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LOCATIONAL CHARACTERISTICS OF RURAL MARKETS: A CASE STUDY OF DHARWAD DISTRICT

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ABSTRACT

The locational characteristics are one of the important dimensions of market centers and play a vital role for functioning the marketing activity of a region. The study of distribution of any phenomena on a geographical space is the prime concern of geographic investigation. The distribution characters of market centers are not only influenced by physio-cultural-historical but also other unique qualities are existed in the study region. The present analysis intends to make use of topographical maps of 1:50,000 of the study region in order to identify and classify the market centers and their location. The quantitative methods have been employed to study the spatial distribution of market centers and their relationship with other factors that influence the distribution. The spatial pattern of market centers is also quantitatively analyzed to understand the spatial perception. Geographers are always keen on the functioning of anything as the space is the main consideration and accordingly the present study is also reflect the same in the study region.

KEYWORDS :Locational Character-istics, Spatial Pattern, Spatial Perception

INTRODUCTION :

Geographers are always keen on to study the distribution of any phenomena on the earth surface. The distribution perspectives are amongst the most significant ones which provide foundation for geographic study of any physical or cultural elements. Distribution over space is the phenomenon which is spatial in nature Dixit, (2004). Researchers are always observing the phenomena in a different prospective. Cole and King (1968), opine that geography is the science that is mainly concerned with

distributional elements that occur on the surface of the earth and with the variations of distributions through time and space. The locational factors are not only influences the growth of market centers but also act and react on the various processes and development. Hence, the importance of location factors have been taken into consideration rather than simply depending upon generalized theoretical models. Thus, the locational factor is seen as one in which geographical influence stands out prominently (Saxena, 1975). The distributions of market centers are influenced by physio-cultural and many other unique qualities prevailing in the study region. Therefore, an attempt has been made to study the locational charecterstitics, distribution and pattern of rural markets in Dharwad district is on similar manner.

STUDY AREA

The study area is located at the fringe zone of Semi -Malnad and Maidan of the north-Western parts of the Karnataka State .It has extended between $15^0.2`$ to $15^0 42`$ northern latitude and $74^0 43`$ to$75^0 32`$ eastern longitude with five talukas namely; Dharwad, Hubli, Kalaghatgi, Kundgol and Navalgund .There are 367 Revenue villages and 27 Hamlets, six Urban Centers with five Municipalities, 127 Gram Panchayat. The study region has an area of 4263 square kilometers with population of 1847023. The density of population is 433 persons per square kilometers (2011census). The Navalgund taluk (1080 sq km) is biggest and Hubli taluka (631sqkm) is the smallest taluka in terms of area.
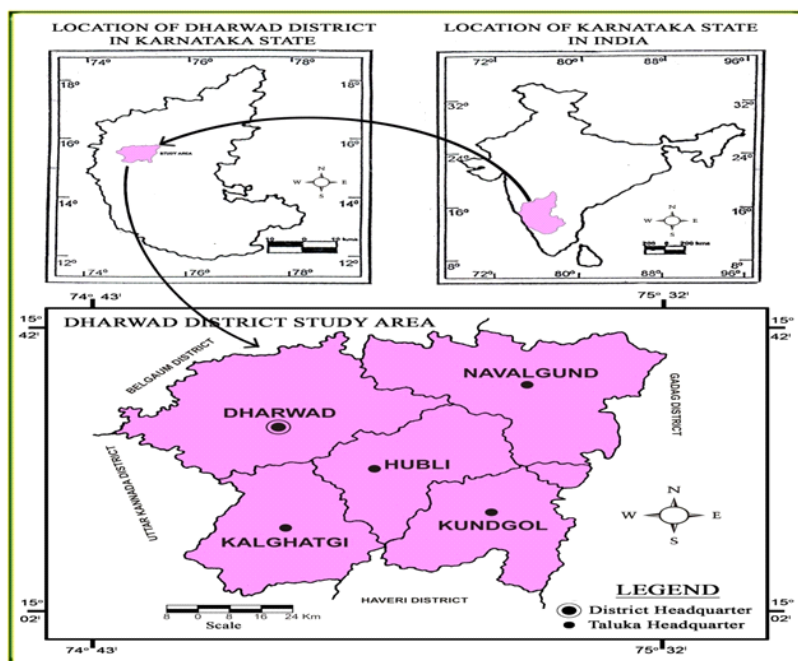

Fig. 1

OBJECTIVES
The present study has the following objectives;
- to study the locational characteristics of Rural Markets.
- to understand the spatial distribution of Rural Markets.

