

STUDY OF HIERARCHY OF AGRICULTURAL REGULATED MARKET CENTRES IN SOLAPUR DISTRICT

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ABSTRACT

Spatial organization is mostly studied in geography. The prime concern of geographical study of market centres is their location, distribution and spatial interaction. Market centres and their infrastructures are integral part of a spatial organization. Market centres have attendance of concentration of activities which forms a basic for spatial interaction. The relative locational pattern of market centres can be examined in hierarchy. For the present study the relevant published and unpublished records have been consulted. However, the present work is based on both primary as well as secondary data collected through intensive field work. Secondary data has been collected mainly from the District Census Handbooks, Socio-Economic Reviews and District Statistical Abstracts, Maharashtra State Gazetteer of Solapur District.

The study reveals that, the hierarchical system of agricultural regulated market centres are concerned, due to large deviation assumption is proved. The hierarchical class system of agricultural regulated market centres derived is very important and it will be useful for solving various problems in the area and it will provide information to the planners and decision makers for the regional planning and overall development of the region.

Key Words: Market centres, Distribution, Centrality and Hierarchy,

INTRODUCTION

Agricultural regulated market centres play a vital role not only in the marketing system of the country but also in a rural development. They are provide trade and commerce services and act as nodal centres for transportation and serve as growth centres, also help in increasing social contact, serve centres of diffusion of innovation and ideas and become focus for political and other activities. Agricultural regulated market centres are different from each other. They are different in the respect of their population, size, functional capacity and aggregate importance. The present attempt is concerned with the calculating the centrality and hierarchy values of the market centres in the Solapur District.

OBJECTIVES

In view of the above, the specific objective of the present study to

1. To examine the hierarchy of agricultural regulated market centres in Solapur district of Maharashtra.

DATABASE AND METHODOLOGY

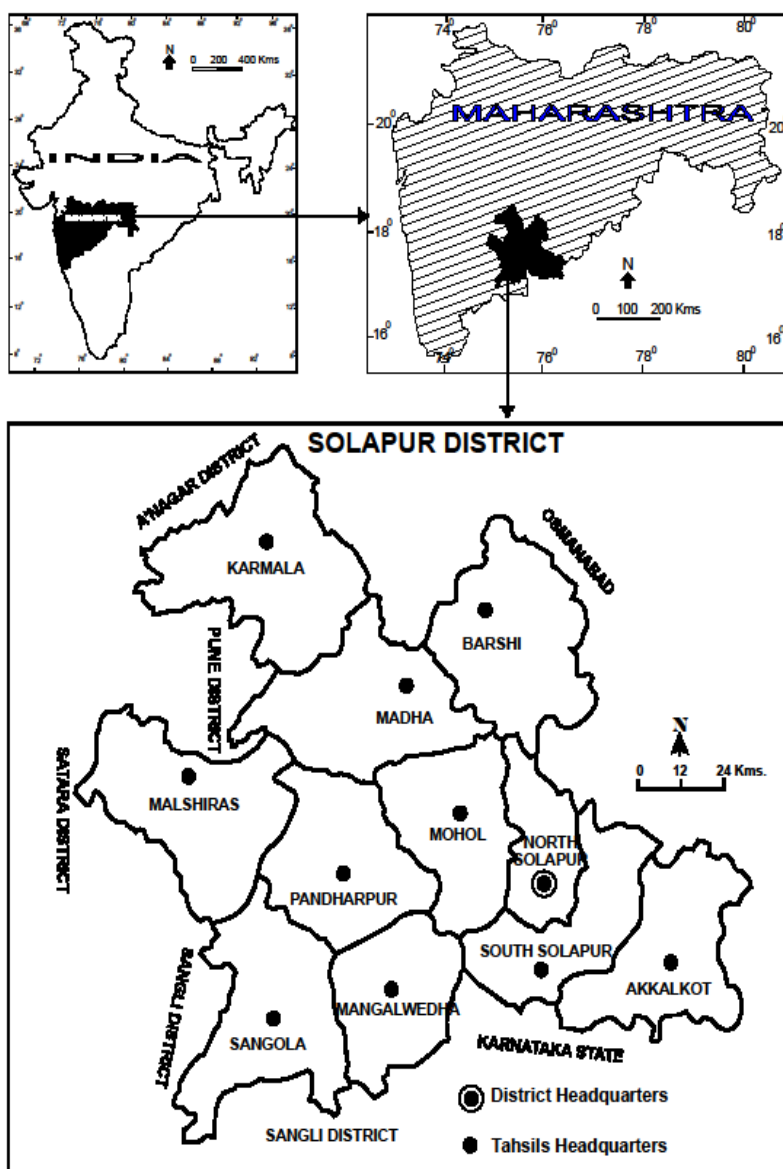
For the present investigation the empirical data regarding cattle market centres have been collected through intensive field work which is supplemented by the secondary data abstracted from socio- economic review and district statistical abstracts and district census

hand book. Centrality scores are used to find out the hierarchy of agricultural regulated market centres. Agricultural regulated market hierarchy is determined on the basis of centrality scores and all agricultural regulated market centres are divided in to four hierarchic orders. Centrality score is calculated by giving weightage to selected fifteen indicators of various functions and services. The composite scores of centrality are obtained by location quotient of Davis (1967). The results are shown with the help of table and maps.

