



Changes in Occupational Structure of Population in Ballia district: A Geographical study

Kamlesh Verma¹ and V.K. Rai²

¹Research Scholar, Department of Geography, Institute of Science, BHU, Varanasi

²Professor, Department of Geography, Institute of Science, BHU, Varanasi

(Corresponding author's email: kamleshverma233@gmail.com)

Abstract

All the economic activities for livelihood is called occupation. The people who are involved in various economic activities form the occupational structure of any region. Occupation is an important activity of any population that affects the social, economic, cultural, and demographic characteristics of a region. The proportion of the economically active population in various occupations indicates the economic profile of various groups of the society of that region. This occupational structure varies temporally and spatially which defines the level of development of society and quality of life. The present study is based on Ballia District, lying in the fertile confluence zone of the Ganga and the Ghaghara river. Administratively the district is divided into 17 blocks which are taken as study units. The research aims to compare the working population, occupational structure and its spatial change existing in the district from the period of 2001 to 2011. Data for working population, main and marginal workers along with different occupations are obtained from District Census Handbook of Ballia. Statistical techniques and choropleth maps are used for the representation of occupational structure in the district and consequent changes in the last decade. This comparative analysis will help highlight the spatial variation in different occupations in the study area. This paper deals to analyse the spatial distribution of the working population and change in the occupational structure of Ballia district. The proportion of cultivators and agricultural labourers has decreased from 28.67% to 19.90% and 43.26% to 37.64% level in 2001 to 2011 respectively, while the proportion of household industry workers and other workers have increased from 5.40% to 7.09% and 24.28% to 35.17% level in 2001 to 2011 respectively in Ballia district.

Keywords: Occupation, Spatially, Blocks, Census, Main workers, Marginal workers.

Introduction

The study of occupational structure occupies an important position in the field of population geography. The occupation of any population is related to economic activities. The population engaged in remunerated occupational activities and earning a livelihood from these activities is called the economically active population. The occupational structure of a society is the product of many intimately related factors. The nature and variety of physical resources base, of course, lays down the basic foundation in the form of good land for agriculture, indented coast for fishing, thick vegetation cover for forestry, rich geological strata for mining, etc. (Chandana, 2010). Within a certain economic activity, a distribution in the proportion of the active population is called occupational structure.

More variations are found in the proportion of the population engaged in various occupations in a state or country. These variations depend upon the economic development of the country. The population of a region engages in various types of productive activities for earning income and production of goods and services. The occupation of any region depends upon the degree of economic development and sophistication. In a state with a less developed economy like Uttar Pradesh, the proportion of the population engaged in primary activities is higher as compared to secondary and tertiary and quaternary activities of the economy and this proportion grows as the population increases. With the economic development of any region, the proportion of the population engaged in higher-order economic activities (secondary, tertiary and quaternary) also increases. In developed industrial countries of America and Europe, nearly 50 to 60 per cent of the total population is economically active. This ratio is less than 40 per cent in India and district Ballia of Uttar Pradesh has less than 32 per cent of the working population. The major objectives of this research paper are to study comparatively the distribution of working population and changing the occupational structure of the working population in the study area from the period of 2001 to 2011.

Study area

Ballia district is the most eastern part of Uttar Pradesh. It is situated between the confluence zone of Ganga and the Ghaghra rivers. It is surrounded in the west by Mau, in the north by Deoria, in the north-east and south-east by Siwan district of Bihar and in the south by Buxar district and in the south-west by Ghazipur district. The geographical extent of this district is from 25°23' to 26°11' North latitude and from 83°38' to 84°39' East longitude. The total calculated area of Ballia district is 2981 km² and according to census

2011, the total population is 3239774 of which 51.64 and 48.36 per cent of the population consist of males and females respectively. The density of Ballia district is 1087 persons per square km. and the total number of households is 478420. For the administrative purpose Ballia district is divided into 6 tehsils and 17 blocks namely Siar, Nagra, Pandah, Nawanagar, Sohaon, Chilkahar, Hanumanganj, Belhari, Veruarwari, Bairiya, Dubahad, Reoti, Maniyar, Garwar, Bansdih, Muralichhapra, and Rasra (Figure 1).

