CHAPTER - V

FUNCTIONAL AND BEHAVIOURAL CHARACTERISTICS OF MARKET CENTRES

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5.1 INTRODUCTION :

In this chapter an attempt is made to study the centrality of market centres. In the study of centrality of market centres in the study region, it is observed that, most of the rural market centres are small in size in respect of their population and functional capacity. Though these small market centres holding very few functions and services play an important role as rural service centres in economic organization of landscape.

5.2 THE CONCEPT OF CENTRALITY :

It is obvious that the market centres differ from each other in respect of their population size, functional capacity and aggregate importance. The present attempt is concerned with the problem of calculating the centrality values of the market centres in the study area.

Centrality, simply refers to the measure of importance of a place in terms of its functional capacity to serve the needs of the people in the surrounding area. The centrality of place can be expressed qualitatively, such as the low and the high centrality as well as quantitatively with the help of the centrality values. The centrality values can be obtained by converting the functional base of a place into the scores on the basis of the frequency and importance of the functions performed by the place. The

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centrality, however depends on central functions. These functions have a
certain range beyond the limits of the surrounding region. Christaller (1933,
1966) considered central places as the places, which provided central goods
and services to their hinterlands. According to him, the centrality of a
place is that component of its functional magnitude which is required for
the population of its hinterland.

Shelter is one of the basic needs of mankind. In the early stages of
human civilization the settlements were very small in shape and size. With
the development in technology and increase in population the rural settlement
became multifunctional. Later on each settlement got some functional
importance in the region. But the physical setting of settlements differs
because the geographical factor such as climate, topography and water
resources. The term ‘central place’ is used in a relative sense. Every place
has certain importance more or less in accordance with its possession of
certain functions or services not nearly for its internal population, but also
for surrounding areas (Singh, 1977). A central place theoretically enjoys
centrality in a given area or region with respect to a variety of functions or
services for it’s adjacent areas. The permanent settlements have certain
functions or activities, which provide the socio-economic needs of
neighbouring settlements.

5.3 METHODS OF MEASURING CENTRALITY:

Centrality of a place can be measured in several ways by taking into
account a single function or all the functions available at the place. The
single function index has been used by several authors. The number of
telephone installed was used by Christaller (1933) in his original work. Bus
service frequency of each central place has been used as a measure of centrality by Smailes (1944). The reliability of a single indicator to determine centrality has often been criticised for single function index may give misleading results, if the indicator selected does not represent the level of economic development of the region.

Berry and Garrison (1958) have considered all central functions for identifying the centrality of a place. Retail trade is a very important function, which has been given more attention by several scholars, while others have given more importance to professional and other services.

Davies (1967) has pointed out that, if all the retail establishments are included for measuring centrality, the problem of equivalence is very important. In the absence of such weightage a large unit is likely to be equated with a small unit. Hence, due weightage should be given to such establishment in respect of floor place and turnover. This problem can be resolved to some extent by classifying them as shops of convenience good.

Brush (1953) pointed out that the status of trade centres was determined by the functions, they perform a combination or association of distinctive sets of functions. Mrs. Abiodun (1967) has specifically pointed out that, the variables selected for measuring centrality of a place in developed countries, are not applicable for developing countries, because of their unrealistic results. She had worked on urban hierarchy, of the developing country with special reference to Nigeria.

Godlund (1966) has also worked out the centrality of the Sweedish settlements on the basis of the capacity of the services and trades. For calculating the centrality, he considered the total population of the place
and also the number of the persons engaged in retail trades and services in the place.

Davies (1967) has formulated the simple method for measuring the centrality in his South Walse studies. He assigns a score to every function; Davies is first to introduce a, ‘Location Quotient’ method for calculating the centrality, taking into account the functional availability of an area. He assigns a score to every function, depending on the frequency of distribution of that function in the region, while calculating the functional index of a centre, the relevant score for each function is to be multiplied by the number of functional units of the particular function. In this way the values of all the functional units for all the functions available at the centre can be obtained by multiplying with their respective scores. The summation of all these values gives the functional index of a place. The functional index for all places can be calculated by this method. This functional index gives model importance of a place and to call this index as a centrality index is not proper because this index is not related to the population of a central place. As a result this index gives misleading results for lower order central places.

In India, several geographers used various functions to measure the centrality of a place. Om Prakash Singh (1968) while studying central place in U.P. gave importance to i) The employment in trade ii) as well as existence of establishments providing central services and functions. While Sant Bahadur Singh (1977), used nineteen critical services to measure centrality of places while analyzing the distribution centrality and hierarchy of rural central places in Sulutanpur district in U.P. O.P. Singh (1971), has considered population engaged in commercial activities. Sudhir Wanmali

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(1971), has used all important functions for measuring centrality, where, scalogram method has been used.

