

MARKET CENTRES AND REGIONAL DEVELOPMENT PATTERN OF PURBA MEDINIPUR IN WEST BENGAL

Nirmalya DAS

Assistant Professor, Department of Geography Panskura Banamali College, Panskura,
Purba Medinipur, WB, India

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ABSTRACT: Study of market centres as well as market economic functions in regional planning and development has been found very important in the assessment of the pattern of development of any region. This has attracted attention of the planners all over the world. The market related functions or activities with the level of concentration of services and facilities will help identification the development status of the region. This study attempts to examine the existing pattern of market economic development vis-à-vis development potential in different blocks of Purba Medinipur district of West Bengal. It has been observed that the functional and spatial organizations are interrelated phenomena which influence the economic and social life of the people. Through a systematic study spatial relationships among the existing market activities are observed and it has been noticed that there is a definite pattern of dispersal or concentration of activities in space. On the basis of the above understanding study has been conducted on the potential services of markets and related economic functions of Purba Medinipur district as an areal unit.

KEYWORDS: Market centre, economic development, spatial relationship, potential services.

1 INTRODUCTION

The study of the market economic function in regional planning has got immense and identification of services necessary for economic development of any region of the world. The market related functions or activities with the level of concentration of services and facilities will help to identify the development status of the region. The present study is looking towards the existing pattern of market economic development vis-à-vis development potential in different blocks, the priority areas of planning are concerned in development of backward blocks. The functional and spatial organizations are interrelated phenomenon which influences the economic and social life of the people. The functional activities as explained by Philbrick⁽¹⁾ that "the word functional is used because the different yet associated purpose of functions of human establishments compose in the aggregate the different functional patterns of human activity, which make generalization about society possible in the context of areal distribution. The word organization is used because human activity is inter-dependent and inter-connected in area. People is establishments through their actions interconnecting them with other people in other establishments create larger area units of human organizations, than the establishments in which the focus their lives". In spatial relationships among the existing market activities are observed, it will be noticed that there is a definite pattern of dispersal or concentration of activities in space.

2 STUDY AREA

Purba Medinipur, the southernmost district of the Burdwan Division, extending over area of 4,151.64 square kilometers, is situated between the parallels of 21°36'35" N and 22°57'10" N latitudes and meridians of 86°33'50" E and 88°12'40" E longitudes. The present analysis has been depends mainly on field work from where maximums data related to make functions or trade activities and collected. It is worth mention here that most of relevant geographical and historical

information regarding the functional activities of 58 (fifty eight) identified market centers and related aspects of marketing geography was conducted using the finalized questionnaire for each market centers.

3 OBJECTIVES OF THE STUDY

On the basis of the theoretical frame the particular objective of the analysis is

- i. To study the potential services of markets and related economic function of Purba Medinipur district as area unit;
- ii. To correlate the market development with regional development of the various sub regions of the study region;
- iii. The expression of market potential of the district helps the process of economic regionalization and identifies the status of economic development of the region.

4 RESEARCH METHODOLOGY

The important aspect of the present study is to identify the block level status of economic development in relation to market functions of Purba Medinipur district. The market function of any geographical area is related with number of other factors like agricultural, industrial and other tertiary products. So, the level of aggregation of various variables are composed at the block level where basic statistical information are mostly available in the present structure of statistical organizations in district level set up. For measurement of the inter-block disparity related with marketing functions, the following methods have been logically selected for the present study.

- a) Blockwise level of development (based on UNDP index)
- b) Level of composite market function development (based on average development index of UNDP and average market potential).

5 BLOCKWISE LEVEL OF DEVELOPMENT

This method is based on UNDP (United Nations Development Programme) index of development analysis. Here, the variables selected for the analysis is related directly or indirectly with the marketing functions.

The blockwise selected variable are:

- i) Irrigated area (hector)
- ii) Number of agricultural labour
- iii) Food grain production ('000 metric ton)
- iv) Road length (Km)
- v) Population served per bank
- vi) Small savings ('000 Rs)
- vii) Co-operative working capital ('000 Rs)

UNDP index of development used here as:

$$Index = \frac{\text{value of individual block} - \text{maximum value of the block}}{\text{maximum value of the block} - \text{minimum value of the block}}$$

The calculated values of the entire variable are shown in the *appendix - 1* the sum of the computed values of the development index are divide by the number of variables for different blocks are given in table-2 along with the different classes of occurrence. Here the standard deviation grouping technique is applied to derive different development classes such as from very high to very low.