Ballia district is located in the middle of two rivers, the Ganga and the Ghaghra and the soil of this region is very fertile, so the main occupation of this district is agriculture. Therefore, the greater proportion of the workers are engaged in agricultural works as cultivators and agricultural labourers, though the share of household industries and service sector has shown small growth in the last decade. The total working population in the study area is 31.30 per cent (2011) in which the population of main workers is 55.99 per cent and marginal workers are 44.01 per cent.

Database and methodology

This paper is based on secondary data collected from the District Census Handbook of Ballia for the census 2001 and 2011. The whole population of any area is divided into the working and non-working population. Further, the working population is categorized as main or marginal workers depending upon the number of days they work in a calendar year. The occupational structure is categorized into 4 categories i.e. cultivators, agricultural labourers, household industry workers, and other workers for both main and marginal workers of population. For this study, development blocks (comprising both rural and urban population) have been taken as a study unit for showing the distribution and share of different occupations in 2001 and 2011.

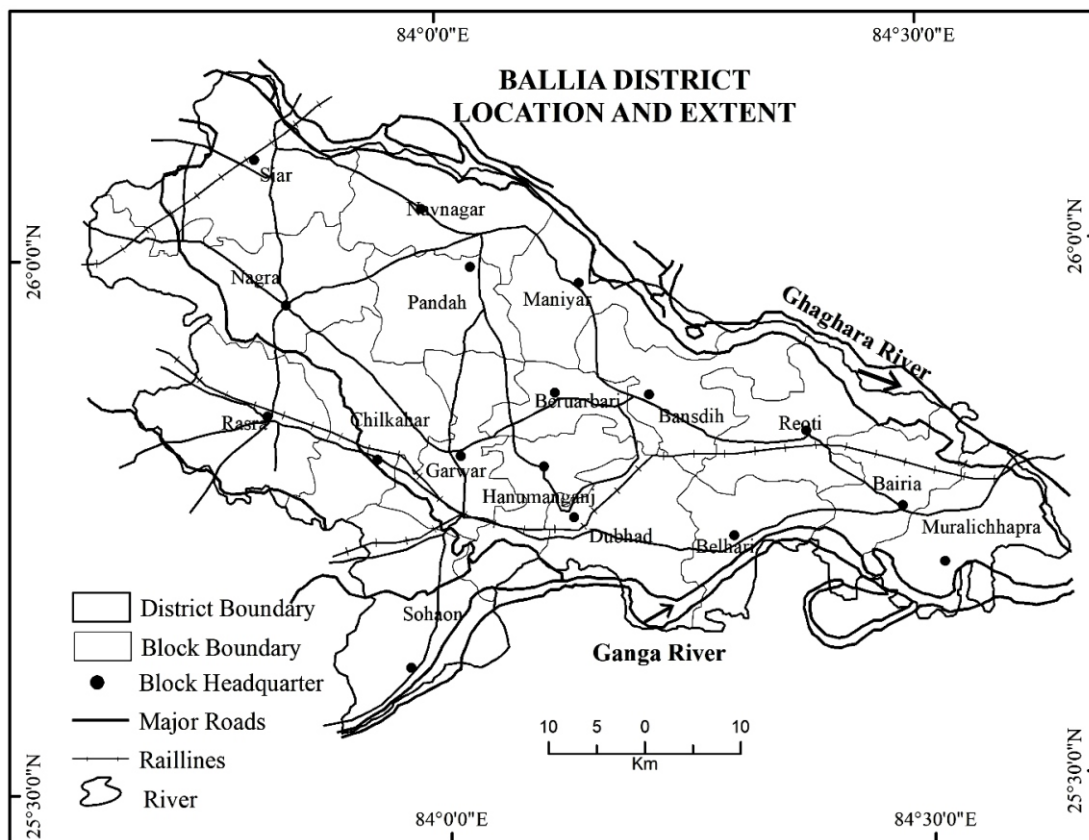


Figure 1: Administrative Division and Extent of Study Area

Decadal changes are also calculated for showing the growth in the individual occupation in any particular spatial unit (blocks). All data are tabulated and represented in a systematic way for this spatial analysis of occupational structure in the district. Statistical techniques of percentage and ratios are used for the comparative study of blocks. Relevant data is calculated on Spreadsheet software and choropleth maps are prepared with the help of ArcGIS software.

Result and discussion

Spatial variation and change in occupational structure

The population of an area is divided into the category of working and non-working

population. The working population is the population engaged in the work of production. The working population plays an important role in determining the social and economic status of a particular region. The higher proportion of the working population denotes the economic development of that region and the living standard of the people and quality of life in that region.