HYPOTHESIS

The confined study has the following hypothesis. It is hypothised that…….

➢ The location of Rural Markets is not only the outcome from the physical factors but also from the socio-economic and cultural factors.

➢ The functions of Rural Markets are the combined effect of area, population and villages served by the market.

DATABASE AND METHODOLOGY

The present study is concentrated on both primary and secondary source of information. The secondary data related to the market day and information related to the different villages located near the market centre have been extracted from the toposheet of 1:50,000 scale and the number of villages served, periodicity, number of market meetings etc have been collected from the field survey on different market days of Dharwad District. The quantitative techniques have employed to study the spatial distribution of market centers and their relationship with other factors that influence the distribution.

REVIEW OF LITRATURE

Space is being the central force for all geographical studies, many geographers studied different aspects of location of market centers .Hodder (1965) analyzed the periodic markets of Yorubaland and described the location of markets in relative and absolute terms. Hodder suggests that, contact zones of an ethnic nature and long-distance trade routes are the two possible geographical features within which the markets tend to got located. Good (1972), opined that the spatial distribution of markets may help to identify the process behind a particular location pattern. Webber and Symanski (1973) observed that the existence of periodic market is closely related to the needs of the society and not just the exchange of goods. Fagerland and Smith (1974), prepared preliminary map shows the locations and periodicities of some markets in Ghana. Many Indian geographers also attempted on spatial distribution of markets namely,Sinh a(19 51),Pa ttan aik(1953),S rivas tava(1977),Wa namali(1981)Khandwc(1982) Saxena(19 84),Dixit(1988),Hugar(2000)and Mulimani(2006)experienced the distribution patterns of rural weekly market in a different manner but they come to conclusion that shape and structure are the subject of variation in accordance to varying nature of spatial distribution of markets in different regions. The distribution pattern could leads to plan for further development of any geographical space in different regions.

LOCATIONAL CHARERTERSTICS

The distribution of market centers over space is attributed by number of factors. The factor of location is seen as one in which geographic influence stand out most prominently Saxena, (1975). Most of the market sites have religious, topographical and economic dimensions Mukherji (1980). Similar studies have been made by number of geographers Wood (1976), Srivastava (1979), Wanamali (1981) Hugar (1984, 2000), Mulimani (2006).etc.

MARKET CENTERS ON NODAL CENTERS

As per as the study region is concerned, it is well developed by transport network like, National Highway State Highway, Major District roads etc; along with the rail connectivity. As a result, it has been observed that nearly half of the market centers have been distributed on the nodal center in the study region and constitutes 46.0 percent table, 1. Hubli, Dharwad, Kundgol, Navalgund, Aannigeri, Tegur,

Warur, Nulvi, Nnarendra, Morab, Hebbali are the importent market centers with good hinterland.

MARKET CENTERS ON DRY NALA BEDS

The study region is highly influenced by the agricultural activities. The dry nala beds with steep interfluves have become the permanent source of underground water.Quite but natural that the agricultural activities are prodominent. It has been observed that, 38 percent of market center are located on dry nala beds such as Byala, Shirkol, Tirlapur, Hebbal ,Garag , Tadkod ,Javoor etc. in the study region.

LOCATION OF MARKET CENTERS
TABLE: 1

Sl No.	Name of Market type	No.of Market Centers	Percentage
1	Market Centers on Nodal centers	23	46.00
2	Market Centers on dry nala beds	19	38.00
3	Contact zone with contrasting economy	08	16.00
	Total	50	100.00

Source: Compiled from the Topographical Map of 1:50, 000, and Field Survey 2012.

