



## ORGANAZATION OF SERVICE CENTRES IN RURAL HILLY AREA OF KOLHAPUR DISTRICT (MS)

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### Abstract

*The identification of growth centers is an imperative not only their individual development but also integrated areal development. The growth centers generates their own ideas or innovations or they are taken these from higher order centers. They can diffuse these ideas or new innovations to their hinterland more effectively and maintain regional balance development. The considering these things for study area, the identified growth centers itself have limited number of functions beside this the distribution of these growth centers are uneven as well as they are distantly distributed. Therefore, the available growth centers are unable to fulfill the requirement of their complementary area.*

**Keywords:** *Services, Centre, Function, Hierarchy, Regional Balance, Hinterland*

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### Introduction

Settlements as cultural bearing units are mirror of the region, where the civilization originates, develops and spreads into the whole sphere of human life. There is an increasing outflow of classified information about economic life of villages and central places e.g. demographic features, occupational structure, financial assets and liabilities, production functions, cost and return and disposal of marketable surplus. Settlement is the spatial differentiation of the grouping of houses and highways on any landscape where social cohesion and cultural ties strengthened according to the needs of the society (Mandal, 1979). It is also regarded as the topographic expression of the grouping and arrangement of two fundamental elements of houses and highways (Brunhes, 1952).

The history of civilization flashes light on particular site for settlement at certain ideal geographical point. Numbers of geographical points provides ideal environment for the location



of settlement. In the early era, size and shape of the settlements were limited but time being population is increased and size of settlements is also expanded. In the common environment, the growth of settlements varies from place to place and time to time. A particular settlement grown very rapidly due to its midpoint location, which are surrounded by various settlements show comparatively high growth, obviously such settlements remain big and they are surrounded by small settlements, these small settlements dependent on this central settlement for various facilities (Gophane, 1981).

The importance of settlement depends upon the number of functions, it possesses and generally, the maximum functions are located in the central settlement. Location is meant in the sense that one is identifying a certain place to put particular thing or activity in that particular place (Wanmali, 1972). The location of particular functions in a particular place, thus, depend on the centrality of space, level of development, demand from the consumers, standard of living of the consumers and easy accessibility through good transportation and communication network (Christaller, 1933).

The regional development is mostly concerned with their settlement patterns. Regional development become in force if region having proper and ideal hierarchic and the disparity in development has privileged if region has non-hierarchic or moderate hierarchic settlement pattern. The settlements are ordered according to their importance as centres for providing services to the population in the surrounding settlements (Misra, 1974). The pyramidal structure shows that at the apex there are very few settlements possess higher functions and activities. But, at the bottom, there are lot of small size settlements which have less number of functions and activities.

### **Study Area**

Hilly Area of Kolhapur district of Maharashtra is selected as a study area for present study. The entire Kolhapur district has 12 tahsils, among them eight tahsils are selected for the present study, which are individually having more than 50 per cent hilly area of their total area. Particularly Shahuwadi, Panhala, Gagan Bavada, Radhanagari, Bhudargad, Ajara, Gadhinglaj and Chandgad these tahsils are selected for the present research. These tahsils are mainly located in the western part of Kolhapur district, and it lies between  $15^{\circ} 43'$  to  $17^{\circ} 17'$  North latitude and  $73^{\circ} 40'$  to  $74^{\circ} 33'$  East longitude. Kolhapur district is situated in the extreme southern part of



Maharashtra and surrounded by Sangli district to the north, Belgaum district of Karnataka State to the east and south and Ratnagiri and Sindhudurg districts to the west. Kolhapur district is a part of Deccan trap and the general slope towards the South-east. In general, the physiography of the study area is hilly, having average height about 800 m from MSL. The climate is tropical monsoon. The average temperature of summer and winter is 32.8 0 C and 19 0 C respectively and an average rainfall is 2875 mm. The study area has a well-developed drainage pattern, by Warana, Panchganga, Dudhaganga, Vedaganga and Hiranyakeshi. The study area is having 12,99,252 population as per 2001 census and out of that 12,50,090 habitant in 876 rural settlements and only 49,162 population is living in urban settlements. The population density is 241 persons per sq km and sex ratio is 997 females per 1000 males.