Table 1. Identified permanent markets with no of shops and employee of Purba Medinipur, 2010

Sl. No	Markets	Total Shops	Total employee	Sl. No	Markets	Total Shops	Total employee
1	Nimtouri	271	631	30	Balughata	104	142
2	Radhamoni	312	591	31	Amarshi	173	312
3	Srirampur	122	185	32	Manglamaro	162	274
4	Dimari	123	248	33	Potashpur	209	347
5	Nonakuri	328	580	34	Bhagawanpur	191	320
6	Mecheda	588	1274	35	Bhimeswari	187	311
7	Panskura Station Bazar	444	949	36	Kudi	112	183
8	Panskura Puratan Bazar	329	583	37	Balighai	117	193
9	Kolaghat	333	634	38	Paniparul	348	491
10	Deulia	134	221	39	Henria	298	647
11	Siddha	117	193	40	Kalagachia	124	206
12	Moyna	151	242	41	Khejuri	209	375
13	Gosafat	186	292	42	Janka	154	238
14	Nandakumar	376	872	43	Boga	135	214
15	Babattarhat	106	169	44	Bhupatinagar	157	257
16	Khanchi	193	380	45	Madhakhali	158	252
17	Chandipur	391	677	46	Bajkul	253	441
18	Narghat	180	305	47	Ramnagar	652	1066
19	Mahisadal	387	682	48	Deulihat	329	473
20	Geonkhali	170	282	49	Mirgoda	129	206
21	Kapaserya	129	218	50	Balisai	323	469
22	Nandigram	335	711	51	Kalindi	115	177
23	Amdabad	110	161	52	Pichaboni	113	177
24	Reyapara	139	232	53	Depal	138	232
25	Hanschara	104	162	54	Satmaile	155	261
26	Sutahata	216	349	55	Rasulpur	148	245
27	Chaitanyapur	302	606	56	Marishda	107	162
28	Kukrahati	148	244	57	Nachinda	163	266
29	Brajlalchak	295	627	58	Kalinagar	137	213

Source: Primary data collected from field survey.

