CHANGING PATTERN AND SPATIO-SECTORAL DISTRIBUTION OF WORKFORCE: A CASE OF PURULIA DISTRICT IN WEST BENGAL, INDIA

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Abstract

From the very beginning of the civilization people always changed their livelihood from time to time for sustaining their lifestyle. This change keeps imprint on occupational structure. Changes in occupational structure mean changes in the socio economic activities of the society. Purulia is known as backward district in comparison to other districts in West Bengal. The inhabitants of the district are lagging behind the modern technology and they mainly possess primitive traditional culture. This paper aims to show the distribution of population in different occupational structure and their pattern of specialization in each block in respect to the district. The data collected from District Census Handbook of Purulia-2001 and 2011. Collected data has been converted into percentage form to know the proportion and Location Quotient method has been used to show the specialization pattern of each block in specific economic activity. The analysis depicts that the inhabitants of maximum block of the district is engaged in primary economic activities. Though in recent years, it has been noticed that engagement in other services than primary activities has grown up. But the share is not enough. To enhance the economic level of the people several policy initiatives must be taken by the Governmental agencies.

Keywords: Economic Activities, Occupational Structure, Livelihood, Location Quotient

Introduction

The study of economic composition of population remains incomplete without its reference to the occupational composition of population. The occupation of an individual refers to his trade, profession, type of work etc.

Till world's agriculture remained at subsistence level, there was not much diversification of occupational structure. The diversification process gets further impetus from industrialization because it generates a variety of traditional jobs. Advancement in science and technology introduces an element of specialization in the occupational composition by creating highly specialized types of jobs. It modifies the occupational structure considerably (Chandna, 1983)

Changes in livelihood pattern largely influence the changes in occupational structure. This change is perceived by the increase and decrease in the distribution of population in different socio-economic activities in the society. This is done by calculating the percentage of people in different economic sectors. On the basis of involvement in different economic activities labourers are divided into different collar workers, such as red, blue, pink, white collars etc.

Purulia, a backward district of West Bengal mainly dominated by rural population, is now experiencing a slight economic transformation.

The distribution of population is not uniform in the district and the main source of economy lies in the primary sector. The analysis of occupational structure of an area simply reveals the standard of economy of that area. Occupational structure refers to the distribution of the population according to the different types of occupations. Occupations are generally classified as primary (agriculture, mining, fishing etc.), secondary (manufacturing industry, building and construction work etc.) and tertiary (transport, communication, banking etc.). An increasingly relatively high proportion of workers engaged in secondary activities, that is typical of modern world, is a symbol of economic metamorphosis in which there is an increasing use of machine and mechanical power and a high degree of national sophistication and a flowering of national prosperity is achieved when a large increment in tertiary sector takes place (Trewartha 1969).

Objectives of the Study

For taking policy initiatives to improve socio-economic level of a society, the study of occupational structure and distribution of population in different economic sectors is necessary. Keeping this issue in view, the present paper aims to show the occupational structure of the population of Purulia district and specialization or localization of each block in specific economic sector in respect to the whole district.

Data Base

For the purpose of analysis, Census data of two successive years 2001 and 2011 have been collected. Total population has been divided into two categories- workers and non workers. Among the workers there are two

types- main workers and marginal workers. Both of them are divided into 4 categories- cultivators, agricultural laborers, household industrial workers and other services.

Methodology

For getting the proportion of workers in each economic sector, the raw data collected from 2001 and 2011 Census have been converted into percentage form. In addition, to show the specialization or localization of each block in respect to the district, a popular statistical technique *Location Quotient* has been used.

$$LQ= e'/e \div E'/E$$

Where,

LQ=Location Quotient of a particular work in a particular block.

e'=Worker in specific category of occupation in a block.

e =Total worker in a block.

E'=Worker in specific category of occupation in a district.

E =Total worker in the district.

LQ depicts the relative concentration of an activity or work in block compared to the district. The values ranges between <1 to >1.

LQ >1= Indicates the area has greater share of the work than the region.

LQ 1 = Indicates that the area has a share of the work in accordance to its whole region

LQ <1= Indicates the area has lesser share of the work than the district. This shows quite different or diversified pattern of economic activity in that area.