Recently, Jaymala Diddee (1978), in the analysis of central places of Bhima Basin has used extra-population served index for calculating centrality. Deshmukh (1985), in the analysis of central places in Upper Krishna basin has considered all central function of the place and used surplus function index for calculating centrality. Kumbhar and Deshmukh (1984), has calculated the centrality scores for analysis of rural market centres in the Sangli District and Gharpure and Pawar (1987) for calculating centrality and Hierarchy of Agroservice centres in the Panchanganga Basin (Mah.). Jana and Bagachi (1978), have used the number of available functions in the settelements by giving them weightages according to degree of their importance.

5.4 CHOICE OF METHODS FOR PRESENT STUDY:

To calculate the centrality of a market place several methods are adopted by geographer, which can be grouped into single function methods and multifunctional methods. For the present investigation, multifunctional method has been preferred where 43 different parameters have been considered, (Appendix-II). The centrality values have been obtained by using “Location Quotient Method” of W.K.D. Davies (1967).

Davies (1967), has used this method for south wales. In this method a score for any single unit of function is calculated by following formula:

\[
C = \frac{t}{T} \times 100
\]  

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Where, \( C = \) Score for any function 't'

\[ t = \text{One unit of function 't'} \]

\[ T = \text{Toral number of function units of function 't' in the area.} \]

The weightage scores of all the market centres have been considered for the centrality scores for all the variables calculated by adding up all values of single variable, we get composite centrality value or index for each market centre (Appendix - II). The centrality values of market centres calculated by Locational Quotient Method are given in Appendix-III and show by (Map 5.1)

5.5 SELECTION OF FUNCTION:

To determine the centrality values of the market centres, various functions have been considered. The required data of various functions have been collected with the help of intensive field work. For this purpose, a thoughtful and thoroughly questionnaire was prepared for 43 various functions (Appendix No. II). The field survey was conducted for 64 market centres of the study region. The selection of functions has been done by careful observation because some of the villages has not single important function, even now so most of the villages are depend on small market centre, where very few functions are available, but these functions are also very important from their point of view e.g. grocery shops, grinding mills, kirana shops etc.

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JALNA DISTRICT

Centrality of Market Centres
(Based on Location Quotient Method)
5.6 REGIONAL ANALYSIS OF THE CENTRALITY:

The spatial distribution of the centrality values calculated for each market centres have been represented in Figures No. 5.1. The composite scores of centrality by the ‘Location Quotient Method’ (Davies, 1967), clearly show the notable difference between the lower and higher values. For analysis all the centrality values have been put according to their decending order. (Appendix-III).

The highest centrality value is obtained by Jalna market centre (1786.64) and is followed by Ambad (219.08), Partur (170.03), Bhokardan (167.29), Mantha (160.76) and Jafferabad (130.39). These are very important market centres in the region.

The centrality index of 26 market centres range between 25 to 100. It includes mainly Badanapur and Ghansawangi market centres. Generally these markets are medium in size and are located at tahsil head quarters. About 32 market centres (50%) have below 25 centrality values. Thus the high centrally value market centres are situated in the central and urban places which are agriculturally prosperous zones, and provide more services to the people. Out of the total 64 market centres nearly 32 market centres (50%) have very low centrality values ranging from 4.4 to 22.49. It is clearly shows that, these market centres have poor functional organization, but these market centres also plays an important role to serve the rural population (Appendix No. III).

The analysis of regional market centres, shows that the Jalna market centre a district place has found very high centrality value, because it is a large town of the study region, which has very large service area and it

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serves more population of the study region. Thus the Jalna market centre proves its dominancy, which acts as the regional market centre. Ambad stands second in ranking of centrality, which obtain the centrality value of 219.08. It is also a large rural market centre of the study region, and its an important commercial and trade centre of the study region. Partur and Bhokardan stand at the third and fourth ranks respectively and they serve to the region as the sub regional market centres, which range between 100 to 200 centrally scores. Whereas, 26 market centres have the centrality score ranging between 25 to 100. It includes mainly Badanapur and Ghansawangi market centres. Generally these market centres are medium in size and are located at tahsil head quarter. Another 32 market centres have centrality values below 25. It is notable fact that most of the market centres of the higher centrality are facilitated, by developed, road and other communication network.
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