MARKMET CENTERS CONTACT ZONE WITH COTRASTING ECONOMY

The study region falls under Semi-Malnad and Maidan region. Due to this, the district falls into two contracting economy. Consequently, both the settlers need to exchange their products by meeting at particular places; such places became the contact zones with contracting economy. The market centers of this category occupied 16 percent of the total market centers of the study region. The important market centers of these types are Kalghatgi, Hulkopp, Tabkad Honnali, Bommigatti, Dummawad, Nigadi etc
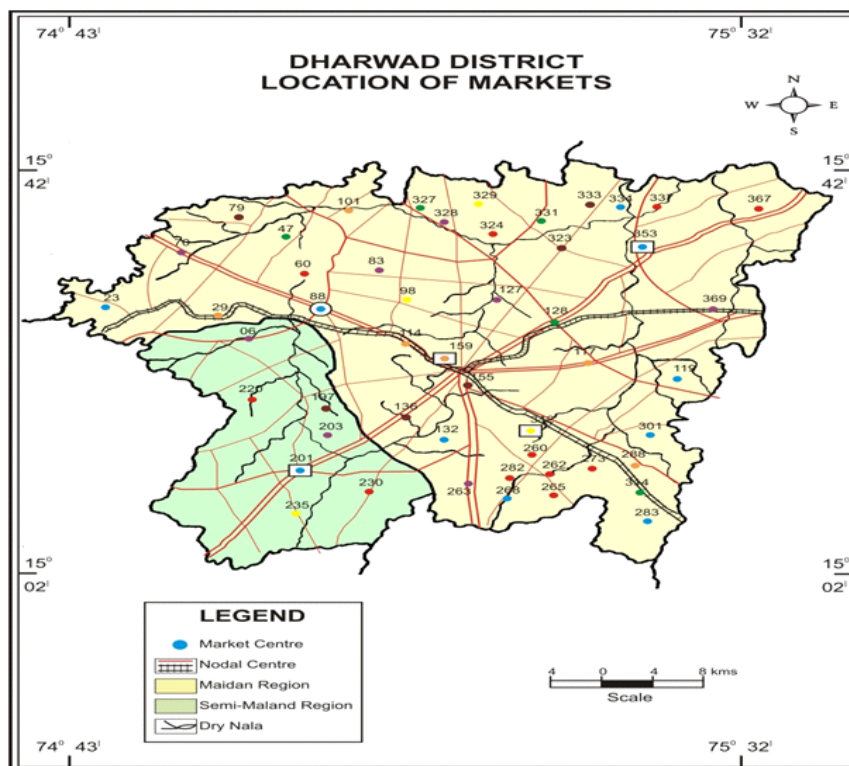
POPULATION SIZE OF SETTLEMENTS AND PERIODIC MARKETS

The emergence of market centers are closely related to the Population size of settlements and periodic market center to the population size of the settlements as well as the hierarchy of the settlements. However, it tends to received little attention on the study of relationship between the distribution of population and location of market centers. Hodder (1965) suggested that, the location of periodic markets in areas of relatively densely populated country in terms of their size and hierarchy of settlements. Hodder found out that the distribution of periodic markets showed little correspondence either with the distribution of population or with the size of rural and urban settlements. Many geographers have attempted to use this pioneering work to study some aspect of distribution of population to describe the distribution of periodic markets. Eighmy (1972), Mekim (1972), Dixit (1981), Hugar (1984, 2000), Mulimani (2006).Hence, the present study also intends to study the relationship of population size of settlements and market centers.

The table 2 reveals the fact that there are 33.06 percent of villages which lies in a category of less than 1000 population size, have no weekly rural markets, whenever population size increase rural weekly markets have come into existence. The population size 1001 to 2000, 31.45 percent of villages are falls in this category with only five periodic markets centers, this is due to the less population size. Similarly, in the next group of population size, that is .2001 to 3000 having 14.24 percent of villages with six markets. There are 9.94 percent of villages which lies in a category of 3001 to 4000 with the emergence of seven market centers. Similarly the population sizes of 4001 to 5000 have 3.76 percent of villages have six market centers. Population sizes of 5001 to 6000, which indicates 1.34 percent of villages with the emergence of five market centers. This is because these rural settlements have more number of people, therefore, the maximum demand from the people are responsible for the emergence of market centers.

POPULATION SIZE OF SETTLEMENTS AND PERIODIC MARKETS
TABLE: 2

Sl. No.	Range of Population	No. of Settlements	Percentage	No. of Market Centers	Percentage
1	0-1000	123	33.06	-	-
2	1001-2000	117	31.45	05	10.0
3	2001-3000	53	14.24	06	12.0
4	3001-4000	37	09.94	07	14.0
5	4001-5000	14	03.76	06	12.0
6	5001-6000	05	01.34	05	10.0
7	6001and above	23	6.18	21	42.0
	Total	372	100.00	50	100.00

Source: Compiled from the field survey 2012.

The category of above 6001, population size show that there are 21 market centers with 6.18 percent of village which provides the maximum threshold of population of the emergence of periodic market. It is observed that the higher the number of population size settlement required the higher in the number of market centers.

