

Research Paper

Analyzing Origin and Spatio-Temporal Distribution of Rural Markets: A Geographical Study from North India

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ABSTRACT

This paper analyzes the genesis and spatiotemporal distribution of selected rural markets. For the study, Aligarh district in the north Indian state of Uttar Pradesh has been selected as a study area. There are 286 rural markets in the district which are unevenly distributed over the space. Study is based on secondary sources and data has been collected from the Census of India, District Census Handbook, and Gazetteer of Aligarh. The analysis made clear that the bulk of the area's rural markets grew due to the construction of road networks by the British government and landlords. The geographic distribution of market centers in terms of time and space is a component of rural markets. The combined effect of physio-cultural characteristics of the specific place determines market dynamics and their periodicities.

HIGHLIGHTS

- ❶ Socio-economic factors played an important role in the emergence of rural markets.
- ❷ There are 286 rural markets which are distributed over an area of 3,591.82 sq km.
- ❸ The maximum numbers of rural markets are situated in Tappal block (67), while the minimum numbers are recorded in Akrabad (7).
- ❹ Daily market centres also observe periodic marketing during specified day(s) of the week.

Keywords: Rural markets, origin, spatiotemporal distribution, growth, India

The history of the origin and evolution of markets is closely associated with human civilization. The evolution of market centers is the result of a long play of factors like geo-economic, sociocultural, and historical ones. Simple, unorganized and rudimentary trade or exchange of commodities was in practice in primitive culture when man was nomadic and used to fulfill his needs by hunting or forest products. There was no question of any reciprocal exchange or so (Saxena, 1984). The exchange system is merely one aspect of the regularities of social relationships (Belshaw, 1965).

The history of human civilization reveals that man relied very heavily upon nature for all his wants. With the advent of human civilization, the man began to be free from the crutches of nature. To begin with, human needs were minimal, and man was contented with whatever he had. As days advanced, human wants to be increased, which paved the way for exchanging goods and services

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between different societies (Mulimani, 2006). In the beginning, the mutual exchange of goods and services was limited to the periphery of human establishments. However, with the development of transportation facilities, various settlements came in contact with each other, and the scope for the exchange of goods and services was further extended. It opened avenues for further specialization too. The political stability also encouraged such activities. These circumstances led to further occupational specialization, which later on gave birth to periodic rural markets (Dixit, 1984).

Further, two main theories, namely, the indigenous and the exogenous concept, emerge from the research. The indigenous concept postulates that periodic markets developed due to internal demand for the exchange of goods and services among local communities. The exogenous concept credits external stimuli, such as the incursion into a local area of long-distance traders, for the start of periodic markets (Khan and Ali, 1998). Thus, the valid succession of the development of the market centers are: (a) the development of trade routes, (b) the establishment of markets on these routes, (c) with the

development of road network, local markets develop around the old parent market (Meillassoux, 1962).

Tasks and Study Area

The present study has been undertaken to analyze the genesis and spatiotemporal distribution of selected rural markets in the study area. There are 286 rural markets in the district which are unevenly distributed over the space. Study is based on secondary sources, and data has been collected from Census of India, District Census Handbook, and Gazetteer of Aligarh. Due to the non-availability of the 2021 census data, the study is based on 2011 data.

The Aligarh district in the North Indian state of Uttar Pradesh has been selected as the study area (Fig. 1). It is located in the north-western part of Ganga Yamuna doab and forms a part of the Agra division and lies between 27° 27' N to 28° 11' N latitudes and 77° 27' E to 78° 38' E longitudes. The district's total area is 3,650 sq km, which supports a population of 3,673,849. It has a total of 1,170 inhabited villages and 24 town areas. Administratively, the district has been divided into five tehsils (subdivisions) and twelve development blocks.

