Golden Research Thoughts

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PERIODICITY AND SPATIO-TEMPORAL SPACING OF RURAL MARKETS OF PURBA MEDINIPUR DISTRICT, WEST BENGAL: AN APPRAISAL OF THE MARKET CENTRE DEVELOPMENT

Abstract:-

Periodic markets (Hats), that significantly control the livelihood of the sellers and the consumers in the rural sector of West Bengal, are the temporary markets held on particular day or days of the week at some fixed locations. The periodic markets fulfill the demand of consumers in the society where permanent markets are absent or the daily marketing system is not possible. An assessment has been made here to examine the pattern of periodicity and spatio-temporal character as well as the local importance of rural markets of parts of Purba Medinipur district of West Bengal based on both primary and secondary data generated and collected in the field. The evaluation has been done in the light of the standard concept of market centre development. The study area encompasses twenty five CD blocks in the said district where the periodic markets maintain a meaningful system of economic process. The detail study upon the periodic markets of this district reveals a gradual process of transformation from periodic market to permanent daily ones with the growing urbanization over time.

Keywords:

Periodic Market, permanent market, rural sector, spatio-temporal charcter, transformation.

INTRODUCTION

Periodic markets form a characteristic feature of market system in the rural areas of the developing countries in the present day. These types of markets in rural West Bengal, which are commonly known as hats, play an important role in the process of economic development in the rural areas of the state.

Periodic markets or hats are held in selected days of the week at some fixed locations to provide trading services to the rural people. According to Bromley (1987) periodic market is 'an authorized gathering of buyers and sellers of commodities meeting at an appointed place at intervals'. Numerous geographical studies have been made on the periodic markets in developing countries over the world. Berry (1967) proposed three sequence of periodic market development; the first sequence involves a socially administered exchange system, the second isa barter system, in which money provides the standards of value permitting market-place transactions, and the third, is the peasant dualism between subsistence and trade. In recent years periodic markets are gradually being replaced by specialized modern economic and periodic markets and fairs with highly articulated array of market centres. Hodder (1968) stated that the periodic market starts from the necessity of local exchange and the division of labour in the local markets. Bromely, Symanski and Good (1975) believed that periodic markets persist to satisfy the requirement of the producers. Plattner (1976) suggested the three stages of periodic market development, as: i) the stage of reciprocal exchange, ii) the stage of inter-community exchange, and finally iii) the stage of exchange through periodic markets. Wanamale (1980) suggested that periodic markets grow-up spontaneously and are not controlled by any authority. Srivastava (1984) suggested four important factors of development as i) subsistence level of production, ii) weakening of self-sufficiency, iii) increase in specialization and iv) strengthening of social relation. He also argued that in backward of remote areas the periodic or temporary markets are the dominant trade centres.

Hence it can be assumed that the growth of periodic markets or hats occur in a region where i) subsistence type of agricultural production can meet only the local demand, ii) the quantity of excess production is minimum, so that the local producers tend to sell their products locally rather sending them to the permanent markets located away from the rural areas, iii) inadequate system of accessibility cause hindrance for development of large market centres, iv) the rural buyers have low purchasing power, and v) the pattern of social behavior and customer choice are different from those of the urban areas.

2. THE STUDY AREA

This study on periodic markets and their dynamics is based on observation and meticulous study upon the periodic markets occurring in twenty five CD blocks of Purba Medinipur district in the southern part of West Bengal. This southernmost district of the Burdwan Division, extending over an area of 4,151.64 square kilometers, is situated between the parallels of 21º36´35?N and 22º57´10?N latitudes and 86º33´50?E and 88º12´40?E longitudes. It was formed on the 1st January, 2002 after the partition of the erstwhile Midnapore district in two parts: Purba Medinipur and Paschim Medinipur. Orissa state lies on the south-western border whereas the Bay of Bengal in the south; the Hooghly river and South 24 Parganas district to the east and Howrah district to the north-east.

