

Changing Pattern of Rural Service Centres in Karnal District (Haryana)

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Abstract: *The paper is an attempt to know the rural service centres of Karnal district on the basis of rural services provided at village-level. On the basis of services provided and weightage score, varying orders of rural service centres have been demarcated. With the passage of time; continuous move from lower order to higher order class has led to change from rural to urban area. The overall picture is that 1 order order or higher order centres are increasing in number and lower order centres are diminishing due to the continuous development of the region and its impact on the surrounding rural regions of the district.*

Keywords: Rural service centres, higher order centres, rural region, Hierarchy

1. Introduction

Urban geography has rapidly progressed in India developing into a well documented academic sub-field. It has attracted the attention of a large number of scholars not in the country but also abroad resulting in significant number of publications since independence. The unprecedented growth of towns and cities in India as a result of the modernization process which has led to agricultural and industrial development has been the main cause of the incredibly rapid growth of urban geography in India. The fact that in 1991 "India had a total" (Dutt and Sen 1992), provides a setting where both typical and atypical urban problems and characteristics are found.

Rural service centre is defined as "A place, which supplies the economic, administrative and social needs of the people of service area as well as of the people of a place itself, through public and private institution; establishments and organization." According to empirical studies grown centre or service centre cater to the provision of services such as education, health, transport, communication, trade, finance and other services. The rural central places are important nodal centres on communication lines enjoying centrality in a given area or a region with respect to a variety of functions or services for its contiguous surrounding areas. (Kharas, 2009)

Growth Points (GPs), Growth poles (GPs), Small Towns (STs) or Growth Centres (GCs) as they are variously named in literature are defined as centres with strong resource base that can initiate a cumulative causation process that culminate in continuous and sustainable development. The term growth point (GP) means increasing in size both in number of facilities, building and services provided at an identified centre. If well managed growth points have demonstrated the potential to become commercially viable places that can create a lot of employment opportunities for people in rural areas (Manyanhaire et al 2011).

The present study embraces the size, hierarchy and distribution of rural service centres in district Karnal. The location of the district Karnal on the national Highway and well connected network is its big assets and gives it a

position of advantage as against the other district in the state of Haryana.

The main aim of the study to identify the rural service centres on the basis of services provided and their hierarchical pattern. The present study embraces the size; hierarchical pattern of Rural Service Centres in district Karnal on the basis of services only. The location of the district Karnal on the National Highway and well connected network is its big assets and gives it a position of advantage as against the other district in the state of Haryana.

The main aim of the study to identify the rural service centres, evaluation of services and functional characteristics.

2. Study Area

The study was conducted in Karnal district of Haryana State, India. Karnal lies between North latitude 29°23' and 76° 26' and 76° 28' to 77°12' East longitudes. (Fig.1) The climate of the district is dry and hot in summer and cold in winter. Its maximum and minimum temperature varies from 43°-21°C in June and 22°-4°C in January.



Figure 1

Location of Karnal District in Haryana
 Geographically, the area of the district is divided into 3 major regions i.e. Yamuna Khadar, Bhangar and Nordak regions.

Objectives of the study

- To examine the services provided in the rural parts of the Karnal District
- To find out the differences in the various rural parts of the district (1971-2011) and the present.
- To identify the rural service centres on the basis of the functional characteristics and establish their hierarchy on the basis of total composite score.

Data Base and Methodology

- Census data of Karnal district for 1971,1981,1991,2001 and 2011 have been taken into account while considering the village population.
- Villages having below 200 populations have not been taken for study assuming these villages do not provide any service to its neighbouring population.
- 5 major functional groups with 50 sub- functions are taken under consideration.
- Central functions weighted according to the relative importance and the frequencies of the functions.
- Data base of 1991(transition year of 50 years) has been taken for comparison of various services provided.
- Percentage has been used to calculate composite score for different periods.

Hierarchy of Functions & Weightage System

Types of functions relate to the availability of categorized functions like, health, postal, education, transport, historical importance etc. Such a classification is, although,

conventional as recognized in the census abstracts, but various institutions in each types of function, has to be decided by the investigator himself. Functional types, again, is a function of population concentration. By general assumption it can be said that the larger population size will attract larger functional types of functions and vice versa. However, in a socially conscious state some types of functions are ubiquitous e.g., education, health & postal. Nonetheless, it is worthwhile to note inter-disparity of functional types within same population sized villages and within different population villages. The following text, therefore, examines that behavior with reference to functional types and their composite score.