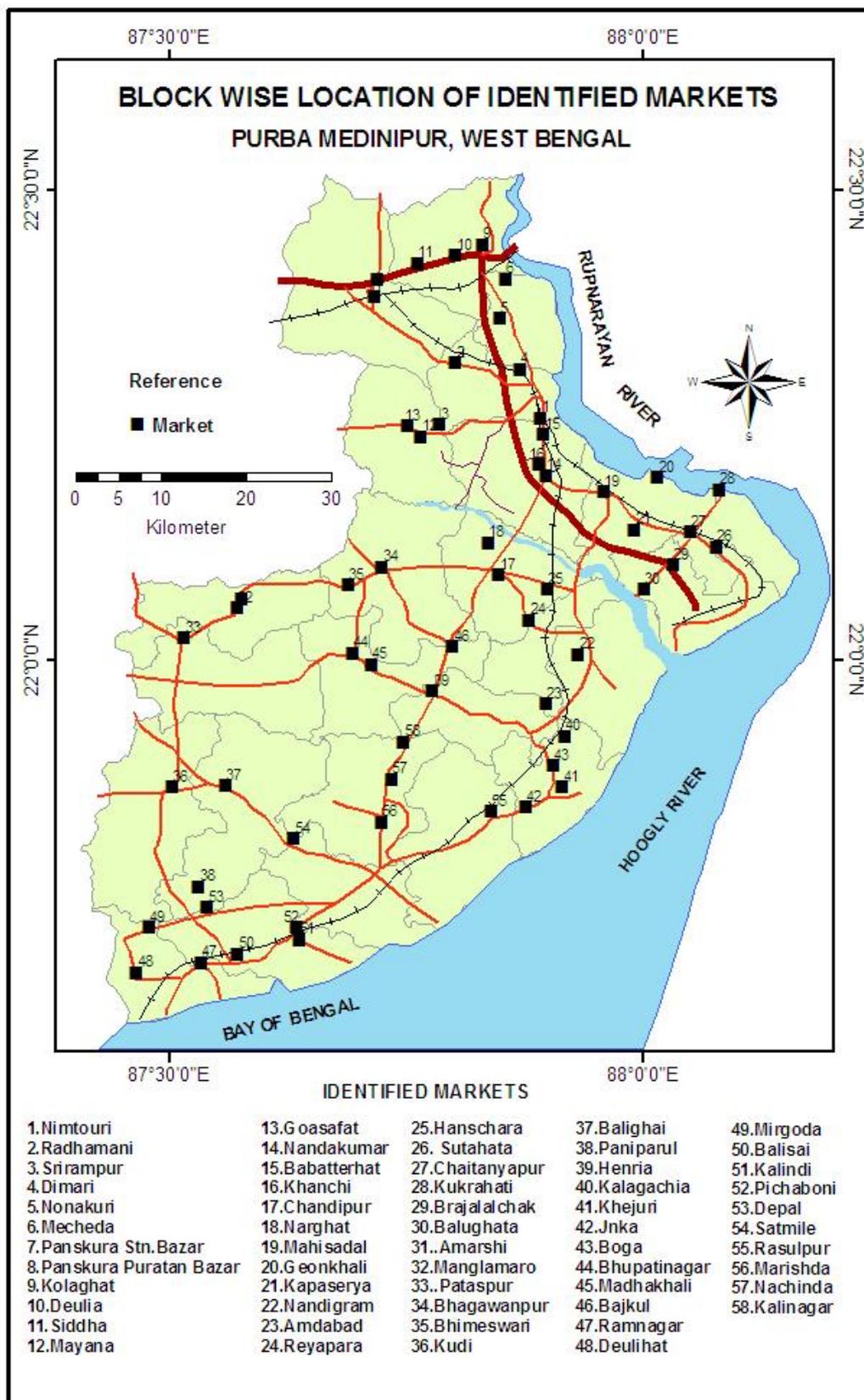


Figure – 1

**Table – 2. Blockwise level of development related to marketing
(Based on UNDP index of development)**

Sl. No	Average Index Class	Level of Development	No. of blocks	Name of the Block	No of markets	% of markets
1	0.0275 - 0.1484	Very Low	7	Nandigram-II, Haldia, Khejuri-I, Khejuri-II, Ramnagar-I, Ramnagar-II, Contai-II	17	29.31
2	0.1484 - 0.2693	Low	7	Sahid Matangini, Chandipur, Nandigram-I, Sutahata, Egra-II, Contai-III Bhagawanpur-II,	17	29.31
3	0.2693 - 0.3902	Moderate	7	Nandakumar, Mahisadal, Potashpur-I, Potashpur-II, Bhagawanpur-I, Egra-I, Contai-I	13	22.41
4	0.3902 - 0.5111	High	3	Tamluk, Panskura-II, Moyna	9	15.52
5	0.5111 - 0.6320	Very High	1	Panskura-I	2	3.45
<i>Mean =0.2693</i>						
<i>Standard deviation = 0.1210</i>						

From the table-2, it is clear that Panskura – I block shows a very high level of development in relation to market related variables. In this block the number of agricultural labour, food grain production and irrigated area is higher than other blocks of the district. All these criteria related with both permanent and periodic markets because the maximum number of the markets of the district are agro-based which helps to develop economic functions in the block. The other three blocks like Tamluk, Panskura – II and Mayna belongs to high level of development due to its higher road density, banking service and food grain production. Road length and financial support plays a vital role in the development of market functions. Near about 50 percent of blocks shows a low to very low development index value which includes Nandigram – I & II, Ramnagar – I & II, Chandipur, Bhagawanpur – I, Contai – II & III, Khejuri – I & II, Sutahata, Sahid Matangini and Egra – II. All these blocks have low food grain production, financial support and road length which influence the lower level of development related with marketing functions. Rest of the seven blocks like Nandakumar, Mahisadal, Potashpur – I & II, Bhagawanpur – I, Egra – I and Contai – I accounts for moderate development rate. In these seven blocks though the food grain production is high but the financial support and co-operative system are in an underdeveloped condition which causes the moderate levels of development.

The pattern of development related to market function of the district shows a peculiar type. Only four blocks with 18.97 percent of market under study area reflects very high to high level of development where are 58.62 percent of permanent market belongs to 34 blocks shows very low to low level of market development value. There are 22.41 percent markets located within seven blocks belongs to moderate level of development. The variables related with market functions of the district are given in the above table reflects that the permanent markets of the district is not up to a remarkable stages of the development which can influence the whole economic development pattern of the study region.