STUDY REGION

The study relates to Solapur district, which lies in the middle Bhima plain of southern part of the Maharashtra. Situated between the parallels of $17^{\circ} 10'$ north and $18^{\circ} 32'$ north latitudes and between the meridians of $74^{\circ} 42'$ east and $76^{\circ} 42'$ east longitudes. The geographical foundation of soils prevailing in Solapur district is mainly from Deccan trap of volcano origin viz. “Basalt”. and Average rainfall of the district is less than 750 mm. and is always uncertain with bimodal situation.

STUDY AREA



It district covers geographical area of 14895 sq.kms. Which is 4.82 per cent of the total area of Maharashtra State and population 38, 49,543 (2001), which is 3.97 per cent of total population of the state. It ranks 7th in population in the state. The district is having 11 tahsils (Fig.1). Solapur district is agriculturally part and drought prone area of the state. The study region can be attributed to the availability of perennial sources of water from Bhima, Sina, Nira and Man rivers. Across these rivers several Kolhapur types of weirs, canal and lift irrigation schemes are constructed from which the stored water is released periodically.

The Concept of Hierarchy

Spatial organization is mostly studied in geography. The prime concern of geographical study of market centres is their location, distribution and spatial interaction. Market centres and their infrastructures are integral part of a spatial organization. Market centres have attendance of concentration of activities which forms a basic for spatial interaction. The relative locational pattern of market centres can be examined in hierarchy.

Specialists in geography, economists and many other specialists of different disciplines widely use the concept of hierarchy. This concept is used in marketing geography not only for identification of various categories of market centres, but also for organizing marketing centres within the study area. In every region there are few large size or regional agricultural regulated market centres, a medium size or sub-regional, and local or primary market centres performing complementary functions. Agricultural regulated market hierarchy can be determined on the basis of number of retail/wholesale establishments, threshold, aspects like size of market area, volume of commodity arrivals, total turnover etc. The Pattern of agricultural regulated market hierarchy based on the detailed analysis will prove a base for planning and development of the agricultural regulated market centres.

A study of hierarchical pattern is essential in order to understand the:

- (i) Spatial interdependence of the centres,
- (ii) Functional wholeness of the system, and
- (iii) Clear classification of centres.

CHOICE OF THE METHODS FOR PRESENT STUDY

In the present study, centrality scores are obtained for all 37 agricultural regulated market centres with help of Location Quotient Method of Davies (1967). The centrality scores of obtained by Davies method are used to classify agricultural regulated market centres.

Table 1
Centrality Value

Sr. No.	Order	Centrality Value
1	I	Above - 510
2	II	198.06 - 510
3	III	76.89 - 198.06
4	IV	29.85 - 76.89
5	V	11.59 - 29.85
6	VI	Below- 11.59

Source: *Intensive Field work, 2010-11.*

1. *District Census Handbook, Solapur District, 2001.*
2. *Social and Economic Review and District Statistical Abstract, Solapur District, 2009- 2010.*
3. *Records of Agricultural Regulated Market Centres (ARMC) Solapur District,*

With the help centrality scores researcher made only four classes, of agricultural regulated market centres in the study area. So the researcher include fourth, fifth and sixth order agricultural regulated market centres in one hierarchical order; because there is no much difference in their functioning. So the researcher got following four hierarchical orders.

- 1) First order - Regional market centres
- 2) Second order - Sub-regional market centres
- 3) Third order - Medium size market centres
- 4) Fourth order - Local /primary market centres

Considering the above classes, the researcher gets real picture of hierarchical orders of agricultural regulated market centres.

Table 2
Solapur District: Hierarchic Order, Centrality Score, No. of Agricultural Regulated Market Centres and Their Percentage to Total.

Sr. No.	Hierarchic order	Category	Centrality Range	No. of Market centres	Percentage to total
1	I	Regional market centres	Above 500	1	2.70
2	II	Sub regional Market centres	200-400	4	10.81
3	III	Intermediary market centres	100-200	6	16.22
4	IV	Small /Primary market centres	Below -100	26	70.27

Source:

1. *Intensive Field work, 2010-11.*

2. *District Census Handbook, Solapur District, 2001.*

3. *Social and Economic Review and District Statistical Abstract, Solapur District, 2009- 2010.*

4. *Records of Agricultural Regulated Market Centres (ARMC) Solapur District,*

REGIONAL ANALYSIS

The hierarchy of agricultural regulated market centres is determined with the help of semi-log graph. It is grouped into four classes. The analysis reveals that nearly 70.27 percentages of agricultural regulated market centres are grouped into fourth hierarchical order of agricultural regulated market centres, which have low centrality values. These agricultural regulated market centres are small in size and serve most of the rural population of the study area, which have got more importance because of their nearness. It is an indication of developing stage of study area.