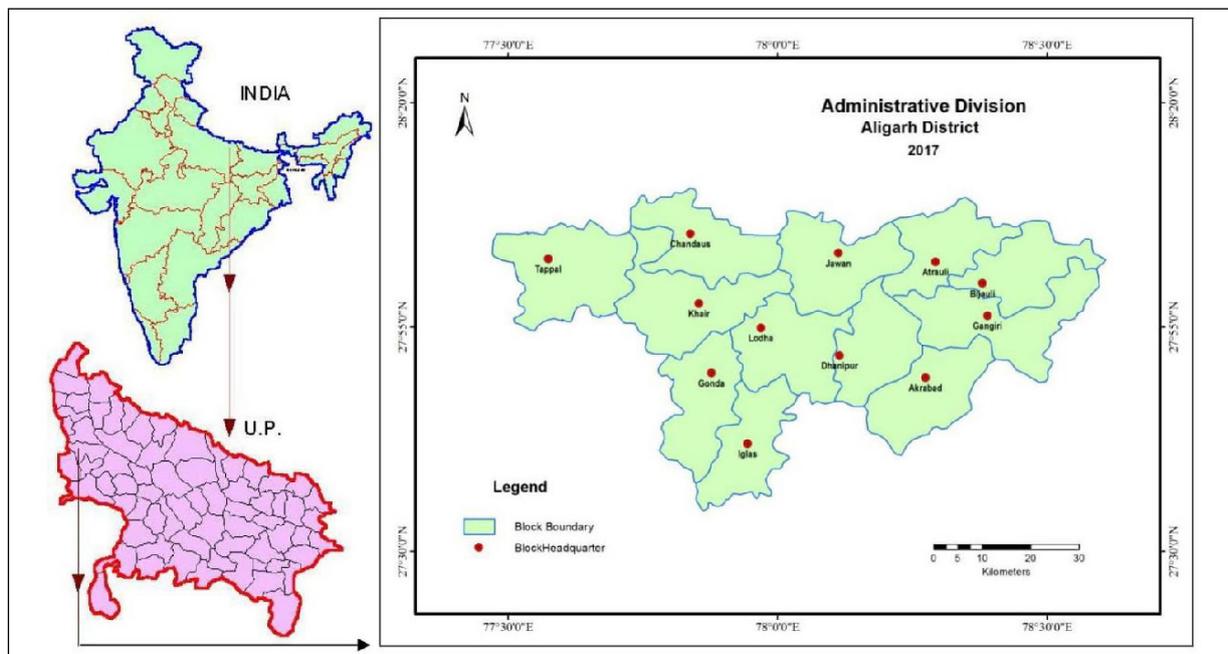


Fig. 1: Map showing Aligarh district

DISCUSSION

Genesis and Development of Market Centres in Aligarh District

In the study area, the socio-economic factors played an essential role in the emergence of rural markets. The majority of the rural markets held today emerged due to natural needs, partly established by the powerful *Nawabs* and *Zamindars* of the district. The majority of the rural markets in the district were developed due to the development of road networks by the British government and *Zamindars*. Today in the Aligarh district, very few markets centers are of more than local importance, the majority merely serving as feeders to the central marts and supplying the modest needs of the agricultural populations. Markets mainly follow the trade routes and as the last change, they alter their importance.

The district's trade is extensive and is constantly on the increase. It flourished despite the many drawbacks in the shape of tolls and dues levied by every local chieftain. The British abolished these dues, and in their place, a regular customs post was established at Aligarh. This was withdrawn in 1810 when inland customs were abolished.

Trade in the Aligarh district grew rapidly with the construction of canals and metalled roads, the latter contributing much to the growth of Hathras. Soon afterward, the even more potent influence of the railways made itself apparent. At present the railways monopolize most of the traffic. Still, a considerable volume of trade is carried along the provincial roads, though the canals have fallen out of use.