Study Area

The study area (Fig.1) lies in the western part of the West Bengal. As per 2011 Census the total population of the district is 2930115 which are spreading over the 6259 sq. km. area. The district consists of 3 sub-divisions and 20 C.D. Blocks. In 2011, percentage of population in each block in respect to the district's total population is Neturia (3.46%), Santuri (2.68%), Raghunathpur-I (4.02%), Raghunathpur-II (3.88%), Para (6.85%), Hura (4.90%), Kashipur (6.83%), Purulia-I (5.16%), Purulia-II (5.78%), Jhalda-I (4.68%), Jhalda-II (5.06%), Bagmundi (4.63%), Jaipur (4.55%), Balarampur (4.71%), Barabazar (5.82%), Bundwan (3.24%), Manbazar-I (5.26%), Manbazar-II (3.32%), Puncha (4.23%), Arsha (5.28%).
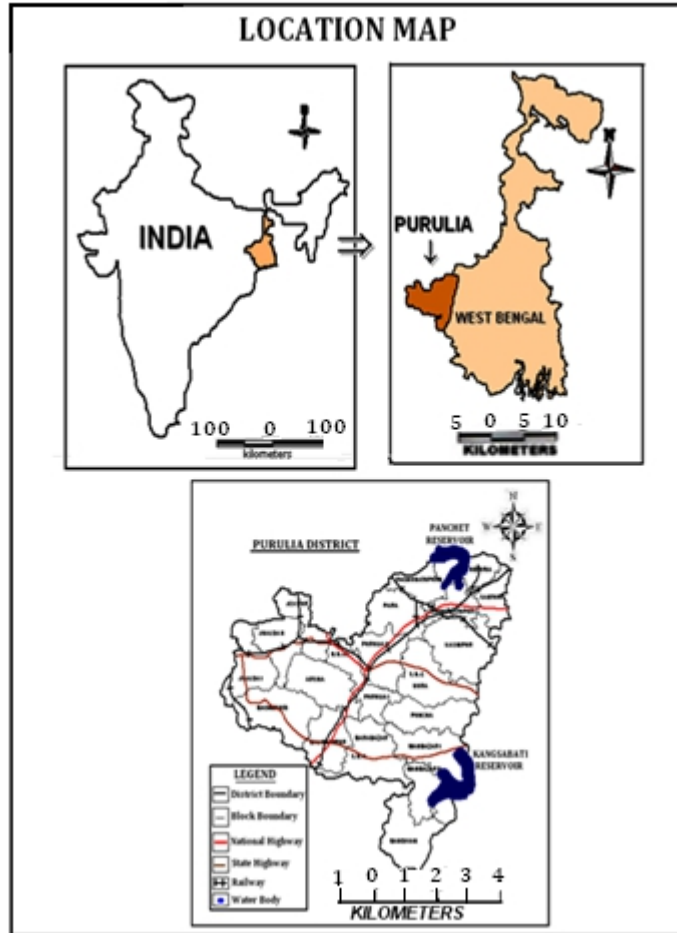
Fig. 1

Occupational Structure

The occupational structure of a society is the mix of different types of occupations found in a region. It also describes the distribution of people among those occupations, which gives some sense of the types of work predominate a society. Occupational structure is sociologically important because of its effect on social class and other forms of social inequality. The concept of worker was introduced for the first time in India in 1961. According to the Census of India, any person whose main activity was participation in any economically productive work either by his physical or by his mental activity was classified as worker (Census of India, 1971). According to Census report, excluding industrial categories of marginal workers, only industrial categories of main workers is considered under occupational structure. Census report defines who worked for 183 days or more in the year is known as main worker and those who have worked any

time in the year but have not worked major part of the year is known as marginal worker.

Changing Pattern of Workforce

It is clear from the Table-1 that in 2001 the share of cultivators, agricultural labourers, house hold industrial workers and other workers were 22.43%, 11.2%, 4.68%, and17.57% respectively. This clearly depicts that maximum portion of population is dependent on primary sector for earning their livelihood. As it is already mentioned that Purulia is a backward district, so maximum C.D. Blocks of south, west, south-east, south-western part of the district is agro-based. These are the remote and most technologically poor area. So, these areas are lagging behind in education, culture and in everything. They are not able to think beyond primitive societal culture. In the northern section of the district basically in Neturia, Kashipur, Raghunathpur-I & II some population are employed in secondary and tertiary sector which is marked by the sharp increase in the percentage of other services from 2001 to 2011 (Table-1).