### Objective

- 1) To identify and study the hierarchic order of settlements in rural hilly area of Kolhapur district.

### Data Collection And Methodology

The primary and secondary data are used for present work. The primary data is collected through field survey, personal interviews and schedule particularly for functional data. Beside this population data and information related to settlements are collected through secondary data from census hand book of Kolhapur district, Socio-economic Review and Zilla Parishad Office, Kolhapur.

### Identification Of Growth Centers

For the identification of hierarchic systems of the study area, the researcher has adopted central place theory. Based on it the growth centers are found out for integrated area development. The growth centers of the study area are key factor. So, growth centers are most important for regional development, the identification of areal service centers must be needful for prospective regional development.

In present study, the following criteria have been used to identify the service centers. To identify a service centre, a settlement should have minimum 2000 population and any three following functions of lower orders.



- Group A – Education
- Group B – Health Service
- Group C – Weekly Market
- Group D – Communication
- Group E – Transportation
- Group F – Banking
- Group G – Electricity

### Methodology

The centrality of a place can be measured by several ways by taking into account a single function or all functions available at the centre. Davis W. K. D. (1967) has used several functions and calculated location index for each function. The method of Davis gives the total serving capacity of any service centre.

In the present study, various functions have been taken in to account for the calculating centrality values. The centrality is calculated by using various methods. Centrality values are determined by using Davis W. K. D's method (1967) by following formula –

$$c = \frac{t}{T} \times 100$$

whereas –

c = is a location of any region

t = is a single function

T = is a number of particular functions in the area

By using this method, the centrality score is determined. The centrality index of service centres is used to identify the growth centres

### Hierarchy Of Settlement

The centrality score of each settlement is calculated by considering the major seven groups of functions. The seven groups of functions have combinably content nineteen sub-functions. As per the availability of these sub-factions (numbers) at individual unit are scored (per group of function) and total score is calculated. For the present study, five groups of



hierarchy and six groups of settlement size are assessed and growth centres are identified which are revealed from table 1.1 and fig. 1.1 for integrated area development.

**Table 1: Hierarchy of Settlements in Study Area**

Sr. No.	Size of Settlement	No. of Settlement	Score				
			Below 4	4-8	8-12	12-16	Above 16
1	Below 500	137	137	-	-	-	-
2	500-1000	264	264	-	-	-	-
3	1000-1500	209	209	-	-	-	-
4	1500-2000	105	105	-	-	-	-
5	2000-2500	52	47	5	-	-	-
6	Above 2500	113	48	54	4	4	3
Total		880	810	59	4	4	3
Order of hierarchy			V	IV	III	II	I

*Source: 1. Census of India, Kolhapur District Census, 2001 2. Compiled by Researcher*

### **I – ORDER HIERARCHY (Above 16)**

The study area reveals 3 service centres with highest score, these service centres are also supposed the growth centres namely, Kodoli, Ajara and Gadhinglaj. These service centres provide various levels of education, different qualities health services, retail and wholesale shops, better networks, good communication, nationalised and local co-operative banking facilities as well as administrative offices, etc. These facilities are common at these centres. Therefore, the populations of the complementary area have frequently visited to complete their necessities.

### **II – ORDER HIERARCHY (12 to 16 Score)**

In the study area, there are four settlements with their available functions reporting the second order service centres. These are Kotoli, Kale, Gargoti and Chandgad. All these settlements are rural and Chandgad is a taluka place. The first two settlements (Kotoli and Kale) are in Panhala taluka, Gargoti is in Bhudargad taluka and Chandgad itself is a taluka place. The functions i.e. education, health, market, banking, transportation and communication with higher quality and quantity are present in these service centres. The Gargoti and Chandgad also provide administrative services to their hinterland. Though these four service centres have played



significant role to provide lower to higher order services to their command area and these centres are linked to I<sup>st</sup> order service centres.