SPATIAL DISTRIBUTION

The spatial distribution of market centers on a geographical space is an outcome of the various

factors determined the distribution. The influence of population, area and number of villages is very prominent in the distribution of market centers. Market centers seem to posses certain relationship with these factors. Dixit (1981, 1988), Hugar (1984, 2000), Mulimani (2006) attempted to measure the relationship of market centers distribution with those of the population, area and number of villages at each taluka level by using the statistical and quantitative methods. The present study also makes an attempt to measure the relationship of market centers with those of population area and number of villages by calculation talukawise percentage share of each market in the district.

TALUKAWISE DISTRIBUTION

In the study region, there are fifty market centers are functioning, over an area of 4263 square kilometers. There are 372 inhabited settlements including towns, among them only 50 settlements have emerged as a market centers. These market centers have been distributed among the five talukas. It is observed that the markets are unevenly distributed in the study region. Navalgund taluka has thirteen market centers which occupied first rank in the district and Kalghatgi taluka which represent the least market centers that is six. The table: 3, reveals the fact that, Navalgund, Kundgol and Dharwad indicate the higher number of market centers than the district average of ten. The locational characters of markets centers and socio-economic developments are responsible for the high degree of spatial interaction in marketing activities of these talukas. While the talukas like, Hubli and Kalghatgi shows the least number of market centers then the district average.

MARKET CENTERS DISTRIBUTION RELATIONSHIP
TABLE: 3

Sl.NO.	Name of the Talukas	No.of Market Centers	Area in km^2	No. of Villages	Total Population	Area	Village	Population	CI.
1	Dharwad	11	1121 (26.29)	110 (29.56)	580165 (31.41)	2.39	2.68	2.85	7.92
2	Hubli	09	733 (17.19)	58 (15.59)	756423 (40.95)	1.19	1.73	4.55	7.11
3	Kalghatgi	06	682 (15.99)	88 (23.65)	154659 (8.37)	2.66	3.94	1.39	7.99
4	Kundgol	12	648 (15.20)	58 (15.59)	165568 (98.96)	1.26	1.29	0.74	3.29
5	Navalgund	12	1080 (25.33)	58 (15.59)	190208 (10.01)	2.11	1.29	0.83	4.23
	Total	50	4263	372	1847023	9.61	10.93	10.36	30.54
	Average	10.0	-	-	-	1.92	2.18	2.07	6.10

Source: Compiled from the field survey 2012.

MARKET CENTERS AND AREA

Every market tends to serve a definite area around it. As per as the study area is concerned on an average, each market center serves 1.92 percent of area of the district. The talukas such as Dharwad, Navalgund and Kalghatgi market centers serve more than the district average. Hubli and Kungol talukas serve less percent of area of the district.

MARKET CENTERS AND NUMBER OF VILLAGES

The table 3 shows that, the market centers serve different villages in different manner, each market serves on an average 2.18 percent of the villages of the district. The talukas having an average more than the district are Dharwad and Kalghatgi. These talukas are dominated by urban centers as

well as developed transport network which serve the hinterlands. Due to this, these are served the more number of villages. While talukas like, Hubli, Navalgund and Kundgol have better transport facilities prospers in agricultural activities. As a result, the numbers of market centers are more in these talukas and serve a limited number of villages.

MARKET CENTERS AND POPULATION

Every market centers serves a definite proportion of population in the area around it. In each taluka, it is noticed that on an average each market centers serves 2.07 percent of the district population. Talukas like, Hubli and Dharwad having half of the district population, due to urban centers i.e. Hubli and Dharwad cities. As a result, they indicate a higher percentage of population than the district average. Three talukas of the district such as Kalghatgi, Kundgol and Navalgund are serving least percentage of population than the district average.

COMPOSITE INDEX

In order to understand the combined effect of area, population, and number of villages served by each market is with the help of Composite Index and also understand the distribution relationship. However, Composite Index values were calculated and deviation from the average were taken into consideration and prepared the Composite Index map.

It is noticed that, talukas like Dharwad, Hubli and Kalghatgi serve more number of villages, area and population than the district. Hence, Kundgol and Navalgund talukas having more number of market centers. These talukas served less number of populations, area and number of villages than the district average.