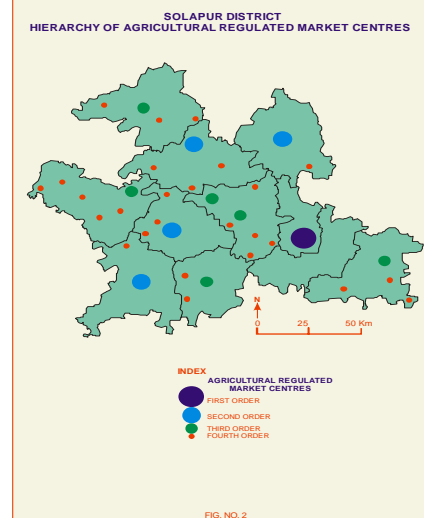
The third order agricultural regulated market centres, are having centrality values 100-200 accounts for 16.22 percentages of the total agricultural regulated market centres of the study area. Whereas the second order agricultural regulated market centres have centrality values 200-400, which have accounts for 10.81 percentages of the total agricultural regulated market centres in the study area.

i) Regional Agricultural Regulated Market Centres

North Solapur is the only one agricultural regulated market centre in the entire study area which has got the status of regional agricultural regulated market centre. Its centrality score is maximum; (510.6), and it is the district head quarter and the biggest town in the

study area. It has not only high – level functions in all facilities but also high volume in all the functions, where most of the commercial, social and administrative district and divisional offices are housed. It is historical, religious and old trade centre also, and located on National high way No.9. It is also connected with Railway and Airways.

The Solapur is famous for “Chadders” all over the state. Solapur is the principal agricultural regulated market centre (Siddheshwar Market Yard). It covers two tahsils namely North Solapur and South Solapur. It is "A" Class Regulated Market. In this way North Solapur is at the top of hierarchy.



ii) Sub-Regional Agricultural Regulated Market Centres

Barshi, Pandharpur, Sangola and Kurdwadi are also principal agricultural regulated market centres in the study area. All these agricultural regulated market centres have got well cultivated surrounding area. The centrality score of these agricultural regulated market centres range in between 200 to 400. Both maximum concentration and variety of functions have characterized these agricultural regulated market centres of second order or sub-regional. These sub-regional centres are also clearly distinct from both the higher order centres and lower order centres in terms of variety of functions and goods and services.

Barshi agricultural regulated market centre is one the of most important agricultural regulated market centre in the study area. It has one sub market centre. Barshi is the gateway of the Marathwada region. It is connected with road and rail ways all over the state. The agricultural commodities come from the Latur, Osmanabad and Beed district.

Pandharpur is also the principal and the important agricultural regulated market centre in the study area. Pandharpur is famous for the lord Vitthal which is situated on the bank of the Bhima River. Pandharpur is well irrigated and agricultural developed region. In Pandharpur there is tri annual cattle market centre (Kartiki, Maghi and Chaitra fairs). For this tri annual cattle market the cattle comes from all over the Maharashtra state. Pandharpur has three sub market centres. Pandharpuri bufallos are famous all over the state. It is also connected with state highway and Railways.

Sangola has got sub-regional importance in agricultural regulated market centres. Sangola tahsil is not well irrigated but it's famous for pomegranate. This factor has reduced its importance as a centre of trade in agricultural commodities. It is however one of the biggest cattle market centre in Maharashtra and is very famous for the trading of bullocks of the khilar breed.

Kurdwadi is one of the sub-regional agricultural regulated market centres in the study area. Kurdwadi has three sub market centres and these all are well connected with road and rail ways with entire region. Kurdwadi is a big railway junction in the study area.

iii) Medium size Agricultural Regulated Market Centres

There are 6 agricultural regulated market centres in the third hierarchical order (fig.6.4), out of which four are the tahsil head quarter viz; Akkalkot, Karmala, Mohol and Mangalwedha. Remaining two Akluj and Vairag are the rural agricultural regulated market centres. Akluj is famous for caw marketing. Since last five years this agricultural regulated market centre has been started the horse marketing. Vairag is the sub centre of Barshi agricultural regulated market centre. Mangalwedha is famous for the jawar production in the study area.

iv) Local / Primary Agricultural regulated market centers

There are 26 agricultural regulated market centres in this hierarchical order. Out of 26 agricultural regulated market centres Malshiras and Madha are the tahsil head quarter but it's also the rural agricultural regulated market centre. Dudhni and Malshiras agricultural regulated market centres are the principal agricultural regulated market centre. Malshiras and Natepute are the important agricultural regulated market centres. They are famous as the cattle market centres.

The centrality score of this class range is below 100 (fig 6.4). The centres of this group and rural service centres are characterized as small / primary agricultural regulated market centres. All of these agricultural regulated market centres are the sub centers of various principal market centres in the study area. They are not only large in number but also they are large in variations in their functioning character.

CONCLUSION

The principal agricultural regulated market centres are mainly located in the town or city and the area well connected by transports facilities and these agricultural regulated market centres are provided more services and facilities to the population / agricultural producer. The agricultural regulated market centres which have lower centrality score and lower hierarchical order (below 100), are located in the villages and they are unable to provide the better services to the population / agricultural producer. So far hierarchical system of agricultural regulated market centres are concerned, due to large deviation assumption is proved.

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