchy is not applicable fully, there remains a close association between the observed and theoretical number of central places. The important thing is that, there is a high degree positive correlation ($r=0.79$) between the order of central places and their number.

The study of selected central places from each level of hierarchy selected for case studies reveals that, central places have higher growth rate as compared to general rate of growth of all settlements. During last forty years, due to implementation of several development programs many more functions and functional units have been added in most of the central places. The addition of new functions and services has not only promoted the growth, but also cause to increase the status of many central places.

The selected central places for the case studies reveals clearly derived compact shopping area in the core of the central place where density of population is highest. Most of the central places have multipurpose shops with wide range of goods. The large numbers of commercial establishments are shared for residence. Small rural central places indicate the mixing of residential and commercial activities this fact is also found in large size central places. In most of the lower order central places there is a clear association between a community and its occupation.

The higher order central places have concentration of higher order central functions like University, Engineering Colleges, Arts, Science & Commerce Colleges, Specialized medical facilities, Market Yards,
Regional office of National Banks, Radio Stations, Wholesale traders, Theatres and Manufacturing establishments and gas agencies where as lower order central places have lower order central functions like High School, Dispensary, Kirana Shop and Post Office. The case studies also reveals that in urban central places percentage of working population engaged in tertiary sector is more than secondary and primary sectors of economy. Percentage of working population in urban centers increases with the increase in the central importance of urban centre. In respect of rural central places it is observed that percentage of working population engaged in primary sector of economy is more than secondary and tertiary sectors of economy. In case of rural central places percentage of working population engaged in primary sector decrease with increasing central importance of the rural central places.

Application of central place principle to the regional planning in the area has been examined. If the strategy of ‘Growth pole’ is accepted for regional planning then the study area has two growth centers namely Parbhani and Gangakhed. Other centers which could be developed as growth centers are the Purna and Manwat of second order central places and Jintur, Sonpeth, Palam, Sailu and Pathri of third order central places.

The central places of large and medium size rural settlements of third and fourth orders are neglected because of hinterland and poor accessible and located nearer to the already developed and important central places. These central places could be developed as growth points, by providing specialized medical facilities, banks, degree colleges, bus stands, veterinary aid centers, agro service centers automobile workshops and submarket yard facilities because most of them are located in agriculturally prospers areas.
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PROBLEMS AND SUGGESTIONS

1) The study region has an agrarian economy. Out of the total working population about 78.85 percent working population is engaged in primary activities, especially in agriculture. There is disparity in the development of agriculture. To minimize the disparity and reduce the pressure of population on agriculture following measures should be taken in consideration.

1. New agricultural technology.
2. Provision of credit and marketing facilities.
3. Reclamation of waste land.
5. Facility of breeding centers for animal husbandry.
6. Improvement in irrigation facility.
7. Availability of improved agricultural implements.

These facilities should be located at such central places where rural population can get benefit easily. To reduce the pressure of population on agriculture land, it is essential to boost the present and new agro based industries in the region through government policy and public investment at suitable centers.

2) The distribution of central places in the study region indicates that there is concentration of higher order central places in the central part of the region as compared to northern and southern part of the region. It is because of the topography of the study region and uneven distribution of the natural resources. Therefore different action programs should be implemented in a comprehensive manner to develop the backward areas particularly in the northern and southern parts. The central places in these areas like Waghi (Dhanora), Amberwadi and Wassa in Jintur tahsil and Banwas and Peth Shivni in Palam tahsil should be treated as growth and service centers. Growth...
at these places will have to be intimated through government policy and public investment.

3) The education attainment, particularly among youth is modest and needs improvement. Poor educational attainment hampers their future and the development of central places of the study region. This there is an urgent need to increase the participation of population particularly youth, in higher and technical education because education is the basic need of man and an important tool of development. A study reveals that there are functional gaps with respect to secondary, higher secondary and higher education in some tahsils of the study region. Therefore these education facilities are should be provided at different orders of central places in these tahsils to minimize the in balance in the field of education.

4) The seasonal nature of employment in primary activities like agriculture, and fishing, there is need to implement more and more self-employed schemes like Swarnajayanti Gram Swarozgar Yojna (SGSY) for rural population so that they could be employed sustainable basis, which leads the development of study region.

5) Public health facilities are not evenly distributed in the study region. The primary health centre facility is moderately served in Gangakhed, Pathri and Jintur and poorly served in tahsils like Palam, Sonpeth, Purna, Manwat and Sailu to overcome or fulfill this need there is need to strengthen the National Rural Health Mission (NRHM) on priority to extend the public health facility.

6) A study of functional gaps also reveals that rural area of Parbhani, Gangakhed, Palam, Purna and Pathri is poorly served by cooperative bank facility. Therefore it is suggested that some more banks should be opened in the rural central places of these tahsils.
7) Sub Market yard is a need of the farmers as it goes a long way in ensuring higher remuneration to them through proper weighing, cleaning grading and better price realization of their produce. The farmers look towards market yards as a dependable infrastructure for furtherance of their economic goal. The study of functional gaps also reveals that, tahsils like Parbhani, Gangakhed, Sonpeth, Purna and Pathri are poorly served by sub market yard. Therefore it is suggested that in some central places from the above said tahsils would be established sub market yards.

8) The Weekly Market centers are downward terminus for manufacturing goods and upward entry point for the farm produce, serve as nuclei of exchange of goods and services. The study of functional gaps reveals that tahsils like Parbhani, Gangakhed, Purna and Manwat are poorly served by the weekly Manwat centers. Therefore it is suggested that some central places from the above said tahsils would be developed as Weekly Market centers.

The location of specific function or service depends upon purchasing power of the people, accessibility of the area, demand for specific function and levels of development of that particular area. Most of the rural areas are deprived from the basic services due to one or combine effect of all factors. Therefore it is suggested that in planning process when new functions or services are proposed, they should be located at such a place, which may start a chain reaction of development with far reaching effects. The location of particular function at particular place is not only for the centre but also for its dependent surrounding area. The system of linkage between centre and surrounding area provides an infrastructure for developing economy.