3. OBJECTIVES OF THE STUDY:

The major objectives of the study are the following:

i) to study the spatial pattern of distribution of rural periodic markets of the district;
ii) to analyse the pattern of concentration of the periodic markets in the study area;
iii) to format an ordering of the periodic markets, and
iv)to analyse the periodicity of markets and their spatio-temporal spacing in the district

4. RESEARCH METHODOLOGY FOLLOWED

Recorded information and data on the origin and development of periodic markets in this part of West Bengal are very scarce and not readily available. Hence the study has been based largely upon the primary data generated through field survey using systematically framed questionnaires and collecting associated background information regarding other relevant facts from the people residing around the existing market centres. The data generated thereby were processed thereby. On this basis an attempt has been made here to examine the pattern of periodicity of the existing markets as well as their local importance. In association with this the secondary data as much as made available, have been used to make a meaningful analysis on the marketing system as well as the market-based economic process of this part of the district.

5. SPATIAL DISTRIBUTION OF PERIODIC MARKETS OF PURBA MEDINIPUR DISTRICT

The Periodic markets distributed through the various blocks of the district act as the transit centres of exchange of locally produced commodities ranging from vegetable and grain crops to handicrafts and other household goods. In this study as many as 211 periodic markets, locally known as hats, occurring in different locations in the district of Purba Medinipur have been selected, which are purely rural in character.

The detailed study shows a gradual trend of transformation from periodic market to permanent daily ones with the growing urbanisation over time. During field survey the data were collected and generated from all the above mentioned number of periodic markets of the 25 CD blocks of the district. Sample interviewing of the local consumers was conducted for learning the character of peoples' participation and their behavioural pattern. On the basis of the data generated through interview the number of consumers for each periodic market has been calculated. A very significant criterion of the periodic markets, as revealed through this study, is that the cycle of movement of the traders is largely controlled by the seasons. Hence there exists a marked seasonal change in the number of traders.
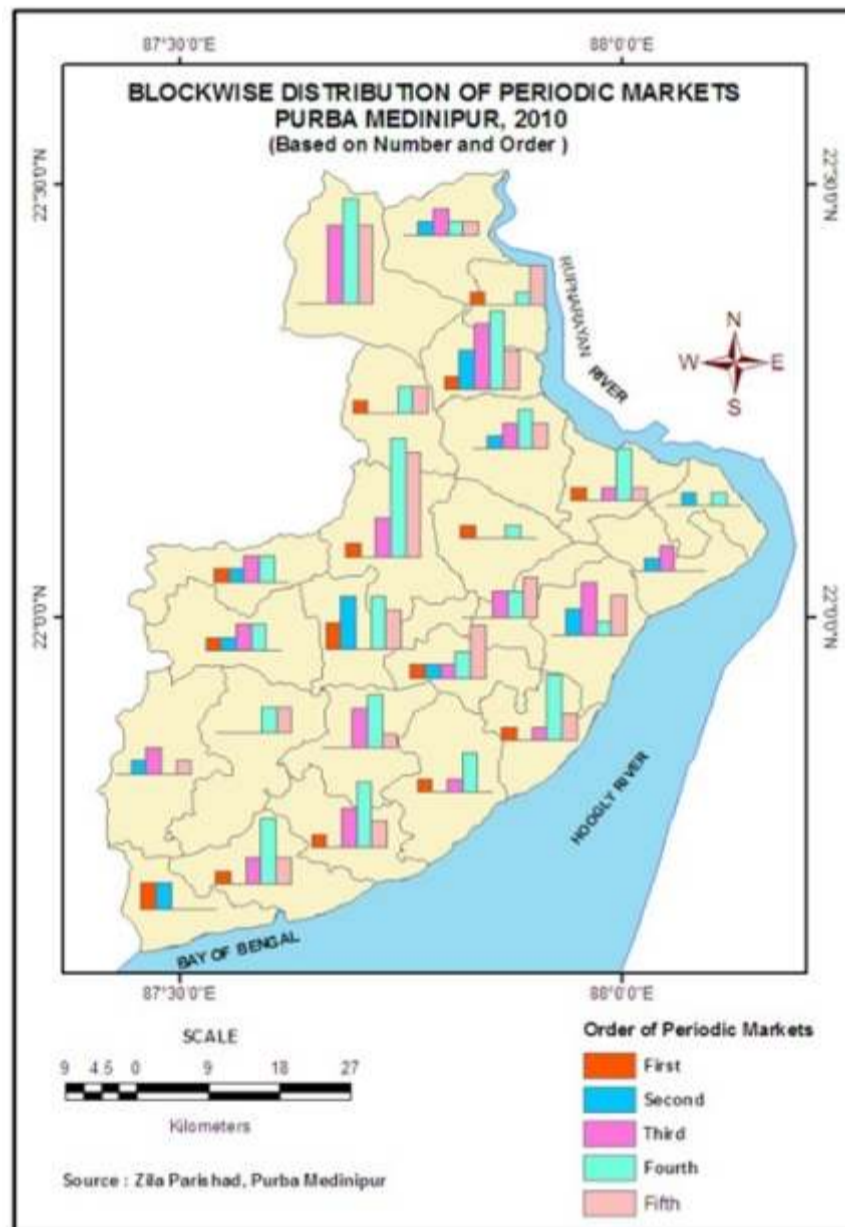