Working population

According to Census 2001, the total working population of Ballia district was 28.89% which increased to 31.30% in 2011 (Table 1). The highest proportion of the working population was reported in Maniyar (33.54%) and Rasra (35.40%) block in the year

2001 and 2011 respectively, while the lowest in (35.33%) blocks were included in very high Belhari (24.87%) and Bansdih (27.80%) block category (>34%) in 2011, although no block for the same period. The share of the working population was found very low (<28%) in the eastern blocks of the district (Belhari, Bansdih, Murlichhapra etc.) in 2001. In comparison, the western part recorded low to medium (30-32%) distribution. Rasra (35.40%) and Chilkahar

Table 1: Block-Wise working, Non-working population and Decadal Change (2001-2011)

Sl. No.	Blocks/ District	Working Population (%)		Decadal Change (%)	Non working population (%)		Decadal Change (%)
		2001	2011	2011-2001	2001	2011	2011-2001
1	Siar	29.18	32.02	27.68	70.82	67.98	11.70
2	Nagra	28.77	30.64	24.81	71.23	69.36	14.12
3	Navanagar	28.96	30.34	19.90	71.04	69.66	12.21
4	Pandah	28.48	29.63	21.07	71.52	70.37	14.47
5	Maniyar	33.54	30.78	4.42	66.46	69.22	18.50
6	Rasra	29.50	35.40	39.20	70.50	64.60	6.30
7	Chilkahar	31.26	35.33	31.89	68.74	64.67	9.80
8	Garwar	30.19	30.42	16.85	69.81	69.58	15.57
9	Sohaon	30.40	30.94	27.48	69.60	69.06	24.31
10	Hanumanganj	27.28	30.08	35.42	72.72	68.53	15.74
11	Dubahad	25.79	32.14	43.67	74.21	67.86	5.45
12	Belhari	24.87	32.50	54.18	75.13	67.50	6.01
13	Veruarwari	30.11	28.17	11.80	69.89	71.83	22.83
14	Bansdih	28.75	27.80	16.52	71.25	69.22	17.03
15	Reoti	31.06	32.30	25.92	68.94	67.70	18.94
16	Bairiya	27.18	31.17	32.19	72.82	68.83	8.94
17	Murlichhapra	26.85	29.50	22.69	73.15	70.50	7.59
	Total	28.89	31.30	27.15	71.11	68.44	12.95

Source: Based on Computation from District Census Handbook of Ballia of 2001 and 2011.

working population in the district was 27.15%. The highest decadal change was recorded in Belhari (54.18%) block due to new jobs such as bidi production, labourer engaged in fishing and poultry form etc., while lowest decadal change has been found in Maniyar (4.42%) block. 8 blocks recorded less growth in working population than the district average. Change in Maniyar and Bansdih block was included in very low (<10%) category, while Belhari and Dubahad block corresponded to growth in very high (>40%) category (Figure 2). The main reasons for positive growth in the working population are increasing infrastructure and education, the rising number of household industries and service sector in the study area.

Main workers

A person who has worked for the major part of the reference period (i.e. six months or more during the last one year preceding the date of enumeration) in any economically productive activity is termed as 'The main worker'. The proportion of main workers in the total working population was 63.00% in 2001, which decreased to 55.6% in 2011. The highest proportion of main workers was found in Dubahad (71.71%) and Hanumanganj