Table-1: Changing Occupational Structure of Population in Purulia District (Percent)

Years	Cultivators	Agricultural Labourers	Household Industrial Workers	Other workers
2001	22.43	11.2	4.68	17.57
2011	13.92	10.73	3.68	19.21

Source: Calculated from District Census Handbook of Purulia, 2001 & 2011

The situation was much worst in the decade of 90s. Other services include manufacturing, trade & commerce, construction, transport etc. But this slight progress is not adequate in comparison with other districts of West Bengal.

Spatio-Sectoral Distribution of Workforce
Cultivator

Census report marked cultivators those who are engaged in cultivation of land owned or held from any person or institution or govt. with payment of money or share of cultivation. Most of the persons of Purulia district are engaged in cultivation. The figure is declined from 22.43% of 2001 to 13.92% in 2011 (Table.1). Percentage of cultivators was highest in Baghmundi (32.08%) in 2001 and in 2011 lowest percentage of cultivators is recorded in Jhalda-II (12.75%) (Table-2).

Table-2: Occupational Structure of Population in Purulia District, 2001 (Percent)				
Block	Cultivators	Agricultural labourer	Household Industrial	Other Services
Jaipur	24.78	5.01	6.17	13.84
Purulia-II	17.72	8.45	3.68	25.52
Para	15.82	10.86	2.73	25.41
Raghunathpur-II	15.38	9.14	1.69	24.27
Raghunathpur-I	13.3	8.53	2.61	30.89
Neturia	14.45	8.41	1.24	32.52
Santuri	21.42	7.79	1.98	23.42
Kashipur	16.47	10.23	2.25	23.24
Hura	23.71	14.78	2.29	13.93
Purulia-I	22.87	7.67	2.49	25.27
Puncha	23.44	16.62	2.42	13.37
Arsha	24.82	11.98	5.92	11.67
Jhalda-I	29.07	10.95	8.88	16.49
Jhalda-II	18.81	7.09	26.54	9.96
Bagmundi	32.08	11.75	1.81	12.06
Balarampur	21.55	10.83	2.46	26.1
Barabazar	28.68	9.79	1.78	10.19
Manbazar-I	22.78	13.4	1.85	12.67
Manbazar-II	26.87	19.14	2.71	6.93
Bundwan	27.27	21.67	5.22	9.17

Source: Calculated from District Census Handbook of Purulia, 2001

Jaipur (24.78%), Santuri (21.42%), Hura (23.11%), Purulia-I (22.87%), Puncha (23.44%), Arsha (24.82%), Jhalda-I(29.07%), Balarampur (21.55%), Barabazar (28.68%), Manbazar-I (22.78%), Manbazar-II (26.87%), Bundwan (27.27%) had recorded over 20% cultivators in its occupational structure. Though Baghmundi was on top of the list in the percentage of cultivators in 2001 but in 2011 its position is in the bottom of the list. The percentage of cultivators is 17.65% (Table-3).

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Table-3: Occupational Structure of Population in Purulia District, 2011 (Percent)				
Block	Cultivators	Agricultural labourers	Household Industrial	Other Services
Jaipur	19.12	5.54	5.89	18.79
Purulia-II	10.77	8.42	2.65	22.74
Para	10.88	9.71	1.68	28.25
Raghunathpur-II	7.73	4.92	1.65	33.85
Raghunathpur-I	9.05	9.04	1.71	38.06
Neturia	7.72	5.82	1.37	37.14
Santuri	12.04	8.63	1.94	29.22
Kashipur	11.1	8.43	1.29	24.37
Hura	14.87	14.82	1.33	14.66
Purulia-I	12.91	8.16	1.52	22.55
Puncha	16.9	17.07	0.95	10.99
Arsha	18.91	11.58	4.37	12.37
Jhalda-I	19.82	10.73	5.21	17.71
Jhalda-II	12.75	5.87	31.26	13.89
Bagmundi	17.65	11.81	1.11	12.34
Balarampur	13.07	7.99	1.36	28.29
Barabazar	19.11	14.16	1.19	12.5
Manbazar-I	10.9	12.3	0.81	12.44
Manbazar-II	14.84	18.43	0.82	6.32
Bundwan	11.28	16.01	2.69	11.01