Figure 1: Block-wise distribution of periodic markets in Purba Medinipur district

Table 1 given below shows the number of hats or periodic markets with their frequency by days in the week.

Table 1: Block-wise frequency of periodic markets by days in the week

Blocks	Son	Mon	Tues	Wed	Thr	Fri	Sat	Daily	Total Days	Total *Hats*	% of Block-wise *Hats*
Tamluk	3	6	2	5	1	4	3	*5*	29	18	8.53
Sahid Matangini	1	1	2	1	0	1	2	1	9	5	2.37
Panskura - I	4	3	5	5	3	2	3	4	29	20	9.48
Kolaght	2	1	0	2	1	0	0	2	8	5	2.37
Moyna	2	1	1	0	0	2	0	1	7	5	2.37
Nandakumar	5	1	2	2	4	1	1	0	16	8	3.79
Chandipur	1	0	0	2	0	0	1	0	4	2	0.95
Mahisadal	2	1	3	1	2	2	2	0	13	7	3.32
Nandigram-I	5	3	2	1	6	1	2	0	20	10	4.74
Nandigram-II	0	2	3	1	3	1	3	0	13	7	3.32
Sutahata	1	0	0	1	1	0	0	0	3	2	0.95
Haldia	1	2	1	0	0	2	0	0	6	3	1.42
Potashpur-I	5	3	4	5	4	2	4	1	28	15	7.11
Potashpur-II	3	3	1	1	2	2	0	0	12	6	2.84
Bhagawanpur-I	8	5	7	4	5	7	5	0	41	21	9.95
Egra-I	2	1	1	1	2	1	1	0	9	4	1.90
Egra-II	2	1	0	1	2	1	1	0	8	4	1.90
Khejuri-I	4	2	3	4	0	2	3	0	18	9	4.27
Khejuri-II	5	1	3	4	1	1	2	1	18	9	4.27
Bhagawanpur-II	2	2	5	6	1	6	3	0	25	13	6.16
Ramnagar-I	0	1	1	1	1	1	3	0	8	4	1.90
Ramnagar-II	2	2	4	1	2	5	2	1	19	10	4.74
Contai-I	3	3	2	2	2	4	3	2	21	11	5.21
Contai-II	0	3	1	1	0	2	2	1	10	5	2.37
Contai-III	3	2	4	2	2	2	3	0	18	8	3.79
Total	66	50	57	54	45	52	49	19	392	211	
Percentage	16.8	13	14.5	13.8	11.5	13.3	12.5	4.85			

Source: Record of Purba Medinipur Zila Parishad & Primary Survey Report

The above table shows that Bhagawanpur – I, Panskura – I and Tamluk share higher percentages (18 to 21 per cent) of periodic markets within the district as compared to the other blocks. There are as many as 60 hats located within these three blocks. Nandigram – I, Khejuri – I & II, Ramnagar – II, Contai – I, Bhagawanpur – II and Potashpur – I blocks have 71 hats or periodic markets (9.86 to 7.92 per cent) of the total in the district. Chandipur, Sutahata, Haldia, Egra – I & II and Ramnagar – I have the minimum share (0.08 to 2.04 per cent) of periodic markets. The reasons behind this spatial variation in distribution of periodic markets can be explained in the following manner.