SPATIAL PATTERN:

The spatial pattern is one of the important aspects in geography. Researchers always have been observing the phenomena in a different prospective. This is widely applied by geographers in different regions in the world in particular and planner and policy makers in general. The existence of market centers in a particular region is a result of geo-economic factors. On the other hand, their nature of distribution is a result of how these factors act and react in shaping the pattern of distribution. (Saxena 2004).The spatial pattern of periodic markets is outcome of landscape, which relates to the nature of location points over space. The pattern in an aerial unit can be considered as an index of the marketing activity. In the study region, the pattern of distribution is measured by employing the nearest neighbor method and analyzed accordingly.

The concept of Nearest Neighbour Method was firstly developed by plant ecologists, Clark and Evan (1954) to measure the pattern of incidence of different species of plants. Since, then it is popular in geography discipline. Deccy (1962, 1964) modified this method slightly to make it more effective and suitable. King (1961, 1968) used this technique for selected areas of the United States to study the character of settlement pattern. This method is employed by the geographers all over the world including Indians. Thakur (1972), Reddy (1973), Singh (1973), Singh and Singh (1980), Dixit (1983), Hugar (1994, 2000) applied the same technique for analyzing the distribution pattern of Gulbarga district and Mulimani (2006) employed this method for spatial distribution of market centers of Raichur district. The nearest neighbor method involves measurement of distances (geodesic or the shortest straight line physical distance) from an individual centre to its nearest neighbour, irrespective of directions. To determine the nearest neighbor normally two distances are taken into consideration, firstly, one the mean distances obtained by drawing straight line connecting two nearest points

irrespective of directions, which is called as expected distance.

As per the study area is concerned. It is observed that all the five talukas of the district having a tendency of approaching uniformity pattern. The district as a whole, the pattern of distribution of market centers is also approaching towards uniformity with Rn value of 1.74. It is noticed that the physical as well as socio-economic factors of the study region are responsible for the distribution pattern of market centers.

NEAREST NEIGHBOUR STATISTICS
Table: 4

Sl No.	Name of the Talukas	No. of Market	Area in km	Do.km	De R	Rn
1	Dharwad	11	1120	9.18	5.04	1.82
2	Hubli	09	733	8.37	4.78	1.75
3	Kalghatgi	06	682	9.66	5.33	1.81
4	Kundgol	12	648	5.58	3.67	1.52
5	Navalgund	12	1080	8.00	4.55	1.75

Source: Compiled from the settlement map of Dharwad District, 2012.

DHARWAD DISTRICT
SPATIAL PATTERN OF MARKET CENTRES
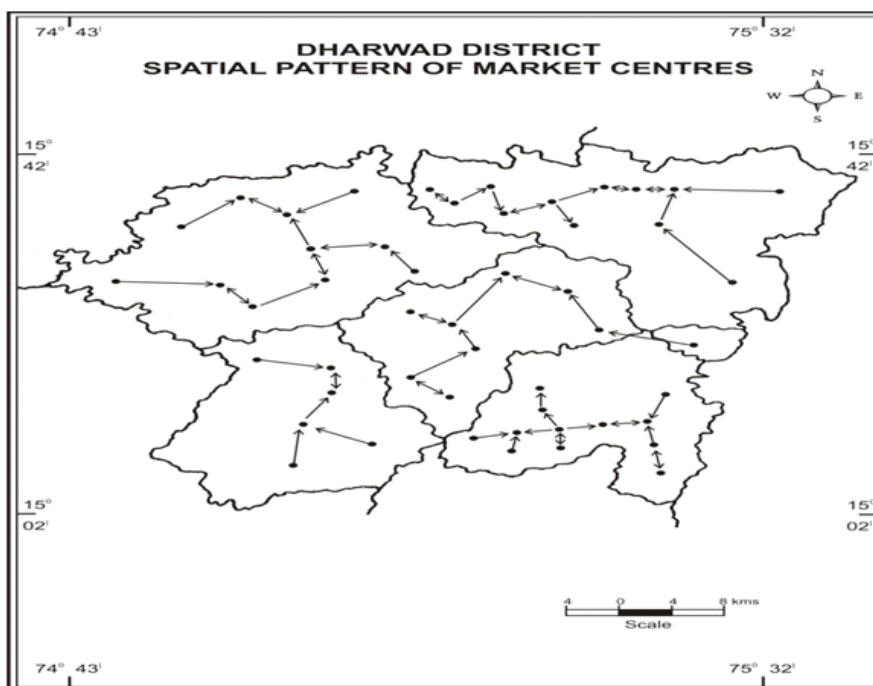
MARKET PERIODICITY

Periodicity is an essential aspect of rural weekly markets. It enables the region to have a greater number of markets to achieve the threshold of demand than would be possible otherwise and should result in an efficient allocation of marketing activities and opportunities within the area encompassed by a periodic cycle. Market periodicity is that phenomenon whereby in a set of market, any particular market is held on certain days in advance (Tinkler, 1973). Such periodicity varies from region to region, influenced by regional, cultural, economic and religions diversity and is beneficial to the traders as well to the consumers.