To determine the importance of any central place or to determine the hierarchy of rural service centres we have ignored the volume of the functions and have taken the presence or absence of central functions. This has been done considering the complexity and laborious management of the data. Some data although available for present year, was not available for the past years. It was, therefore, not considered in the present study.

5 major functional groups with 50 sub- functions are taken under consideration. (See table: 1)

To assume that all central functions are of equal level of significance does not seem to be the realistic one. The method of awarding one or zero depending on the presence or absence of a function in a settlement irrespective of type function therefore seems to be inappropriate. It is therefore, essential to give consideration to differences in the status of functions where such exist.

Table 1: Weightage and Sub-classification of Services

Weightage Type	Class I 15	Class II 10	Class III 5	Class IV 1
Education	Senior Secondary School	High School, Primary Health Centre	Middle School, Primary Health Sub Centre	Primary School, Medical Practioner
Health	Dispensary,Civil Veterinary Hospital	Hospital cum Breeding Centre	Civil Veterinary Dispensary	Stockmen Centre
Postal & telecommunications	Postal Telegraph/ Telephone Office	Telephone Exchange	Post Office + Telephone	Post Office
Transport, trade & commerce	Village located on National Highway	Village located on State Highway	Village Located on Major District Road	Villages connected with Link Road
	Railway Station	Forwarding Agencies (Truck Union)	Bus-Que Shelter	Bus Stop
		Regulated Market	Sub Market Yard	Purchase Centre
			Insecticide Centre	Godowns (rented)
			Fertilizers depot Godowns – NCDC	
			Godowns own	
	Warehouse	A.E.O.		
		Medium & Large scale unit	SSI Unit	KVIC unit
		Filling Station NH	Filling Station SH/MDR	Filling Station on Link Road
	Land development Bank	Co-operative Bank	Commercial Bank	Mini-Bank/Co-operative Credit and Services Society
Others(Historical/religious&political)	Antique places if any	Fair/Festival	Mela	Mandir/Tirath
		Sub Tehsile Head Quarter	C..B.D. Head Quarter	Panchayat Head Quarter

Source; compiled data-taken from various concerned offices.

In the study area, some centres can adequately serve their areas with only one primary school, while others by virtue of their importance would be expected to possess a high school or a senior secondary school. To award the same scale to both the functions is to reduce them to the same level of significance. Therefore central functions weighted according to the relative importance and the frequencies of the functions. The lower weightage was assigned, where the frequency of occurrence was high and vice-versa. A primary school has been allocated 1 point, while a middle school has been awarded 5,10, 15 points respectively. Where no distinction can be made within the type of service, the local condition has been the factors in considering the classification of functions. For example, Godown, service in its type has 3 different levels. Rented, NCDC private owned. The rented godown has been under IV group, while NVDC and own both have been placed under III order although the weightage of NCDC has been given 3 and own godown of 5. This has been done in accordance with the Two points are needed to be explained in this:

- 1) A function that is more ubiquitous is found to be less important in comparison to the other that is scarce.
- 2) This rule, however, is not valid in some cases like sub-functions of historical importance i.e. Fort & Temple. Although the forts have slightly larger occurrence than temple but its history is greater than temples. According, exception has been made in this by allowing higher weightage to forts than temples, Similarly in Health category, the frequency of primary health centres

& the medical practitioners are almost same but the establishment of primary health centres give diversified kind of services that the medical practitioners. Accordingly Primary health centres (PHC) has been given higher weightage as compared to medical practitioners.

It is through quality that distinctions among some functions have been made, and quantity has been ignored. It is evident from the Table: 1 that specializations of functions occur only at higher level of the hierarchy of functions while lower level of functions i.e., III orders are of common in nature and are ubiquitous in the study area.