● Tamluk, Panskura and Bhagawanpur - I blocks are located on the fertile and agriculturally prosperous land close the bank of the two rivers Rupnarayan and Kangsabati where a wide range of crops are produced round the year. These two blocks supply mainly vegetables, to the other parts within and outside the district. The local producers sell their items to the middlemen in the rural hats and in turn these middlemen supply the collected items to the markets in the urban areas.
● Nandigram – I, Khejuri – I & II, Ramnagar –I, Contai –I, Bhagawanpur –II, Potashpur – I block share 4 per cent to 7 per cent of the district periodic markets. In these blocks the distance from the urban areas and the seasonal inaccessibility appear to be the main reasons for the growth of periodic markets.
● In the rest of the blocks, e.g., Sutahata, Haldia, Egra – I & II, Contai – II & III, Sahid Matangini, Panskura – II, Chandipur, Nandakumar, Mahisadal and Moyna where the main five municipal towns of the district, i.e., Tamluk, Haldia, Contai, Panskura and Egra are located people tend to depend on the urban markets rather than the periodic markets or hats. These urban centres are well connected by road networks with the different parts and hence the people do not have to depend upon the hats or the periodic markets.

On the basis of the collected data (Table – 1) and from the above analyses the following inferences can be drawn:

(i)Higher degree of concentration of periodic markets in Panskura – I, Bhagawanpur – I and Tamluk have

caused higher rate of influx of population and in turn rapid development of settlement. The daily-cum-periodic market act as lower order central place of the periodic markets in the surrounding areas.

(ii)An ostensible reason for the origin and development of periodic markets is the seasonal (rainy season) low accessiblity in some blocks, viz., Bhagawanpur – II and Khejuri – I & II.

(iii)The growth of urbanization or the increase of urban population hinders development of periodic markets or hats as the urban people prefer well established shopping complexes and departmental stores where the consumers have opportunity to come across a wide range of choice of commodities under one roof. The five municipal markets like those of Haldia, Contai, Egra, Tamluk and Panskura act as growth centres of the district and also attract the people of the surrounding areas in their established shopping complexes.

(iv)The periodic markets that grow up around the urban centres have tendency to be converted into permanent or regulated markets. Some periodic markets in Sutahata, Egra, Nandakumar, Mahisadal and Ramnagar – I exhibit this trend of conversion from periodic to daily and regulated ones in the recent years. In these areas the daily commuting and vending by the rural people on some particular days in the week sill remain significant.

6. CONCENTRATION PATTERN OF THE PERIODIC MARKETS

The spatial concentration of market is found to be based on territorial divisions and measures of concentration and thus enhance degree of correspondence between units and area. The concentration is also a function of the individual area and population of a market to the total of region or territorial unit. This concentration can help develop a spatial segmentation pattern of the market. In this study a simple method has been maintained following the model of Gibbs (1961) whose method is often used for measuring the population concentration of urban units. In this model he considered the urban area unit to total area and percentage of total population located within it. The formula for computing the measure of the degree of concentration is:

$C = \Sigma(x - y)/2$ ……. Formula 1

Where,

C = Degree of concentration
x = Per cent of total urban area in a territorial division,
y = Per cent of total population located within its boundary.

The C values may range from minimum of 0.0 to maximum of 100.0. A high C value is the indication of an uneven distribution. The above mentioned method has been used here to find out the periodic market concentration of Purba Medinipur district. By changing the symbol (x,y) of the original formula the author has restructured the formula as follows:

$PMC = (Ta – Tp)/2$ ……. Formula 2

Where,
PMC = Periodic Market Concentration;
Ta = Percentage of block-wise periodic market area to total block area;
Tp = Percentage of block-wise periodic market population to total block population.

The information about the actual area of the individual periodic markets has been collected from Purba Medinipur Zilla Parishad office and from different Block Development Offices of the district. The pattern of peoples' participation in the 211 periodic markets has been worked out upon the numerical data generated as well as perception studies during the field survey by interviewing the buyers and sellers of the periodic markets.