The variation of periodicity is a common feature of the periodic markets and in a region one can find markets being held once, twice, thrice, etc. In the study area bi-weekly markets are found in

Dharwad taluka table 5. There are fifty markets are functioning, among them fourty four markets are the weekly markets. Two markets are bi-weekly and six markets are daily or urban market. Dharwad taluka having two daily markets and remaining talukas are having each daily market.

MARKET PERIODICITY
Table: 5

Sl No.	Name of the Talukas	Weekly Markets	Bi-weekly Markets	Daily Markets	Total No. of Market Meetings
1	Dharwad	11	02	12	25
2	Hubli	09	-	06	15
3	Kalghatgi	06	-	06	12
4	Kundgol	12	-	06	18
5	Navalgund	12	-	06	18
		50	02	36	88

Source: Compiled from the field survey 2012.

Out of fourty four periodic markets, twelve markets are functioning in the Navalgund and Kundagol talukas are the highest in the district. It is observed that the Navalgund taluka is irrigated by Malaparbha River and highly influenced by the agricultural activities. As a result, large quantities of agricultural products are produced in surplus which needs to have marketed. Population is also high in this taluka. Besides the well developed transport facilities is also responsible for the development of market centers. Dharwad taluka is second highest in the number and growth of market centers i.e. ten fallowed by Hubli which has eight periodic markets and Kalghatgi taluka has five market centers in the district.

FREQUENCY OF MARKET DAY DURING MARKET WEEK

Selection of the market day for a particular centre depends upon several factors like, Proximity to other markets, demand of goods, religious and or social consideration etc. Generally, for Muslim community prefer Friday and Thursday because they congregate for Friday prayer and for function on the graves of pious persons, which are held, weekly (Wanmali, Khan 1992), Monday is considered to be an auspicious day for Hindus particularly the farming communities. Thus, leisurely farming community devotes their time on Monday to marketing (Hugar, 2000). In similar manner, Sunday markets are most common in Christian dominated societies.

DAY-WISE DISTRIBUTION OF MARKET CENTERS IN DHARWAD DISTRICT:
TABLE: 6

Sl No.	Name of the Talukas	No.of Market Centers	Week Days							No.of Market Meetings
			S	M	T	W	T	F	S	
1	Dharwad	11	3	4	2	3	4	5	4	25
2	Hubli	09	3	1	3	1	2	2	3	15
3	Kalghatgi	06	2	3	1	2	1	2	1	12
4	Kundgol	12	1	6	4	1	2	2	2	18
5	Navalgund	12	3	4	2	2	3	3	1	18
	Total	50	12	18	12	09	13	14	11	88

Source: Compiled from the field survey 2012.

In the entire study region, eighty eight market meetings were held every week. The frequency of market meetings over the week has been shown in table: 6. Table reveals the fact that Monday is the peak day in a week because maximum market meetings were held i.e., eighteen markets. The farming communities leisurely spend their time involving in the marketing. Friday occupied rank second in market meetings in the study region i.e., fourteen fallowed by Thursday thirteen market meetings. Sunday and Tuesday having same market meetings i.e. twelve. Saturday is having ten market meetings and Wednesday is least market meetings day of the study region. It is observed that the mutual agreement among the local traders , consumers and market authorities to avoid the competition among the market centers or the professional market traders, who favoured different markets days at different centers for their regular visit.

CONCLUSION

It is concluded that, the market centers in the study region emerged not only on the basis of locational character but also on the socio-economic need of the people increased by transport and administration conveniences. Nearly half of the market centers of the district are located on the nodal center. Further, the distribution of market centers tends to coincide with distribution of population. Whenever the population size increases the rural weekly markets have come into exist because, the maximum demands from the people are responsible for the emergence of periodic markets. The distribution of market centers in each taluka has a definite relationship with area, number of villages and population size. It is observed that all the five talukas of the district having a tendency of approaching uniformity pattern. The district as a whole, the pattern of distribution of market centers is also approaching towards uniformity with Rn value of 1.74. It is noticed that the physical as well as socio-economical factors of the study region are responsible for the distribution pattern of market centers.

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