Source: Calculated from District Census Handbook of Purulia, 2011

Table-4: Location Quotient of Occupational Categories in each Block of Purulia District, 2001				
Block	Cultivators	Agricultural labourers	Household Industrial	others services
Jaipur	1.13	0.46	1.23	0.77
Purulia-II	0.81	0.77	0.74	1.42
Para	0.72	0.99	0.55	1.41
Raghunathpur-II	0.7	0.83	0.34	1.35
Raghunathpur-I	0.6	0.78	0.52	1.72
Neturia	0.66	0.76	0.25	1.81
Santuri	0.97	0.71	0.4	1.3
Kashipur	0.75	0.93	0.45	1.29
Hura	1.08	1.34	0.46	0.77
Purulia-I	1.04	0.7	0.5	1.4
Puncha	0.23	1.51	0.48	0.74
Arsha	1.13	1.09	1.18	0.65
Jhalda-I	1.32	1	1.78	0.92
Jhalda-II	0.86	0.64	5.31	0.55
Bagmundi	1.46	1.07	0.36	0.67
Balarampur	0.98	0.98	0.49	1.45
Barabazar	1.3	0.89	0.36	0.57
Manbazar-I	1.04	1.22	0.37	0.7
Manbazar-II	1.22	1.74	0.54	0.39
Bundwan	1.24	1.97	1.04	0.51

Source: Computed by the authors

Table-5: Location Quotient of Occupational Categories in each Block of Purulia District, 2011				
Block	Cultivators	Agricultural labourers	Household Industrial	Other Services
Jaipur	1.36	0.5	1.47	0.99
Purulia-II	0.77	0.77	0.66	1.32
Para	0.77	0.88	0.42	1.49
Raghunathpur-II	0.55	0.45	0.41	1.78
Raghunathpur- I	0.65	0.82	0.43	2
Neturia	0.55	0.53	0.34	1.95
Santuri	0.86	0.78	0.48	1.54
Kashipur	0.79	0.77	0.32	1.305
Hura	1.06	1.405	0.33	0.77
Purulia-I	0.92	0.74	0.38	1.19
Puncha	1.21	1.55	0.24	0.58
Arsha	1.35	1.05	1.09	0.65
Jhalda-I	1.42	0.98	1.3	0.93
Jhalda-II	0.13	0.53	7.82	0.73
Bagmundi	1.26	1.07	0.28	0.65
Balarampur	0.93	0.73	0.34	1.49
Barabazar	1.36	1.29	0.3	0.66
Manbazar-I	0.78	1.12	0.2	0.65
Manbazar-II	1.06	1.68	0.21	0.33
Bundwan	0.81	1.46	0.67	0.58

Source: Computed by the authors

This declining trend in the percentage of cultivators from 2001 to 2011 is positively significant because it is an indication of economic growth.

Fig. 2

Jaipur (1.13), Hura (1.08), Purulia-I (1.04), Arsha (1.13), Jhalda-I (1.32), Bagmundi (1.46), Barabazar (1.3), Manbazar-I (1.04), Manbazar-II (1.22), Bundwan (1.24) revealed specialized pattern in cultivation having LQ>1 in 2001 and Puncha (0.23) alone shows a diversified economy (Table.4). In 2001 location quotient of Cultivator in case of Puncha was 0.23 which was the indicator of diversified economy and in 2011 Jhalda-II (0.13) captured the position of Puncha in terms of diversified economy (Table-5) & (Fig.2).