It may be mentioned here that there is no published source of data regarding market participation in the district level as well as in the country as a whole. All the periodic markets of 25 blocks in the district have been categorized. On the basis of the calculated values of concentration obtained using formula 2 as above as many as five levels of concentration, from very low to very high, have been outlined. Values below 0.30ar econsidered very low, from 0.31 to 0.80 low, 0.81 to 1.30 moderate, 1.31 to 1.80 high and above 1.80 very high. The table given below shows the 25 blocks of Purba Medinipur as categoried according to the concentration values.

Table 2: Levels of concentration of Periodic markets in the blocks of Purba Medinipur district

Sl no	Block	Concentration value	Level of Concentration
1	Haldia	0.23	Very Low
2	Chandipur	0.27	Very Low
3	Panskura - II	0.34	Low
4	Moyna	0.39	Low
5	Contai-II	0.41	Low
6	Sahid Matangini	0.46	Low
7	Egra-II	0.49	Low
8	Egra-I	0.49	Low
9	Sutahata	0.56	Low
10	Ramnagar-I	0.62	Low
11	Nandakumar	0.71	Low
12	Mahisadal	0.84	Moderate
13	Potashpur-II	0.91	Moderate
14	Contai-III	1.12	Moderate
15	Panskura - I	1.15	Moderate
16	Nandigram-II	1.15	Moderate
17	Nandigram-I	1.18	Moderate
18	Bhagawanpur-II	1.32	High
19	Contai-I	1.33	High
20	Khejuri-II	1.37	High
21	Khejuri-I	1.59	High
22	Tamluk	1.67	High
23	Bhagawanpur-I	1.75	High
24	Ramnagar-II	1.85	Very High
25	Potashpur-I	1.90	Very High

Source: Calculated by the authors

The level of concentration as has been classified here is purely on the calculation basis rather than entirely following the Gibbs' method. The above modification of method can give some basic ideas about the level of periodic market concentration in the blocks of Purba Medinipur district.
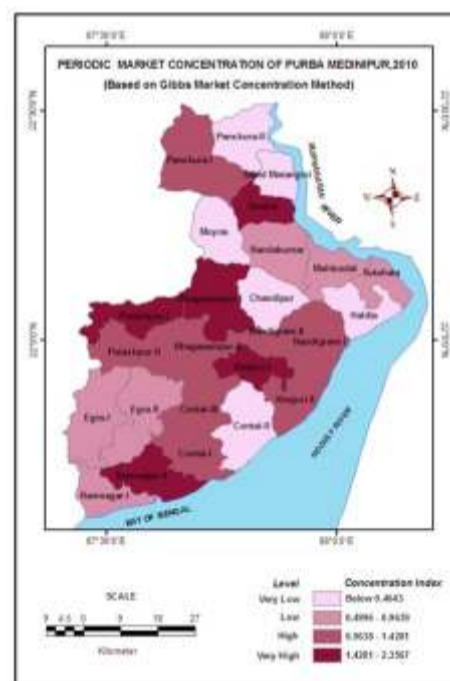

Figure.2: Periodic market concentration pattern in the blocks of Purba Medinipur district

Table 2 shows that all different patterns of concentration of the periodic markets or hats, ranging from very low to very high; occur through the blocks of Purba Medinipur district. Among these blocks two (Haldia and Chandipur) have very low, nine (Panskura – II, Moyna, Contai – II, Shahid Matangini, Egra – I, Egra – II, Sutahata, Ramnagar – I and Nandakumar) have low, six (Mahisadal, Potashpur – I, Contai – III, Panskura – I, Nandigram – I and Nandigram – II)) have moderate, six (Bhagawanpur – I, Bhagawanpur – II, Contai – I, Khejuri – I, Khejuri – II and Tamluk) have high and two (Ramnagar – II and Potashpur - I) have very high degree of concentration.Larger degree of concentration can be attributed to the higher local demand as well as preference of the middle men who form the main buyers for selling the goods outside,

7. ORDERING OF THE PERIODIC MARKETS

The rank or ordering of any centre or market means its relative position in hierarchy within a region. There are different ways of ordering of market centres. Some have classified them as 'small', 'medium' or 'large' based on the volume of activities, market area and kinds of transaction.