3. Results and Discussions

The study defines the trends of various frequency shares of different orders of rural service centres; it can be observed that the higher order service centres are increasing in number, while lower order service centres are decreasing. The increasing trend continues upto IIIrd order rural service centres. After which the decreasing trend manifests. Rate of change is conspicuous in the III rd & IV order centres, while it is more or less slow increase in the upper group. Rate of decrease is also conspicuous in Vth order service centres. The result can be discussed in the following headings: See table (2)

Table 2: Hierarchical Orders Based on Composite Score

Hierarchical Orders	Composite score	No. of centres (1971)	% of total	NO. of centres (1981)	% of total	No. of centres (1991)	% of Total	No. of centres (2001)	% of Total	No. of centres (2011)	% of Total
I	101 and above	03	0.8	4	1.06	5	1.29	12	3.14	28	6.94
II	76-100	02	0.5	2	0.5	14	3.61	15	3.92	30	7.4
III	51-75	04	1.10	15	3.97	25	6.45	35	9.16	50	12.4
IV	26-50	23	6.33	48	12.73	75	19.37	79	20.68	96	23.8
V	1-25	311	85.67	307	81.4	268	69.25	241	64.65	199	49.3
VI	0	20	5.50	01	0.26	0	-	0	0	0	0
		363	100	377	100	387	100	382	100.00	403	100.00

Source: calculated by author.

First Order Rural Service Centres (Composite Score 101 And Above)

Ist order service centres are the Nissing, Kunjpura, Barsat, Jundla and Salwan. These centres attain a weighted composite score of 101 and above. The number of type of functions is between 15 and 20. Nissing, which was a sub-tehsil and community development block, headquarter is having maximum type of functions i.e., 20. In Ist order, more specialized functions like civil veterinary hospital; commercial bank is common. Regulated sub market yard facilities are available here thus trade occupation is dominant in these centres. Moreover, these centres are located on the state highway. Nissing and Kunjpura are acting as nodal centres also. These centres are having maximum number of KVIC industrial units .

Change in I order centres:

The changing behavior of functional types and the hierarchy of rural service centres, has demonstrated some interesting results. The increase of types of functions in Ist order service centres like Nissing, has progressively made it more urban

and its rural observations has declined. Likewise the higher order service centres like Assandh (rural), Indri (rural) and Taraori (rural) have been completely engulfed in urban areas and their rural components has altogether withered. In this regard the quotation of Clawson (1968, 187) is noteworthy, A great many of the small rural towns will wither greatly, and some will die and disappear. Some have already died and disappeared in farming areas. The process within and between such towns will be cumulative, in a downward spiral. As their business volume declines they will be less able to offer services that will attract farmers, who will gradually go to larger towns at farther distances.

Second Order Rural Service Centres (Composite Score 76-100)

There are 14 second order service centres in 1991. Among which Gheer in Karnal Block is on the top. In the II order rural service centres; number of type of functions varies from 15-20. The centres enjoy the facilities of good transport network; good medical facilities; good agriculture and

banking facilities. Gheer and Munak are acting as purchase centres also.

Change in II order Centres:-

The number of second order centres has increased tremendously i.e., from 2 in 1971 to 14 in 1991. The number of type of functions varied from 10-15. In present i.e., after 1991-second order service centres have 15 to 20 types of functions. It, therefore, confirms the rank-size rule behaviour wherein the middle rank service centres have speedier rate of change both in number and functional diversity.

Third Order Rural Service Centres (Composite Score 51-75):-

There are 25 settlements falling in this order. In the third order centres come Shekhopura, Manchuri, Bastali, Ramba, Kalsoura, Uchana etc. are enjoying top positions. Only 3 centres are having 10-15 types of functions of which second and third level of functions are dominant.

Change In III Order Centres

The number of III rd order centres has increased from 4 in 1971, 50 in 2011. The service area of the centres has thus decreased due to increase in number of centres. The functional diversity has also proportionally increased i.e., 10-15 in 1981 to 10-25 in 2001. The lower level functions have relatively larger share of increase as compared to higher level

Fourth Order Rural Service Centres (Composite Score 26-50):

There are 75 settlements, which record score between 26-50. The functions accompanied by the settlements are of basic as well as specialized i.e., primary school, medium middle school, link road, Bus stop are common functions; while in some settlements banking facility is also made available. The top-ranking settlements in this order are NaglaRoran, Darar, Mohay-ud-dinpur, Newal, Chaunra, Gudah, Gangatheri, SamanaBahu, Chirao, Sitamadh, Biana, Padhana, Sirgoha, BhainiKhurd etc.