Koil is a place of considerable and increasing trade, with its ginning, pressing mills, and numerous lock factories. Besides these, Atrauli, Harduaganj, Khair, Sikandra Rao, and Purdilnagar are local business centers of some note, mainly the two first. There are many other market towns, such as Sasni, Akrabad, Bijaigarh and Dadon, while small country bazaars for collecting and distributing agricultural and other produce are very numerous.

The Aligarh horse show and district fair were wholly

different, held every February at Banna Devi near the city. This institution is of comparatively recent date but has become well known to traders and dealers from distant parts, visitors attending the fair from Bombay and even Peshawar. The main feature is the horse show, but besides this, a flower show, an exhibition of arts and manufactures, horse races, school sports, a dog show, and various other subsidiary events take place, one of the chief attractions being the wrestling competitions, which are largely patronised by *Pahlwans* from Muttra and elsewhere. The fair is made the occasion for a good deal of trade, and numbers of shops and booths are erected for the use of dealers.

With an extensive system of railways, an unusual length of metalled roads, a fairly complete network of unmetalled roads, and navigable canals, the district is admirably provided with means of communication. All the roads in the district observed that the headquarters are connected with all the *tahsils* by good metalled roads and that similar roads give access to almost all the railway stations (Nevill, 1909). In this way, the development of roads and railways and the emergence of markets took place simultaneously.

Distribution of Rural Markets

The distribution of markets in an area can be considered an index of marketing activity. Since physical space is the prime concern of geographers, the various aspects of location and distribution of market centers have been studied by several geographers (Hodder, 1965; Tamaskar, 1966; Mukherjee, 1968; Saxena, 1972; Shrivastava, 1976; Dixit, 1981; Hugar, 1984, 2000, and Khan, 2016, 2017). The locational factors not only influence the growth of market centres centers but also act and react to the various processes and stages of development. Hence, one needs to consider the influence of locational factors rather than depending on generalized models (Hugar, 2000).

The distributional aspect of rural markets involves the locational pattern of market centers in space and time. As they are central places or growth poles, it is essential to study the market distribution and their relation with different aspects of the landscape like served area, population structure, inhabited villages, roads, etc. The

integration of the location of rural markets, especially periodic markets in time and space, also deserve to be mentioned (Khan *et al.* 2018). The distributional analysis of rural markets can be classified into two types: (i) Spatial distribution (ii) Temporal distribution.

Spatial Distribution of Rural Markets

In the study area, there are 286 rural markets that are distributed over an area of 3,591.82 sq km. These markets are unevenly distributed over space. Table 1 shows the block-wise distribution of rural markets and their percent share of total rural markets, which varies among different blocks of the district. The maximum numbers of rural markets are in Tappal block (67), while the minimum numbers are in Akrabad (7). Other blocks have a different number of rural markets ranging between 39 and 8 (Fig. 2). So, the percent share of rural markets shows regional variation which varies between 23.42 percent in Tappal and 2.44 percent in Akrabad.

Table 1: Block wise Distribution of Rural Markets in Aligarh District, 2011

Sl. No.	Block	No. of Rural Markets	Percent Share to Total Rural Markets
1	Tappal	67	23.42
2	Chandaus	19	6.64
3	Khair	39	13.63
4	Jawan	15	5.24
5	Lodha	21	7.34
6	Dhanipur	08	2.79
7	Gonda	26	9.09
8	Iglas	22	7.69
9	Atrauli	20	6.99
10	Bijauli	20	6.99
11	Gangiri	22	7.69
12	Akrabad	07	2.44
Total		286	100.00

Source: Computed from Census of India, 2011, District Census Handbook, Part XII A & B, Series 10.

Average Rural Population Served per Rural Market

The block level study reflects a great variation in the average rural population served by each rural market among the twelve development blocks (Fig. 3). The average rural population served per rural market in

the district is found to be 8,589.85. Nine out of twelve blocks have an average rural population served per rural market greater than the district average. They are Dhanipur (25,055.63), Akrabad (24,436.57), Jawan (13,659.40), Lodha (12,598.43), Gangiri (12,271.59), Atrauli (10,539.35), Chandaus (9,827.68), Bijauli (9,284.00) and Iglas (8,755.82). Other blocks with less than the district average are Gonda (7,166.96), Khair (4,855.13), and Tappal (2,899.28) (Table 2).