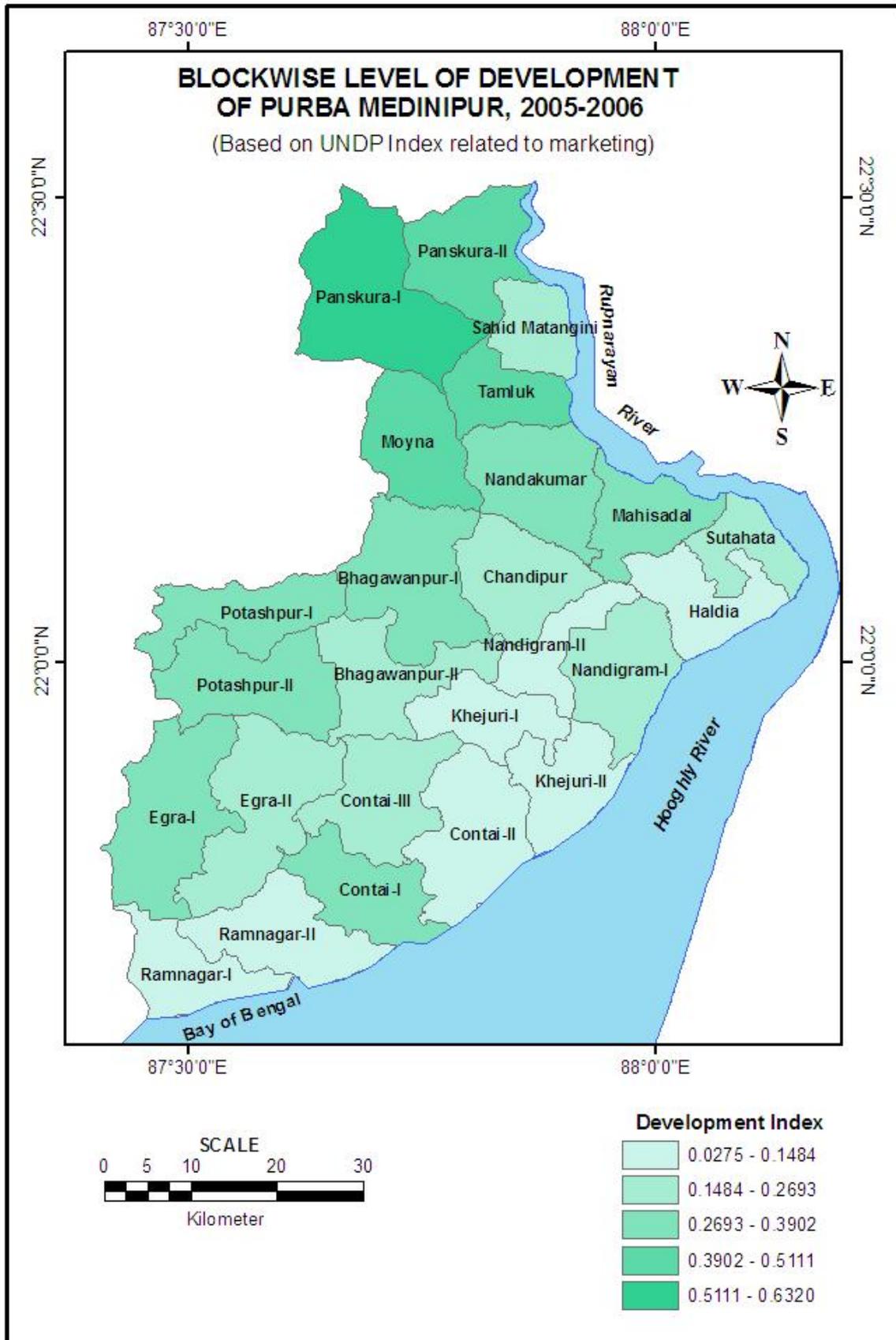


Figure – 2

6 LEVEL OF COMPOSITE MARKET FUNCTION DEVELOPMENT

This is an important method which is used to analyze the development aspect of the market economic function of any region. This method is directly related to the market potential value with the development index calculated by UNDP method of analysis. For working out the composite market functional development index two major components are used i.e. blockwise UNDP index and sum of market potential value. Multiplying both the blockwise information we can get the result which gives the idea about market development aspect the study region. The UNDP method of development index has been already calculated earlier and the blockwise average market potential value also computed by using the formula below:

$$V_i = \sum_{j=1}^n \frac{m_j}{d_{ij}}$$

Where,

V_i = the total marketing potential of i^{th} market centre;

m_j = mass (market worker) of the market centre 'j'

d_{ij} = distance between two market 'i' & 'j'

The level of composite market function development can be calculated by using the formula below:

$$FDI = \Sigma (abmp \times abdi)$$

Where,

FDI = functional development index related to marketing

abmp = average blockwise market potential

abdi = average blockwise development index (as per UNDP)

**Table – 4. Level of Composite market function development
(Based on average development index of UNDP and average market potential)**