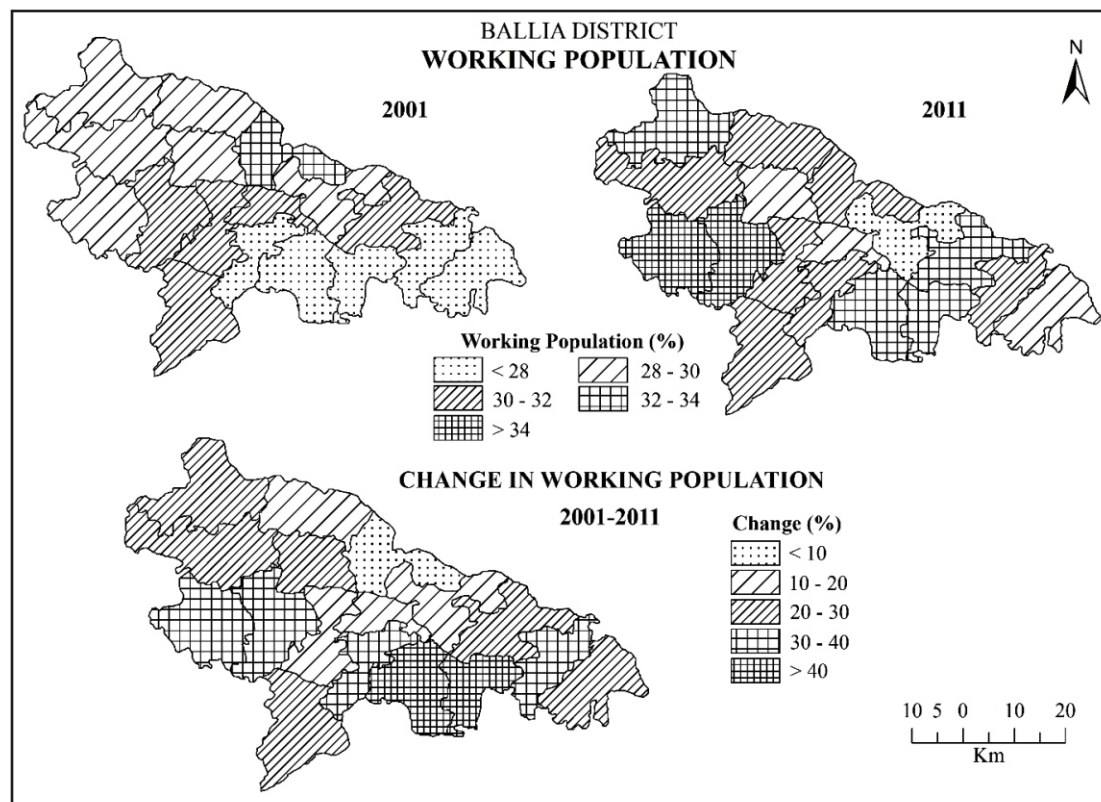


Figure 2: Distribution and change in Working Population, 2001-11

(65.78%) block in 2001 and 2011 respectively, while the lowest proportion was recorded in Siar (57.01% in 2001 and 48.05% in 2011) block in both the census year (Table 2). All blocks showed the decreased proportion of main workers in 2011 compared to 2001, indicating the increasing trend of non-permanent job in the last decade, although there has been a significant increase in the number of main workers in the district during 2001-11. In 2001, three blocks of Dubahad, Bansdih and Reoti had main workers in the very high (>67%) proportion of main workers in the working population, whereas no block was included in very high category in 2011 (Figure 3). The share of main workers was especially very low (<52%) and low (52-57%) in the north-western and western blocks of the district like Siar, Navanagar, Pandah and Nagra due to

predominance of agriculture and a higher proportion of agricultural labourers in such area who are usually non-permanent.

The decadal change of main workers was 13.92% from 2001 to 2011 in Ballia district. The highest and lowest change was observed in Belhari (51.11%) and Maniyar (-6.69%) block respectively. Three blocks of Navanagar, Veruarwari and Bansdih reported negative growth in main worker population from 2001 to 2011 (Figure 3), due to low literacy and lack of stable jobs. The change in southern and eastern blocks of Belhari (51.11%), Sohaon, Murlichhapra and Dubahad was reported high (20-30%) to very high (>30%) because these areas are affected by several floods and workers are engaging themselves in different works in addition to agricultural works.

Table 2: Block-wise Main, Marginal Workers and Their Decadal Change, (2001-2011)

Sl. No.	Blocks/ District	Main Workers (%)		Decadal Change (%)	Marginal Workers (%)		Decadal Change (%)
		2001	2011	2001-2011	2001	2011	2001-2011
1	Siar	57.01	48.05	7.60	42.99	51.95	54.30
2	Nagra	61.21	52.32	6.69	38.79	47.68	53.40
3	Navanagar	62.40	50.36	-3.24	37.60	49.64	58.30
4	Pandah	64.96	56.03	4.42	35.04	43.97	51.92
5	Maniyar	59.50	53.37	-6.34	40.50	46.63	20.22
6	Rasra	62.58	52.32	16.38	37.42	47.68	77.35
7	Chilkahar	57.23	51.48	18.64	42.77	48.52	49.62
8	Garwar	58.48	54.04	7.97	41.52	45.96	29.35
9	Sohaon	62.51	62.16	26.77	37.49	37.84	28.66
10	Hanumanganj	66.28	65.78	40.61	33.72	34.22	43.78
11	Dubahad	71.71	64.88	29.99	28.29	35.12	78.35
12	Belhari	66.66	65.33	51.11	33.34	34.67	60.30
13	Veruarwari	57.65	48.71	-5.53	42.35	51.29	35.40
14	Bansdih	69.79	52.13	-3.65	30.21	47.87	104.39
15	Reoti	69.92	61.23	10.27	30.08	38.77	62.30
16	Bairiya	60.57	52.54	14.66	39.43	47.46	59.10
17	Murlichhapra	61.71	60.49	20.28	38.29	39.51	26.59
	District	63.00	55.99	13.92	37.00	44.01	52.50