Agricultural Labourers

Agricultural labourers refer to those who work in other's land and gets wages. Wages may be given in terms of money or some small portion of crops by which it is difficult for them to meet their own needs. There is no right of agricultural labourers to take the land in lease or in contract. The percentage of agricultural labourers was 11.20% in 2001 and it declines to 10.73% in 2011 (Table-1). Though in Purulia the percentage of agricultural labourers is not very high. In some typical backward blocks such as Bundwan, Manbazar-II the figure was 21.67% and 19.14% in 2001 (Table-2) and in 2011 it is 16.01% and 18.43% (Table.3). Rest of the blocks has less percentage of agricultural labourers.
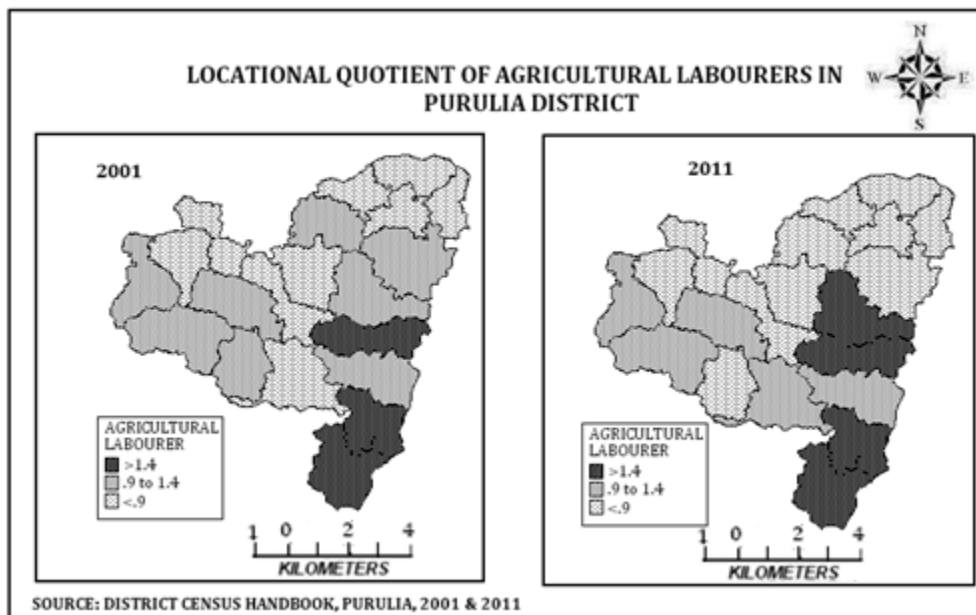

Fig.3

In 2001, specialization in this occupation was found in Hura (1.34), Puncha (1.51), Arsha (1.09), Jhalda-I(1.00), Baghmundi (1.07), Manbazar-I (1.22), Manbazar-II (1.74), Bundwan (1.97) (Table-4). Rest of the blocks

having <1 LQ indicates their lesser share of this activity in the district. Involvement in the other services is the main reason behind this lesser share. In 2011 Hura(1.405), Puncha (1.55), Arsha (1.05), Barabazar (1.29), Manbazar-I & II (1.12 &1.68), Bundwan(1.46) has shown localization of this activity in respect to the whole district (Table-5) & (Fig.3).

Household Industry Workers
Census report defined household industry workers are those who engaged in an industry run by the head or member of the family. May be it is in rural or may be in urban areas. Generally joint families run this industry. The proportion of household industrial workers is comparatively small in comparison with other categories of occupational structure. The percentage of household industrial workers was 4.68% in 2001 and now it is declined to 3.68% in 2011 (Table.1). The percentage in Jhalda-II block is exceptionally high i.e., 26.54%. Jhalda-I block had recorded 8.88% but in rest of the block the percentage is in and around 1 or 2 (Table.2). In 2011 the percentage is 31.26% in case of Jhalda-II and 5.21% in case of Jhalda-I (Table.3). The figure is more or less same in rest of the block like 2001.
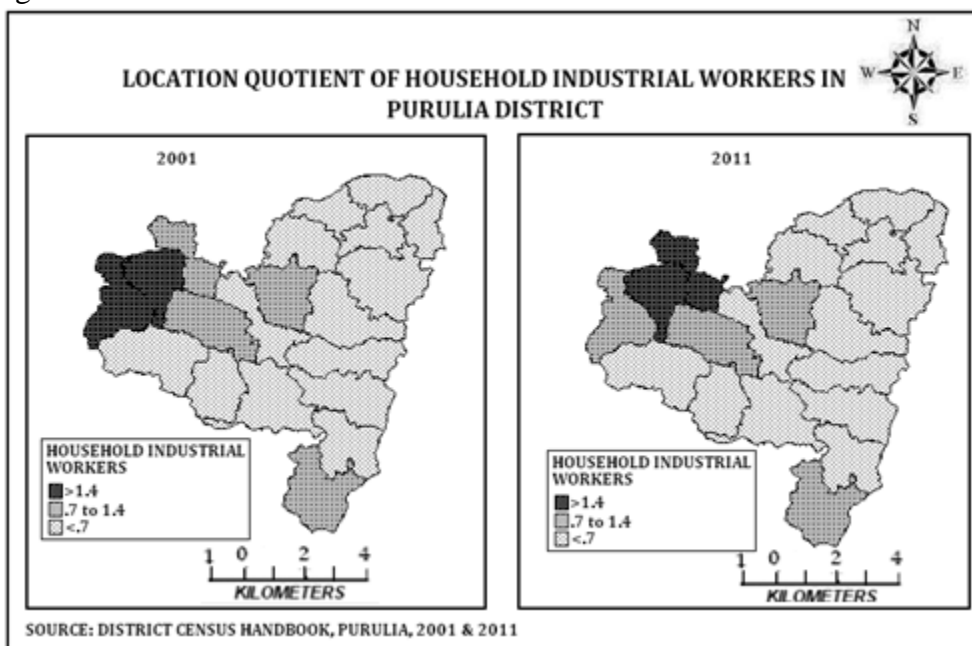