Sl. No.	Functional development index	Level of development	No of blocks	Name of the blocks	No of markets	% of markets
1	Above 4000	Very High	2	Panskura – I, Sahid Matangini.	04	6.90
2	3000 – 4000	High	3	Nandakumar, Ramnagar-I, Tamluk.	10	17.24
3	2000 – 3000	Moderate	2	Nandigram-I, Chandipur.	3	5.17
4	1000 -2000	Low	3	Mahisadal ,Panskura – II, Egra-II,	8	13.79
5	Below 1000	Very Low	15	Egra-I, Sutahata, Haldia, Khejuri-I Khejuri-II, Potashpur-I, Potashpur-II, Bhagawanpur-II ,Bhagawanpur-I , Moyna, Ramnagar-II, Contai-I, Contai-II, Contai-III, Nandigram-II	33	56.90
Total			25		58	100

The functional development classes has been grouped on the basis of the difference from mean and the standard deviation value and the class vary from very low to very high level of development. Like other previous indexes the functional development index shows some similar pattern of growth. Here one advantages of this method is market potential and market employees are used as the important variable. Therefore, the computed result is much more reliable than previous two methods. The table no -4 shows that near about 17.24 percent markets of the study region influence the development of 3 blocks in market economic function. Here again Panskura – I block belongs to very high level of development group and Ramnagar – I belongs to high group. In reality, within these two groups the important 3 higher order permanent markets are located, i.e., Panskura in Panskura – I, Mecheda in Sahid Matangini and Ramnagar in Ramnagar – I block. Tamluk, Nandigram and Chandipur block belongs to low developed class which occupied 12.07 percent of markets of the district. Except Tamluk, Nandigram and Chandipur has the low market potential value but Tamluk urban market influences surrounding markets of

the block. Rest 41 markets of 18 blocks accounts for 70.69 percent of markets of the study region which are belong to very low level of development group. The markets of these blocks are purely local product based and subsistence in nature. So, the market participation is low which cause the low market potentials of the district and the consequence is the very low level of functional development pattern.