Source: Based on Computation from District Census Handbook of Ballia of 2001 and 2011.

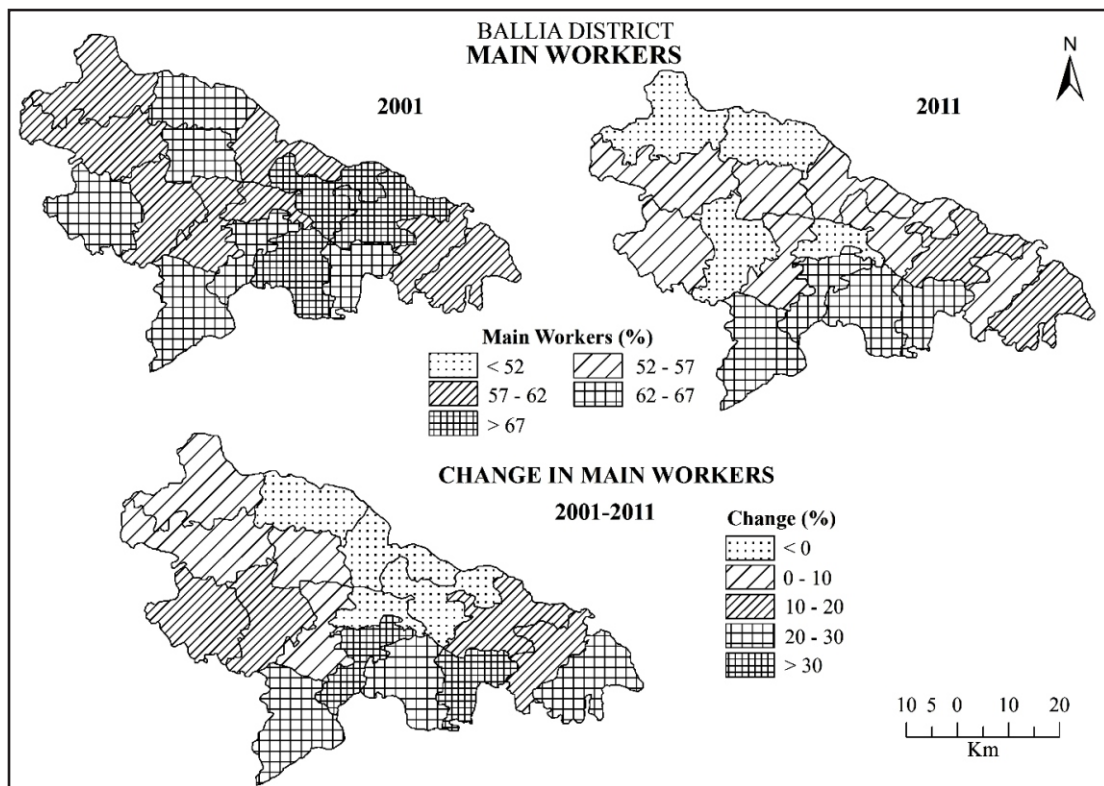


Figure 3: Distribution and Change of Main Workers, 2001-11

Marginal workers

A person who worked for 3 months or less but less than six months of the reference period (i.e. in the last one year preceding the date of enumeration) in any economic activity is termed as 'Marginal worker'. The proportion of marginal workers in the total working population increased from 37.00% in 2001 to 44.01% in 2011. Siar block had the highest proportion of marginal workers in 2001 and 2011, while Dubahad (28.99%) and Hanumanganj (34.22%) block reported the lowest proportion in 2001 and 2011 respectively (Table 2). Only Dubahad block was recorded in very low (<30%) category of marginal workers in 2011, whereas no block

was found in this category in the 2011 census, indicating the increasing share of marginal workers in the total working population. This can be attributed to illiteracy, increasing population and fluctuating nature of agricultural works in the district which stops workers from continuing their jobs for the whole year. As many as 10 blocks reported high (42-48%) to very high (>48%) share of marginal workers in 2011, which was only limited to 2 blocks in 2001 (Figure 4). Western and north-western parts of the district are especially increasing in marginal workers due to an increase in marginal farmers, agricultural costs and involvement in only petty activities like repairing works and weaving cloths etc.