Fig.4

In 2001, specialized pattern of occupational structure was observed in Jaipur (1.23), Arsha (1.18), Jhalda I (1.78), Bundwan (1.04) and in Jhalda-II (5.31). Diversified economy was found in Neturia (0.25) (Table-4). In 2011, only Jaipur (1.47), Arsha (1.09), Jhalda-I (1.3), Jhalda-II (7.82) have shown the specialized pattern of this occupational category. Rest of the blocks has

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recorded lesser share of this activity in respect of the district. Diversified economy is observed in Manbazar-I (0.2) and Manbazar-II (.21). Because in these blocks percentage of agricultural labourers is high (Table-5) & (Fig.4).

Other Services

The Census considers all other economic activities such as construction, non-household industry, trade and commerce, hotels and restaurants, gas, water supply, plantation, livestock and fishing, electricity, public services, defense, education, health, transport, communication, storage etc. under this category. The percentage of workers in other services was 17.57% in 2001 but it is 19.21% in 2011 (Table.1). In Neturia, Raghunathpur-I & II, Kashipur, Balarampur, Purulia-I&II the share of this sector are high but in the backward remote blocks such as Manbazar-II, Baghmundi, Arsha, Barabazar the percentage is very low.
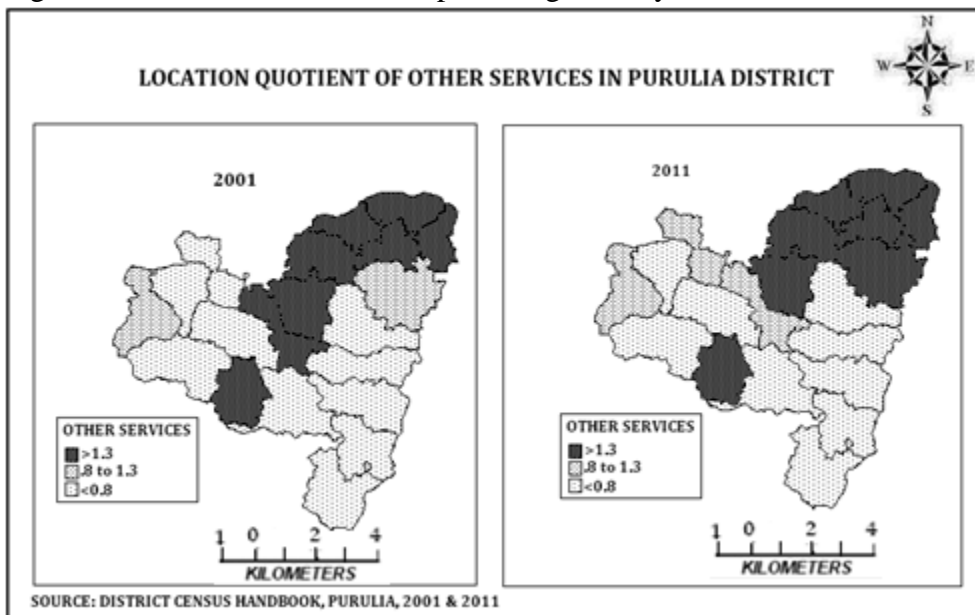