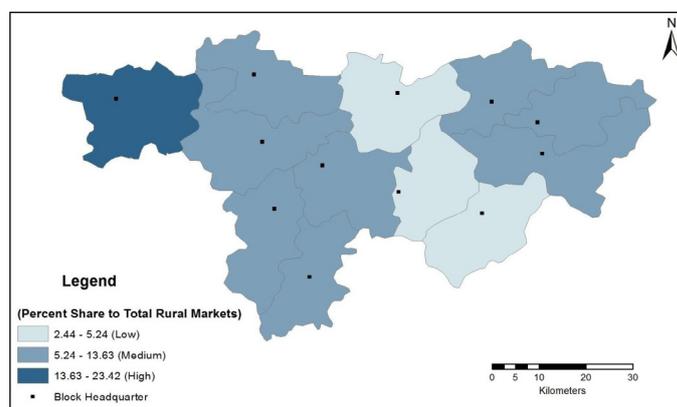


Fig. 2: Distribution of Rural Markets in Aligarh District

Table 2: Average Rural Population Served per Rural Market at Block Level in Aligarh District, 2011

Sl. No.	Block	Rural Population	No. of Rural Markets	Average Rural Population Served per Rural Market
1	Tappal	1,94,252	67	2,899.28
2	Chandaus	1,86,726	19	9,827.68
3	Khair	1,89,350	39	4,855.13
4	Jawan	2,04,891	15	13,659.40
5	Lodha	2,64,567	21	12,598.43
6	Dhanipur	2,00,445	08	25,055.63
7	Gonda	1,86,341	26	7,166.96
8	Iglas	1,92,628	22	8,755.82
9	Atrauli	2,10,787	20	10,539.35
10	Bijauli	1,85,680	20	9,284.00
11	Gangiri	2,69,975	22	12,271.59
12	Akrabad	1,71,056	07	24,436.57
Total		24,56,698	286	8,589.85

Source: Census of India, 2011, District Census Handbook, Part XII A & B, Series 10.

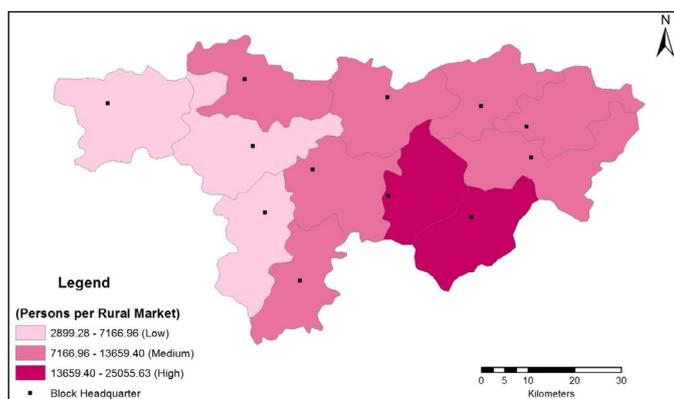


Fig. 3: Average Rural Population Served per Rural Market in Aligarh District

Temporal Distribution of Rural Markets

The distribution of markets on the temporal basis in geographic space is normally termed as ‘temporal distribution’. The markets are held on different days of the week depending upon the socio-economic needs of the society (Mulimani, 2002). Many foreign and Indian geographers have studied the nature and characteristics of periodic markets by selecting different aspects. Scott (1972), Berry (1967), Bromley (1971), and Jackson (1971) have also discussed different factors related to temporal considerations. Hodder (1965, 1969) has made some pioneering studies on Yorubaland’s periodic marketing and periodicities.