### **III – ORDER HIERARCHY (8 to 12 Score)**

There are 4 settlements of the study area belong to the third order of settlements hierarchy. The names of these settlements are Malkapur, Panhala, Radhanagari and Wadi Ratnagiri. The first three settlements are the tahsil headquarters but the last settlement is general settlement. On the basis of rural urban classification, Radhanagari and Wadi Ratnagiri are the rural settlements and Malkapur and Panhala are the urban settlements. The taluka place settlements provide administrative facilities as far as the common functions of these all-third order settlements are education, health, banking, markets, transportation and communication, etc. The range of functions, which are possessed by these settlements, is less than the first and second order centres. Panhala and Wadi Ratnagiri have distinguished characteristics. Panhala is a hill station as well as historical centre and Wadi Ratnagiri is a religious centre of God Jotiba. The people from the surrounding area visit these centres to fulfil their needs.

### **IV – ORDER HIERARCHY (4 to 8 Score)**

There are 59 service centres of the study area falls in the fourth order hierarchy of settlements. The tahsil-wise distribution of these hierarchic settlements is as following Shahuwadi tahsil has 5 settlements (Bhedasgaon, Kapshi, Sarud, Bambavde and Pishavi), Panhala tahsil have 12 settlements (Savarde T. Satave, Satave, Kakhle, Male, Jakhale, Borpadale, Borivade, Waghav, Punal, Majegaon, Padal and Yevaluj), Bavada tahsil has only one settlement (Tisangi), Radhanagari tahsil has 10 settlements (Mhasruli, Dhamod, Rashivade Bk., Kaulav, Tikpurli, Kasaba Walwe, Pungaon, Shirgaon, Avali Bk. and Phejiwade), Bhudargad tahsil has 11 settlements (Solankpur, Mudal, Waghapur, Koor, Madilge Bk, Pimpalgaon, Mhasave, Pushpanagar, Shengaon, Kadgaon and Patgaon), Ajara tahsil has one settlement (Uttur), Gadhinglaj tahsil has 16 settlements (Kadgaon, Karambali, Atyal, Inchanal, Kaulge, Hasurchampu, Dundage, Hitni, Kasaba Nool, Barsarge Bk., Halkarni, Terani, Bhadagaon, Harli Kh., Mahagaon and Nesari) and Chandgad tahsil has 3 settlements (Mangaon, Kowad, and Halkarni). The settlements from fourth order hierarchy belong to the settlement size of more than 2000 habitats. The services available in these centres are mostly education, health, market, transportation and communication, but their quantity and quality is very limited. Some





settlements show weekly market and banking facilities present vary rarely. The settlements of this category can be considered as central settlements. The next order settlements are mostly depend on these service centres for their requirements.

#### **V – ORDER HIERARCHY (Blow 4 Score)**

The study area holds 810 settlements of this hierarchic order. The functions, which are available at these settlements, are very low level. The functions avail at these centres are primary or secondary schools, groceries, post offices and kaccha or pakka roads, etc. on the other hand, number of settlements have no medical facilities, bus transportations, poor communications and no banking services etc. Due to these service conditions, these settlements are connected with the higher order service centres for their requirements.

#### **Conclusion**

The study area reveals total 880 settlements, out of these four settlements are urban and 876 settlements are rural. As per the centrality score, the hierarchy of settlements is uneven; only 11 settlements are significant as a growth centres for areal development. Remaining all settlements is fall in the lowest hierarchy. The higher hierarchies 11 settlements (Kodoli, Ajara, Gadhinglaj, Kotoli, Kale, Gargoti, Chandgad, Malkapur, Panhala, Radhanagari and Wadi Ratnagiri) are providing socio-economic facilities to there neighboring settlements. In the study area, it is observed that 80 settlements are served by one growth centre and it shows major constraints of development. If we can generate new growth centres intentionally with pre planed then the integrated areal development will possible in the rural hilly area of Kolhapur district.

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