Fig. 5

The value of LQ is > 1 in Purulia-II, Para, Raghunathpur-II, Raghunathpur-I, Neturia, Santuri, Kashipur, Purulia-I & Balarampur which denotes the specialization or localization pattern of this activity (Table-4). In 2011, same areas has recorded higher LQ that means backward areas are still lagging behind and no such progress has been recorded in their occupational structure. Manbazar-II is that block which had shown diversified economical characteristics in 2001 and in 2011 also because this area is fully dominated by agricultural labourers and cultivators (Fig.5). Mainly huge concentration of tribal population is the main cause of the reluctance to join other services.

Conclusion

It is clear from the above discussion on occupational structure that in the earlier period people were very much engaged in cultivation but the ratio gradually decreasing towards 2011. The proportion of workforce in the other services is substantially higher in 2011 i.e. 19.21% than the cultivators (13.92%). This shift towards secondary and tertiary activities occurred due to realization of people about the value of education and services. Though this realization is only limited in some selected partially urbanized blocks i.e. in Neturia, Raghunathpur-I & II, Purulia-I & II, Balarampur, Para and Santuri. Rest of the blocks is still under primitive cultural dominance where the percentage of involvement in other services is still meagre especially in Manbazar-II. As we know Primary sector of economic activities not only include agriculture but also fishing and forestry. In Purulia district, fishing as a means of earning livelihood is almost invisible because of scarcity of water and dry climatic conditions of the area. On the other hand, means of livelihoods from forestry especially collection of non timber forest product is only limited to the tribal people who lives in the forest fringe area. They usually collect *Sal* leaves, *Kendu* leaves, and roots of *Satmuli* and *Anantamul* (local name), which have high market demand and small scale commercial value. By selling these products in the local market tribal people fulfill their daily needs. Otherwise, it is used as a supplementary job for the women of household who collects dry wood from nearby forest and sells at the local market. For example, in Arsha Block women collect residues of Sugarcane (after processing) and other dry woods and sells the same in the nearby market Sirkabad. But it is practiced in very small scale. So it cannot be considered as a main source of earning livelihood. Maximum forest covered area of the Purulia is situated in the rough and rugged topography which is completely inaccessible to the people where any type of forestry is not possible at all without any governmental assistance.

After analysing the Census database on people's involvement in different economic sectors it has been found that people of Purulia is mainly associated with cultivation. No such drastic change has taken place during 2001-11. But the matter of concern is that whether the people are reluctant to switch over to any other sector or there is no such alternative occupation to choose. Because the physiographic and climatic conditions of Purulia are not favorable for cultivation due to its undulating land, harsh climatic condition, lower ground water level, poor soil condition, insufficient irrigation facilities etc. In spite of these environmental constraints still people are compelled to choose cultivation as their main occupation. It is because of this fact; the economic status of Purulia is very low where in other districts of West Bengal only cultivation alone contributes significantly to increasing GDP and GNP respectively.

Under such circumstances, it would be appropriate for the State Government to take some major initiatives to introduce few other sources of earning livelihood to enhance the economic status of the people of Purulia, e.g. tourism. Tourism can be a prospective occupation for the people of Purulia, because of its unique scenic beauty. The famous Ayodhya hill, Bagmundi hill and falls, the Panchakot hill, Kangasabati dam and a number of historical sites etc. where eco-tourism can be easily flourished with the assistance from both the Central and State Government as well as private entrepreneurs.

References:
Census of India (1971): *Indian Census in Perspective*, Office of the Registrar General, Government of India, New Delhi, p.169.
Chandna, R.C. et al. (1983): "Changes in the Industrial Structure of India's Male Working Force 1961-81", *Population Geography*, Vol. 5, Nos. 1 & 2*, p.47.
District Census Handbook of Purulia: 1961, 1971, 2001 & 2011
District Gazetteer of Purulia, 1985
Trewartha, G.T. (1969): *A Geography of Population: World Patterns*, John Wiley & Sons, New York, p.171