In this study the authors have attempted to explore the pattern of hierarchy of the periodic markets of Purba Medinipur by processing data on the basis of centrality index method proposed by Davis (1967) and the result has been given in the Table 3 below.

Table 3: Block wise ordering of Periodic Markets as per centrality index in Purba Medinipur district

Blocks	Order						Total periodic market
	I	II	III	IV	V	VI	
Tamluk	1	1	2	4	9	1	18
Sahid Matangini	1	1	0	0	0	3	5
Panskura - I	0	0	0	4	12	4	20
Panskura - II	0	0	0	1	3	1	5
Moyna	0	0	0	0	4	1	5
Nandakumar	0	1	0	0	3	4	8
Chandipur	0	0	0	2	0	0	2
Mahishadal	0	0	1	0	6	0	7
Nandigram-I	0	0	1	2	7	0	10
Nandigram-II	0	0	0	0	6	1	7
Sutahata	1	0	1	0	0	0	2
Haldia	0	0	0	0	1	2	3
Potashpur-I	0	0	2	2	11	0	15
Potashpur-II	0	1	2	3	0	0	6
Bhagawanpur-I	0	0	1	0	19	1	21
Egra-I	0	0	2	0	2	0	4
Egra-II	0	0	0	2	2	0	4
Khejuri-I	1	0	1	1	6	0	9
Khejuri-II	0	0	1	8	0	0	9
Bhagawanpur-II	0	0	0	1	10	2	13
Ramnagar-I	2	0	0	1	1	0	4
Ramnagar-II	0	2	0	1	7	0	10
Contai-I	0	0	0	0	2	9	11
Contai-II	0	0	0	0	5	0	5
Contai-III	1	0	1	0	5	1	8
Total	7	6	15	32	121	30	211
Per cent	3.317	2.843	7.109	15.16	57.345	14.21	100

Source: Records of Purba Medinipur Zila Parishad & Primary Survey data

After calculating the centrality index the values all the 211 periodic markets have been categorized into six groups i.e., from 1st order to 6th order. It is clear from the above table that about 72 per cent of periodic markets belong to 5th and 6th order taken together and the 1st and 2nd order account for 3.32 and 2.84 per cent respectively. This type of ordering indicates that the marketing activities of the district are still concentrated in the blocks which are by and large rural in character. Subsistence type of agriculture, low network of accessibility and low demand cause poor development of markets. It is an indicator of low purchasing power of the people as well because high purchasing power can increase the demand and in turn these demands contribute to the maturity of the periodic markets from lower order to higher order and thus

help reformation of periodic markets to a permanent market centre. The number of periodic markets is maximum in Tamluk, Panskura – II, Nandigram – I, Potashpur – I, Bhagawanpur – I, Bhagawanpur – II, Ramnagar – II and Contai – I. Tamluk Town is the district head quarter which influences the local centres of the block but other blocks mentioned here are purely rural in character. The periodic markets located within these rural blocks belong to the lowest level in hierarchical order in terms of periodical market development. During the field investigation information regarding the consumer behavior was also studied. It was observed that the farmers found it difficult to get associated with the urban markets because of their traditional belief and habit as well as their limitation in financial condition.

8. PATTERN OF PRESSURE OF CUSTOMERS IN THE PERIODIC MARKETS

Buyers and sellers, from the rural environment of the surrounding areas, feel more comfortable in accessing periodic markets to save travel time, monetary cost and also waiting time. Periodic market places, therefore, are expected to continue to exist and play a vital role in the rural economy because the large number of rural users is involved in this system.

It has already been mentioned that in Purba Medinipur district there are as many as 211 periodic markets or hats distributed through the 25 blocks. Document shows that in 2010 only 1.9% of the people of the district participated in these markets and the remaining 98.1% people used to be served by the permanent markets. Bhagawanpur – I, Panskura – I and Tamluk block account for 21, 20 and 18 periodic markets respectively. Potashpur – I, Bhagawanpur – II, Nandigram – I, Ramnagar – I & II have 10 to 15 periodic markets whereas the rest of the blocks have 2 to 9 markets.