Periodicity of Rural Markets

Periodicism is a conspicuous and universal characteristic of rural markets in traditional agrarian societies (Good, 1972). The distribution of market periodicity and market networks presents a complex array of the functional district in a kaleidoscopic pattern of place-time inter-relationship. Periodic markets are not only spatial phenomenon but also have a temporal aspect. Thus, the distributional pattern of periodic markets is a space and time phenomenon considered ‘spatio-temporal synchronization’. Market periodicity is phenomenon whereby in a set of markets, any particular market is held only on certain days, fixed in advance. The markets are held on different days of the week to make it convenient for traders and consumers. Many of the few market days during the market week in an agrarian

society this is not just based on random. Still, there may be specific reasons related to religious, economic, and social causes. Finally, local people desire to hold the market on their convenient days to help traders and consumers (Bidikar, 2002). Periodicity is an essential aspect of rural market centers. The system of periodicity provides an adjustment to the agricultural system. Only one marketing day in a seven-day week means six rest days or days of other agricultural activities, and rural people get sufficient time for relaxation as well as for preparation for the next visit to the market (Mulimani, 2006).

Based on periodicity, the rural markets in the Aligarh district have been classified into two types, viz., (a) regular or daily or permanent markets and (b) periodic or temporary markets (Table 3 and Fig. 4). The *regular or daily markets* are those in which the marketing or buying and selling activity is a regular or daily feature and are located permanently, whereas *periodic markets* are a temporary feature, held either on a specific day or days of the week, fortnight or a month or once, twice or thrice in a year. In the study area, most of the periodic markets are held at those places or locations with a permanent or daily market. Therefore, the daily market centers also observe periodic marketing during the specified day(s) of the week.

Table 3: Block wise Distribution of Markets based on periodicity, 2011

Sl. No.	Block	Total Rural Markets	Daily	Periodic
1	Tappal	67	32	35
2	Chandaus	19	08	11
3	Khair	39	16	23
4	Jawan	15	04	11
5	Lodha	21	09	12
6	Dhanipur	08	02	06
7	Gonda	26	09	17
8	Iglas	22	10	12
9	Atrauli	20	07	13
10	Bijauli	20	04	16
11	Gangiri	22	02	20
12	Akrabad	07	03	04
Total		286 (100.00)	106 (37.06)	180 (62.94)

Source: Census of India, 2011, District Census Handbook, Part XII A & B, Series 10.

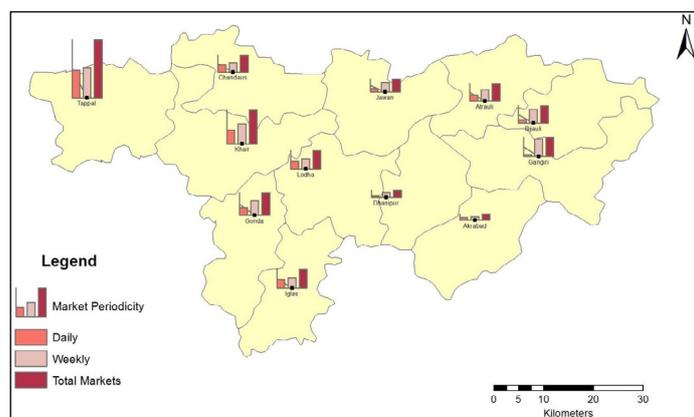


Fig. 4: Periodicity of Rural Markets in Aligarh District

Temporal Change in Rural Markets (1991 to 2011)

The history of any activity explains its origin and gradual development. This general rule also applies to market centres centers (Verma, 1986). The markets and their marketing activities are in a continuous state of change, and their distinctiveness and character are attributed not only to economic factors but also historical, social, and cultural factors (Saxena, 2002). The temporal development of rural markets implies the change in the area of market morphology and several the markets in the study area. The dynamics of the market and their periodicities are the combined effect of the physio-cultural attributes of the particular area (Hoda and Khan, 2002). Therefore, an attempt has been made here to the temporal development of market centers between two decades, i.e., from 1991 to 2011.