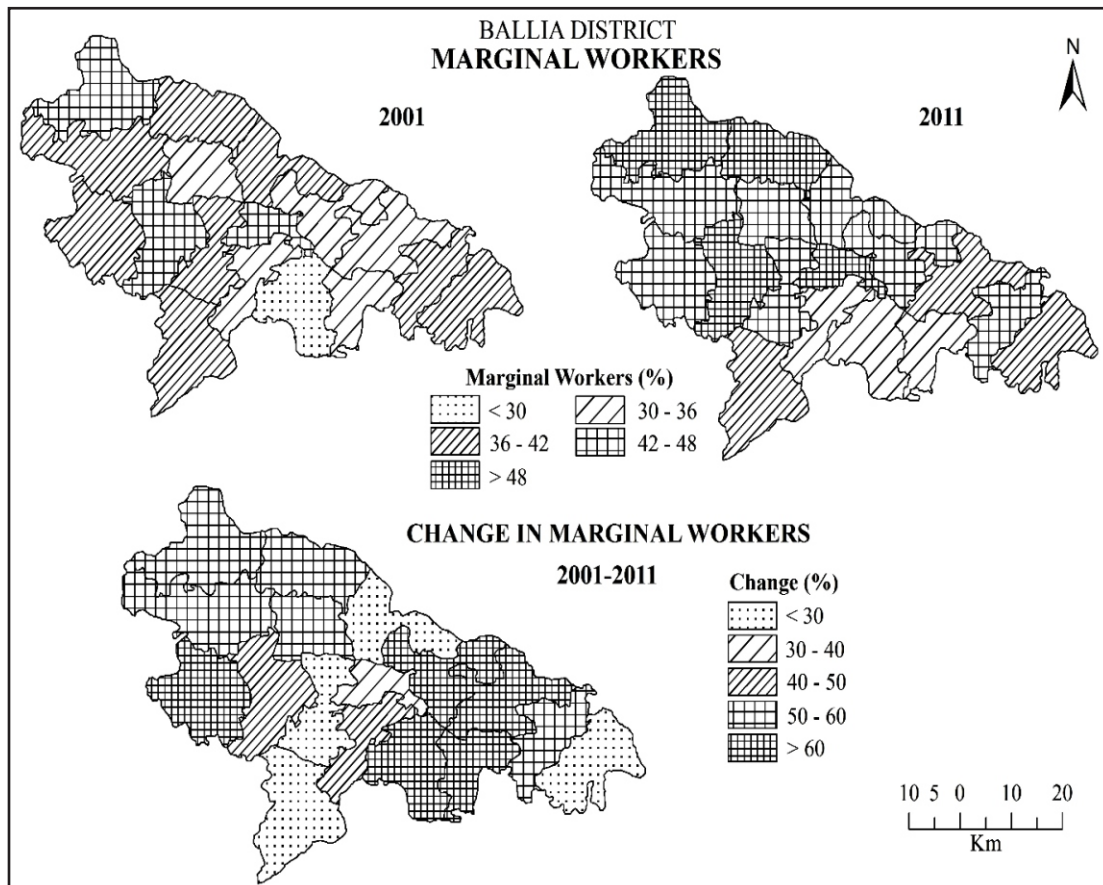


Figure 4: Distribution and Change of Marginal Workers, 2001-11

The decadal change of marginal workers was 52.50% from 2001 to 2011 in Ballia district. The highest and lowest change was recorded in Bansdih (104.39%) and Maniyar (20.22%) block respectively (Table 2 & Figure 4). Only 7 blocks recorded less growth in marginal workers than the district average. The least growth (very low <30%) was observed in Maniyar, Veruarwari, Garwar and Sohaon blocks which lies in the middle of the district. Overall the main reasons for the growth of marginal workers are lack of permanency in agriculture, low literacy and scarcity of household industries and service sector throughout the district.