The pattern of population pressure on respective markets is shown in the table below.

Table 4: The pattern of population pressure on periodic markets of Purba Medinipur district

Sl. No.	Name of the blocks	No of blocks	Total Population (2011)	Percentage of population	No of periodic markets	Percentage of periodic markets	Block-wise number of people attending	Level of service provided
1.	Bhagawanpur-I,	01	1,98,898	4.58	21	9.95	Below 10,000	Very low
2.	Tamluk, Nandakumar, Panskura- I, Mahisadal, Nandigram-I, Nandigram-II, Potashpur-I, Potashpur-II, Khejuri-I, Khejuri-II Bhagawanpur-II, Ramnagar-II, Contai-I, Contai-III	14	23,54,626	54.17	151	71.56	10,000 - 30,000	Low
3.	Sahid Matangini, Panskura - II, Moyna, Egra-I, Egra-II, Contai-II, Ramnagar-I	07	12,74,331	29.32	32	15.17	30,001 - 50,000	Medium
4.	Sutahata,	01	1,06,338	2.45	2	0.95	50,001 - 70,000	High
5.	Chandipur, Haldia,	02	4,12,206	9.48	5	2.37	Above 70,000	Very high
Total		25	43,46,399	100	211	100		

Source: Compilation based on data from Census Handbook and generated by field survey

The above table shows that out of the 25 blocks 14 blocks comprising 54.17 per cent of the total population of the district are served by 151 markets which is 71.56 per cent of the total periodic markets. However, in terms of the attending number of population and service provided thereby they fall in the category of low level. This is because of the fact that these blocks include the major urban sectors of the district (viz., Tamluk, Panskura – I, Nandakumar etc) and understandably the larger proportion of inhabitant access to the permanent markets rather than the periodic markets. In the blocks having by and large rural environment (viz., Sutahata, Chandipur and Haldia), although have fewer number (7) periodic markets, their service level remains high to very high.

9. MARKET PERIODICITY AND SPATIO-TEMPORAL PATTERN

One of the most important economic features associated with the periodic market centres in the developing countries of the world lies in their functional pattern. These are the market places where large number of people prefers to buy and sell goods and enjoy services at regular intervals. The periodicities of these markets occur because of inadequate demand, underdeveloped transport system and variation in consumer behavior. The market periodicity means the temporal occurrence of markets. The seven days

periodic markets and daily market-places in the district have two temporal characteristics. Firstly, there are the diurnal variation in functional operation of the market, i.e. numbers of market centres function in the afternoon hours and the remaining in the morning hours. Secondly, the temporal attribute concerns the unequal number of market centres on each day of the week in the district. Table 5 given below shows the occurrence pattern of periodic markets of the blocks in selective days.

Table 5: Occurrence pattern of periodic markets of the blocks in days of the week.

| Blocks | Market days in the week | | | | | | | | Total Days | Total no. of Periodic Markets | 2 |
	Sun	Mon	Tue	Wed	Thurs	Fri	Sat	Daily			
Tamluk	3	6	2	5	1	4	3	5	29	18	1.00
Sahid Matangini	1	1	2	1	0	1	2	1	9	5	3.25
Panskura - I	4	3	5	5	3	2	3	4	29	20	1.00
Panskura - II	2	1	0	2	1	0	0	2	8	5	0.25
Moyna	2	1	1	0	0	2	0	1	7	5	0.25
Nandakumar	5	1	2	2	4	1	1	0	16	8	2.00
Chandipur	1	0	0	2	0	0	1	0	4	2	3.25
Mahisadal	2	1	3	1	2	2	2	0	13	7	3.00
Nandigram-I	5	3	2	1	6	1	2	0	20	10	1.00
Nandigram-II	0	2	3	1	3	1	3	0	13	7	1.00
Sutahata	1	0	0	1	1	0	0	0	3	2	0.50
Haldia	1	2	1	0	0	2	0	0	6	3	1.00
Potashpur-I	5	3	4	5	4	2	4	1	28	15	2.00
Potashpur-II	3	3	1	1	2	2	0	0	12	6	0.00
Bhagawanpur-I	8	5	7	4	5	7	5	0	41	21	2.00
Egra-I	2	1	1	1	2	1	1	0	9	4	3.25
Egra-II	2	1	0	1	2	1	1	0	8	4	1.00
Khejuri-I	4	2	3	4	0	2	3	0	18	9	0.00
Khejuri-II	5	1	3	4	1	1	2	1	18	9	4.50
Bhagawanpur-II	2	2	5	6	1	6	3	0	25	13	1.00
Ramnagar-I	0	1	1	1	1	1	3	0	8	4	3.25
Ramnagar-II	2	2	4	1	2	5	2	1	19	10	3.00
Contai-I	3	3	2	2	2	4	3	2	21	11	1.75
Contai-II	0	3	1	1	0	2	2	1	10	5	1.00
Contai-III	3	2	4	2	2	2	3	0	18	8	3.00
Total	66	50	57	54	45	52	49	19	392	211	