Table 4: Trend of Growth of Rural Markets in Aligarh District (1991- 2011)

Sl. No.	Block	No. of Rural Markets (1991)	No. of Rural Markets (2011)	Av. Annual Growth (%)
1	Tappal	09	67	32.2
2	Chandaus	05	19	14.0
3	Khair	26	39	2.5
4	Jawan	07	15	5.7
5	Lodha	04	21	21.3
6	Dhanipur	02	08	15.0
7	Gonda	07	26	13.6

8	Iglas	04	22	22.5
9	Atrauli	13	20	2.7
10	Bijauli	04	20	20.0
11	Gangiri	15	22	2.3
12	Akrabad	09	07	1.1
Total		105	286	8.6

Source: Census of India, 2011, District Census Handbook, Part XII A & B, Series 10.

Table 4 revealed that a positive trend of growth had been recorded in the study area concerning the number and periodicity of the rural markets. Temporal growth brings the fact that the number of markets increased from 1991-2011 from 105 to 286 at the rate of 8.6 percent annually, which varies block-wise with a maximum 32.2 percent in Tappal to a minimum 1.1 percent in Akkrabad. The average annual growth rate of rural markets in other blocks is Iglas (22.5 percent), Lodha (21.3 percent), Bijauli (20 percent), Dhanipur (15 percent), Chandaus (14 percent), Gonda (13.6 percent), Jawan (5.7 percent), Atrauli (2.7 percent), Khair (2.5 percent) and Gangiri (2.3 percent). The study shows a positive trend of growth in the rural markets in the study area (Fig. 5).

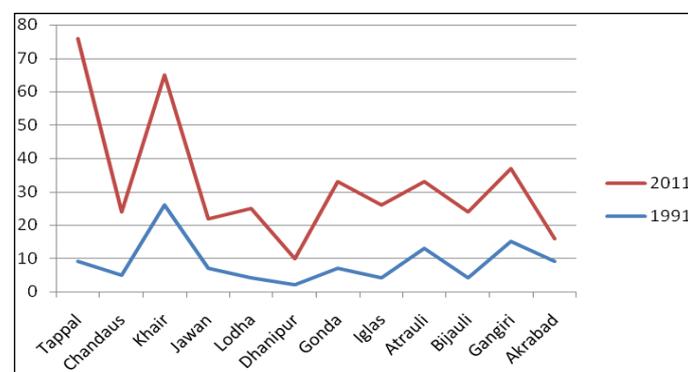


Fig. 5: Trend of Growth of Rural Markets in Aligarh District (1991- 2011)

The number of market centers has considerably increased owing to the commercialization of agriculture and surplus production, demand, and supply as well as urban influence in the study area (Khan *et al.* 2018). The growth in market centers is the result of combined forces of increasing requirements and demands of rural people, changing aspirations, bringing about awareness, and the endeavor to boost the rural economy.

CONCLUSION

Market centers have evolved due to a complex interplay of geo-economic, sociocultural, and historical elements. Socioeconomic considerations significantly influenced the development of rural markets. The vast majority of rural markets today were partly founded by the district's powerful Nawabs and Zamindars and partly developed due to natural necessities. When canals and metalized roads were built, trade in the Aligarh district expanded quickly, and railroad influence soon followed. The Tappal block has the highest concentration of rural markets, while Akrahad has the lowest. Rural markets in the Aligarh district have been divided into two categories based on periodicity: daily or permanent markets and periodic or temporary markets. Most of the periodic markets in the study area take place in sites where a daily market also exists. Due to the commercialization of agriculture, excess production, demand, and supply, and urban influence in the study area, the number of market centers has significantly expanded. It is crucial to evaluate the spatiotemporal synchronization of rural markets and their expansion for the overall development of the studied region. Plans and strategies should therefore be developed to promote the rural markets and their infrastructure.

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