Change In IV Order Centres

There were only 23 settlements coming in this order during 1971, but the number has increased to 96 in 2011. This shows the rising in importance of the rural service centres and their functional diversity.

Fifth Order Rural Service Centres (Composite Score 1-25)

There are 268 settlements coming in this order. Majority of settlements fall in this lower level of hierarchy. The settlements are having score between 1-25. The number of types of functions varies between 5-10. But nearly half the number of settlement have functional types below 5. There is only one settlement Makrampur having score of only 1 and 13 settlements having score of 2. These are the DabkauliKhurd; KalriJagir, Rasulpur, Samaspur, Shekhpura, Syed Chhapra, ZaptiChhapra, SherpurViran, Sohlum, Depot, DarulamanTatarpur, GianpuraMakranmpur. All the settlements are located in Khadar areas of the study region.

Change in V order

As against the recognized behavior of increase the number of service centres in higher order from 1971 to 1991, the fourth order service centres have shown a decline in number from 1971 to 2011. It has declined from 311 in 1971 to 199 in 2001. The gap of V order service centres are correspondingly matched with the increase if IV order service centres in 2011. This exhibits the fact that the lower order centres have moved to the next higher order status, thereby show decline in its own order and corresponding increase in the next higher order.

Sixth Order Rural Service Centres (Composite Score – Zero)

The lowest order of settlements occurs only for the period of 1971 and 1981. There are 20 settlements in 1971 named – Bhaoji, BirBhadson, BirRaiTikana, Dhumra, HansuMajra, KalriJagir, MatakMajri, Rampura, Syed Chhapra, Taprian, ZaptiChhapra, JalalaViran, MangloraQadim, Mirgah, NalwiKalan, Darulaman, Tatarpur, MalikpurGadian, BassiAkbarpur and KaulKhera. All the settlements of this order fall in the riverine tracts of Yamuna River i.e., Khaddar area except the three settlements BirDhandari, JalalaViran and KaulKhera that fall in Nardak area. The number of the settlements of this order reduced to only 1 in 1981 i.e., DarulamanTatarpur. There is completely absence of the VI order centres during recent decades. The reason may be due to increase in the infrastructure and related activities.

From the table 2, it is also clear that the percentage of higher order centres is continuously increasing since 1971. During 1971, the share of Ist order was only 0.8 percent of the total number of settlements, while it increased up to 1.29 percent in 1991, 3.14 percent and 6.94 percent in 2011. On the other hand the share of Vth order rural service centres was 85.67 percent to the total, it decreased to 81.4 percent during 1981, 69.25 percent during 1991 and its value of 64.65 percent in 2001 and 49.3 percent in 2011. Another noteworthy feature is to be noted is that there were 20 settlements in the period of 1971, having zero score contributing to 5.50 percent to the total number of settlements. This category has been placed under VI th order. The percentage of VI th order has declined to only 0.26 percent during 1981 and there is complete absence of VI th order during the recent decades.

Pursuing the trend of various frequency shares of different orders of rural service centres, it can be observed that the higher order service centres are increasing in number, while lower order service centres are decreasing. The increasing trend continues up to III rd order rural service centres. After which the decreasing trend manifests. Rate of change is conspicuous in the III rd order centres, while it is more or less slow increase in the upper group. Rate of decrease is also conspicuous in IVth and Vth order service centres. Another noticeable feature is that 1991 makes a watershed in the total span of 50 years from 1971-2011. Both the increasing and decreasing trend becomes conspicuous after 1981. This shows that the development factor has shown their remarkable influence after 1991.

The outgoing discussion reveals that the dynamism is experienced both in the number of service centres, their

composite score and their interchanging status. Following summary of this dynamic behavior would be led:

- 1) Rate of increase in the highest order is in number Kunjpura, Uchana, Shamgarh, Gheer, Ramba, Kachhwa, Jundla, Gondar, Salwan, Ballah, Kutail, Munak, Barsat come out to be higher order centres.
- 2) Rate of increase in the middle order service centres IInd and III rd order is comparatively rapid and significant.
- 3) Year 1991 is the watershed year, which marks significant infrastructural development causing more rapid growth in the number of service centres and their composite score.
- 4) Lowest order service centres have shown decline in number and its subsequent shift to the next higher order status.
- 5) Some service centres have increased their functional diversity to such an extent that their rural characteristics have been completely engulfed.



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