Source: Prepared on the basis of field generated data

The account shows that the Sunday markets (66) have the highest frequency which is followed by the Tuesday markets (57). Compared to these the Thursday markets (45) have the lowest frequency. However, when these figures are compared with the daily markets (19) it can be seen that the buyers and sellers prefer the week-day markets rather than the daily markets as they can enjoy a wide range of choice of commodities in the week-day markets. The other ostensible feature as emerged from the table is that Panskura hold the largest number (20) of week-days markets. This is because of the fact that this block is a) agriculturally highly productive and b) well connected with the neighbouring blocks in the district. As far as the frequency of occurrence of markets is concerned Tamluk (18) and Bhagabanpur – I (20) also come in the forefront. Another feature as emerged from the week-day-wise occurrence is that there is no significant difference in the frequency of market meeting through the week days.

The hypothesis of the trend of occurrence of the periodic markets in the district has been tested by Chi-square method which is presented in the Table 6 given below.

Table 6: Chi-square (?2) test report for market meetings in Purba Medinipur district

Days of the week	Observed No. of Market Meeting Days (O)	Expected Meeting (^{2}) (E)	Departure level (O - E)
Sunday	66	49	17
Monday	50	49	1
Tuesday	57	49	8
Wednesday	54	49	5
Thursday	45	49	-4
Friday	52	49	3
Saturday	49	49	0
Daily	19	49	-30

Source: Calculated by the authors

The Chi-square (?2) test report indicates the acceptance of the null hypothesis and the values are significant for all periodic market centres at 1 percent level. From the field study it has been found that some periodic markets are functioning with daily establishment and these daily markets imply their growing centrality in the region. About 9% of the periodic markets of the district are daily in nature which shows a certain tendency to become permanent markets. More than 81% of the periodic markets are still in lower rank as far as the business days are concerned.

An attempt has also been made to explore the frequencies of day-wise occurrence of periodic markets in this district. The table given below presents this pattern of occurrence.

Table 7: Number and percentage of days of occurrence of the periodic markets in Purba Medinipur district

Marketing day	No of market	Percentage of market
One day	16	7.58
Two days	171	81.04
Three days	05	2.37
Daily	19	9.00
Total	211	100.00

Source: Prepared on the basis of the field-generated data

It can be seen on the table that the Periodic markets of two-days per week (171 out of 211) are of highest frequency compared to daily, three-days and daily markets the frequencies of which are quite negligible.

10. AN OVERALL ASSESSMENT

The following facts have been explored upon the study of the periodic markets of Purba Medinipur district.

❖ The Periodic markets or hats distributed through the various blocks of the district act as the transit centres of exchange of locally produced commodities ranging from vegetable and grain crops to handicrafts and other household goods.
❖ Need of trading of a wide variety of items produced locally in sufficient amounts has given rise to a higher degree of concentration of periodic markets or hats in Tamluk, Bhagawanpur – I and Panskura – I blocks of the district.
❖ Movement of traders through the periodic markets is largely controlled by the seasons, thus a marked seasonal fluctuation in the number of traders in these markets is observed.
❖ Many traditional periodic markets are disappearing now in consequence of the gradual expansion of the urban areas into the rural areas leaving space for the permanent market centres.

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