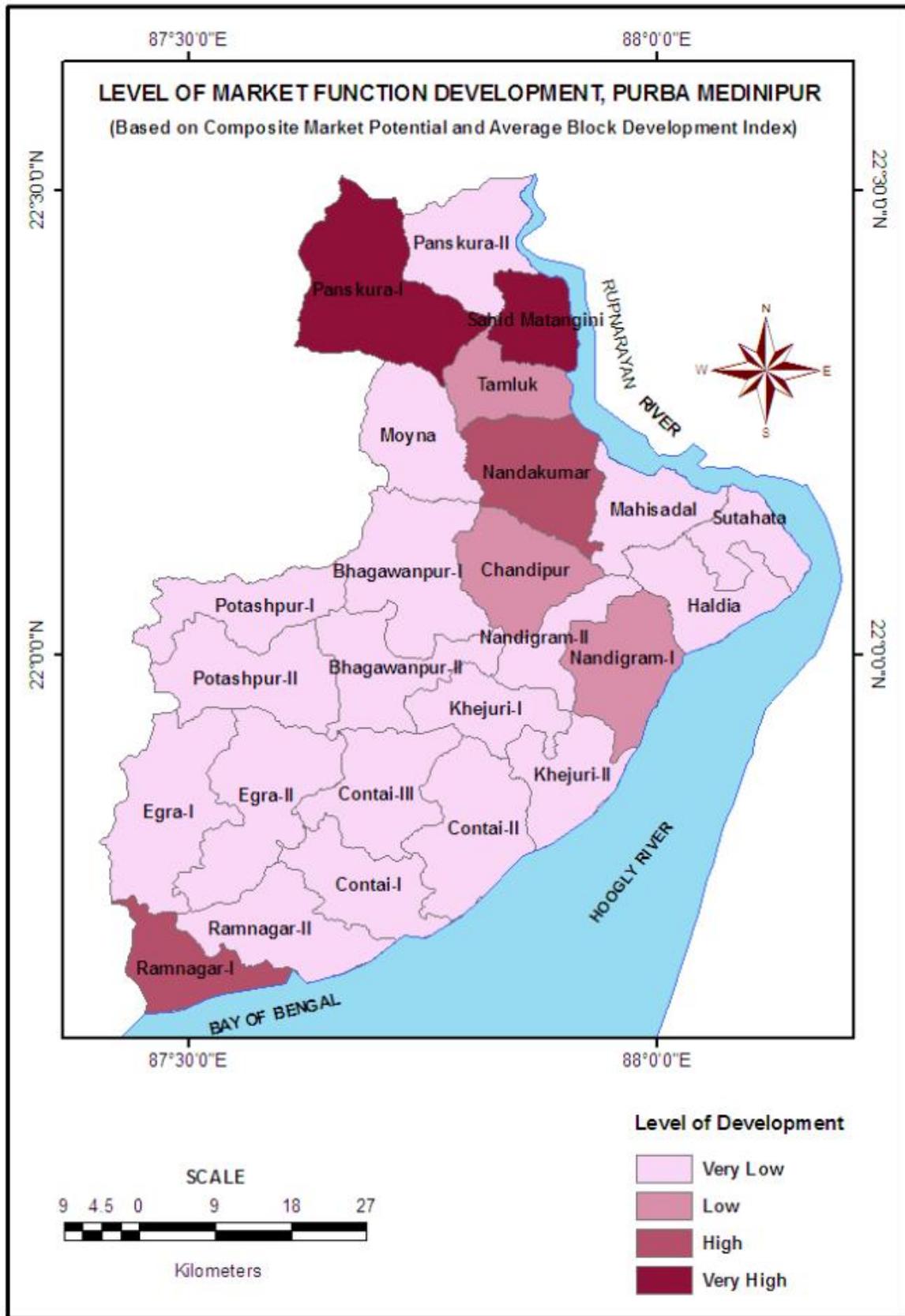


Figure - 3

7 CONCLUDING REMARKS

All the detail calculation has been shown in appendix 1, 2 and 3. The computed composite development value are grouped on the basis of mean and standard deviation and the 25 blocks are divided into five level of development zone varies from very low to very high. There are only two blocks, i.e. Panskura – I and Sahid Matangini belongs to high to very high levels of development group where only four markets are located which share 6.90 percent of permanent market under study of Purba Medinipur district. There are 17 blocks with 39 permanent markets shows a very low to low level of development which is more than 67 percent of permanent markets. It reflects that the market development related variables are not the dominant factors rather less influential items. The rural economic growth, demand and behavioral aspects of the people played a vital role in the development of markets. More than 25 percent of markets located at Nandakumar, Tamluk, and Potashpur – I & II, Panskura and Moyna block are moderately developed because of their nearness to the urban centres like Tamluk, Panskura and Haldia which influence the economic development process of these blocks.

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APPENDIX 1. BLOCKWISE LEVEL OF DEVELOPMENT OF PURBA MEDINIPUR, 2010(BASED ON UNDP INDEX OF DEVELOPMENT)

Sl. No	Block	Irrigated area (hec)	Index	Agricultural labour	Index	Food grains production ('000mt)	Index	Road length (km)	Index	Population served/bank	Index	Small savings ('000 Rs)	Index	Co-operative working capital ('000 Rs)	Index	Total Index Value	Average Index Value
1	Tamluk	8680	0.43	18601	0.43	33.629	0.27	466	0.30	41000	0.65	82531	0.23	3184844	1.01	3.31	0.47
2	Sahid Matangini	5900	0.23	17202	0.36	29.03	0.22	279	0.14	20000	0.03	168779	0.55	61506	0.01	1.54	0.22
3	Panskura - I	16790	1.00	30086	1.00	101.931	1.00	680	0.48	31000	0.35	88608	0.26	83659	0.02	4.11	0.59
4	Panskura - II	8566	0.42	17399	0.37	48.129	0.43	651	0.45	29000	0.29	292550	1.00	45846	0.01	2.97	0.42
5	Moyna	10058	0.52	26483	0.82	52.574	0.47	353	0.20	25000	0.18	177555	0.58	66104	0.01	2.79	0.40
6	Nandakumar	8770	0.43	23347	0.82	48.763	0.43	452	0.28	29000	0.29	132779	0.42	46601	0.01	2.53	0.36
7	Chandipur	5250	0.18	17995	0.40	19.447	0.12	586	0.40	27000	0.24	76691	0.21	34825	0.00	1.55	0.22
8	Mahishadal	7560	0.35	22858	0.64	43.471	0.38	699	0.50	30000	0.32	87759	0.25	73769	0.02	2.45	0.35
9	Nandigram-I	2900	0.02	19791	0.49	29.977	0.23	339	0.19	25000	0.18	66044	0.17	21128	0.00	1.28	0.18
10	Nandigram-II	3470	0.06	12932	0.15	7.978	0.00	595	0.41	26000	0.21	48188	0.11	21724	0.00	0.92	0.13
11	Sutahata	5090	0.17	11679	0.08	14.846	0.07	181	0.05	53000	1.00	51282	0.12	429121	0.13	1.63	0.23
12	Haldia	3450	0.06	10017	0.00	11.461	0.04	136	0.02	27000	0.24	184865	0.61	115830	0.03	0.98	0.14
13	Potashpur-I	14110	0.81	14782	0.24	42.361	0.37	801	0.58	30000	0.32	87741	0.25	117972	0.03	2.60	0.37
14	Potashpur-II	13310	0.75	16266	0.31	57.469	0.53	118	0.00	25000	0.18	44963	0.10	92130	0.02	1.89	0.27
15	Bhagawanpur-I	9500	0.48	24964	0.74	33.355	0.27	573	0.39	25000	0.18	50815	0.12	60609	0.01	2.19	0.31
16	Egra-I	13230	0.75	14748	0.24	54.135	0.49	418	0.26	24000	0.15	48763	0.11	23139	0.00	1.99	0.28
17	Egra-II	10450	0.55	16489	0.32	15.466	0.08	518	0.34	26000	0.21	111646	0.34	132720	0.04	1.88	0.27
18	Khejuri-I	2830	0.01	14670	0.23	17.87	0.11	512	0.34	19000	0.00	84654	0.24	178578	0.05	0.98	0.14
19	Khejuri-II	2650	0.00	11961	0.10	11.108	0.03	683	0.48	29000	0.29	18714	0.00	204385	0.06	0.96	0.14
20	Bhagawanpur-II	8560	0.42	20309	0.51	44.537	0.39	726	0.52	21000	0.06	55428	0.13	148656	0.04	2.07	0.30
21	Ramnagar-I	7520	0.34	13946	0.20	13.037	0.05	201	0.07	21000	0.06	38292	0.07	236888	0.07	0.86	0.12
22	Ramnagar-II	5410	0.20	16319	0.31	18.468	0.11	353	0.20	23000	0.12	35753	0.06	101652	0.03	1.03	0.15
23	Contai-I	3460	0.06	11654	0.08	13.007	0.05	367	0.21	25000	0.18	89544	0.26	3460332	1.09	1.93	0.28
24	Contai-II	3060	0.03	16934	0.34	11.778	0.04	336	0.19	26000	0.21	30036	0.04	187525	0.05	0.90	0.13
25	Contai-III	6190	0.25	13833	0.19	13.96	0.06	1290	1.00	23000	0.12	45560	0.10	182744	0.05	1.77	0.25
																Mean	0.2693
																SD	0.1210

APPENDIX – 2. SHOWING MARKET COMPOSITE FUNCTION

Sl. No	Block	Markets	Composite function(cf) (Based on WKD Davies centrality index *)	Market Population(p)	(cf*P)
1	Tamluk	1.Nimtouri	19.005	631	11992.307
		2.Radhamani	22.564	591	13335.108
		3.Srirampur	2.013	185	372.457
		4.Dimari	2.322	181	420.239
2	Sahid Matangini	5.Nonakuri	19.806	580	11487.375
		6.Mecheda	71.994	1274	91720.743
3	Panskura - I	7.Panskura Stn.Bazar	38.947	949	36960.751
		8.Panskura Puratan Bazar	17.311	583	10092.278
4	Panskura - II	9.Kolaghat	18.962	634	12021.902
		10.Deulia Bazar	2.594	221	573.345
		11.Siddha	2.131	193	411.356
5	Moyna	12.Mayana	3.165	242	765.993
		13.Goasafat	4.708	292	1374.665
6	Nandakumar	14.Nandakumar	33.383	872	29109.632
		15.Babatterhat	1.628	169	275.145
		16.Khanchi	7.252	380	2755.737
7	Chandipur	17.Chandipur	25.520	677	17277.111
		18.Narghat	5.943	305	1812.513
8	Mahishadal	19.Mahisadal	21.254	682	14495.515
		20.Geonkhali	5.433	282	1531.997
		21.Kapaserya	2.923	218	637.204
9	Nandigram-I	22.Nandigram	20.964	711	14905.407
10	Nandigram-II	23.Amdabad	1.561	161	251.336
		24.Reyapara	2.982	232	691.833
		25.Hanschara	1.497	162	242.574
11	Sutahata	26. Sutahata	6.438	349	2246.742
		27.Chaitanyapur	15.700	606	9514.078
		28.Kukrahati	3.552	244	866.720
12	Haldia	29.Brajalchak	17.698	627	11096.702
		30.Balughata	1.312	142	186.259
13	Potashpur-I	31.Amarshi	5.929	312	1849.820
		32.Manglamaro	5.564	274	1524.458
14	Potashpur-II	33.Pataspur	6.614	347	2294.885
15	Bhagawanpur-I	34.Bhagawanpur	5.407	320	1730.109
		35.Bhimeswari	5.040	311	1567.555
16	Egra-I	36.Kudi	2.230	183	408.138
17	Egra-II	37.Balighai	2.032	193	392.171
		38.Paniparul	18.624	491	9144.508
18	Khejuri-I	39.Henria	16.370	647	10591.424
		40.Kalagachia	2.214	206	456.051
19	Khejuri-II	41.Khejuri	6.628	375	2485.333
		42.Janka	3.126	238	744.038
		43.Boga	2.495	214	533.976
20	Bhagawanpur-II	44.Bhupatinagar	3.706	257	952.542
		45.Madhakhali	3.613	252	910.587
		46.Bajkul	9.508	441	4193.029
21	Ramnagar-I	47.Ramnagar	70.583	1066	75241.746
		48.Deulihat	15.532	473	7346.743
		49.Mirgoda	2.418	206	498.193
22	Ramnagar-II	50.Balisai	14.288	469	6700.880
		51.Kalindi	1.766	177	312.609
		52.Pichaboni	1.744	177	308.774
		53.Depal	2.869	232	665.650
23	Contai-I	54.Satmaile	3.563	261	929.893
24	Contai-II	55.Rasulpur	3.522	254	894.537

25	Contai-III	56.Marishda	1.458	162	236.158
		57.Nachinda	4.085	266	1086.512

APPENDIX – 3. LEVEL OF COMPOSITE MARKET FUNCTION DEVELOPMENT (BASED ON AVERAGE DEVELOPMENT INDEX OF UNDP AND AVERAGE MA

Sl. No	Block	Average Development Index(abdi)	Avg. Blockwise Market Potential(abmp)	(abdi*abmp)	Difference from mean	Difference from SD	Level of market development
1	Tamluk	0.473	6530.028	3088.659	11727.456	10436.225	VERY HIGH
2	Sahid Matangini	0.220	51604.059	11349.735	9271.827	7980.596	VERY HIGH
3	Panskura - I	0.587	23526.515	13805.364	1801.719	510.488	HIGH
4	Panskura - II	0.424	4335.534	1839.711	1339.836	48.606	HIGH
5	Moyna	0.399	1070.329	426.662	1010.750	-280.480	LOW
6	Nandakumar	0.362	10713.505	3879.627	640.682	-650.548	LOW
7	Chandipur	0.222	9544.812	2119.176	41.268	-1249.962	LOW
8	Mahishadal	0.350	5554.905	1946.607	-131.301	-1422.532	VERY LOW
9	Nandigram-I	0.182	14905.407	2718.591	-238.198	-1529.428	VERY LOW
10	Nandigram-II	0.132	395.248	52.169	-800.080	-2091.310	VERY LOW
11	Sutahata	0.233	4209.180	980.732	-1097.176	-2388.407	VERY LOW
12	Haldia	0.140	5641.480	790.766	-1287.142	-2578.373	VERY LOW
13	Potashpur-I	0.372	1687.139	627.385	-1306.994	-2598.225	VERY LOW
14	Potashpur-II	0.270	2294.885	618.619	-1450.524	-2741.754	VERY LOW
15	Bhagawanpur-I	0.313	1648.832	516.747	-1459.289	-2750.520	VERY LOW
16	Egra-I	0.284	408.138	115.949	-1480.321	-2771.551	VERY LOW
17	Egra-II	0.268	4768.340	1277.829	-1561.162	-2852.392	VERY LOW
18	Khejuri-I	0.140	5523.737	770.914	-1651.246	-2942.477	VERY LOW
19	Khejuri-II	0.138	1254.449	172.880	-1784.962	-3076.192	VERY LOW
20	Bhagawanpur-II	0.296	2018.719	597.588	-1820.945	-3112.176	VERY LOW
21	Ramnagar-I	0.123	27695.561	3417.745	-1905.028	-3196.259	VERY LOW
22	Ramnagar-II	0.147	1996.978	292.947	-1908.612	-3199.842	VERY LOW
23	Contai-I	0.276	929.893	256.963	-1961.959	-3253.190	VERY LOW
24	Contai-II	0.129	894.537	115.049	-1962.860	-3254.090	VERY LOW
25	Contai-III	0.253	669.050	169.296	-2025.739	-3316.969	VERY LOW
						MEAN	2077.908
						SD	3369.139