Table 3: Block-wise Cultivators, Agricultural Labourers and Decadal Change, (2001-2011)

Sl. No.	Blocks/ District	Types of Workers (per cent of Total Working Population)					
		Cultivators (%)		Decadal Change (%)	Agricultural labourers (%)		Decadal Change (%)
		2001	2011	2001-2011	2001	2011	2001-2011
1	Siar	34.16	19.42	-27.41	41.55	37.50	15.23
2	Nagra	40.24	26.72	-17.13	40.47	37.71	16.29
3	Navanagar	29.27	21.04	-13.82	45.03	41.57	10.69
4	Pandah	43.20	27.80	-22.09	39.14	41.92	29.67
5	Maniyar	36.13	21.28	-38.52	48.50	46.58	0.27
6	Rasra	30.54	18.87	-13.97	39.54	34.71	22.18
7	Chilkahar	32.78	21.53	-13.38	39.77	41.50	37.60
8	Garwar	36.28	24.26	-21.86	35.99	29.90	-2.92
9	Sohaon	22.68	20.77	16.72	49.01	34.88	-9.29
10	Hanumanganj	21.03	11.31	-23.78	35.21	21.92	-11.79
11	Dubahad	13.70	11.01	15.45	34.38	25.52	6.65
12	Belhari	22.66	15.84	7.76	51.90	34.40	2.20
13	Veruarwari	22.24	20.65	3.85	53.08	40.35	-15.02
14	Bansdih	9.91	19.25	-21.39	45.86	46.77	31.53
15	Reoti	32.07	21.59	-15.22	48.67	47.38	22.56
16	Bairiya	29.62	19.60	-12.52	50.15	43.77	15.37
17	Murlichhapra	25.95	24.09	13.89	51.02	47.18	13.46
	District	28.67	19.90	-11.01	43.26	37.64	11.54

Source: Based on Computation from District Census Handbook of Ballia of 2001 and 2011.

Cultivators

A person is classified as cultivator if he or she is engaged in the cultivation of land owned or from government or private persons or institutions for payment in money, kind or share. Cultivation also includes effective supervision or direction in cultivation. Cultivation involves ploughing, sowing, harvesting and production of cereals, pulses and vegetables etc. (Census of India, 2011). According to the Census of India 2001, the total proportion of cultivators in the working population was 28.67 per cent which decreased to 19.90 per cent in 2011, indicating the increase in secondary and tertiary occupations in the district in the last decade. The highest proportion of cultivators was found in Pandah block (43.20% in 2001 and 27.80% in 2011), while the lowest proportion was found in Bansdih (9.91%) and Dubahad (11.01%) block in 2001 and 2011 respectively (Table 3). The proportion of cultivators in Bansdih and Dubahad blocks was very low (<15%) followed by Hanumanganj, Veruarwari, Belhari and Sohaon blocks which indicated medium (20-25%) distribution in 2001. A total of 10 blocks (mainly western and north-western part of the district) reported high to

very high (>30%) proportion of cultivators in working population in 2001, which has reduced to only 2 blocks in 2011, indicating a sharp decrease in the proportion of workers involved in cultivation. This decrease can be attributed to growing secondary and tertiary occupations in the district, subsistent agriculture, increasing infrastructure, education and urbanization. All 17 blocks of the study area witnessed a decrease in the share of cultivators in the last decade (Table 3 & Figure 5)

The decadal change in cultivator population is negative (-11.01%) in Ballia district. There were only five blocks (Veruarwari, Belhari, Murlichhapra, Dubahad and Sohaon) in which the change in cultivators was positive. The reasons for this positive change are productive landholdings, fertile soil and irrigational facilities. Bairiya, Chilkahar,

Nawanagar, Rasra, Reoti and Nagra blocks reported low negative change (-20 to -10%), while Bansdih, Garwar, Pandah, Hanumanganj and Siar blocks were having a medium negative (-30 to -20%) growth (Figure 5). Maniyar (-38.52%) block had the highest negative growth in cultivator population, this is due to the inclination of youth in education and service sector and urban migration among others.

Agricultural labourer

A person who works on another person's land for wages in cash or kind or share is regarded as an agricultural labourer. She/he has no risk in the cultivation but merely works on another person's land for wages. An agricultural labourer has no right of lease or contract on land on which she/he works (Census of India, 2011). The proportion of agricultural labourers in the total working

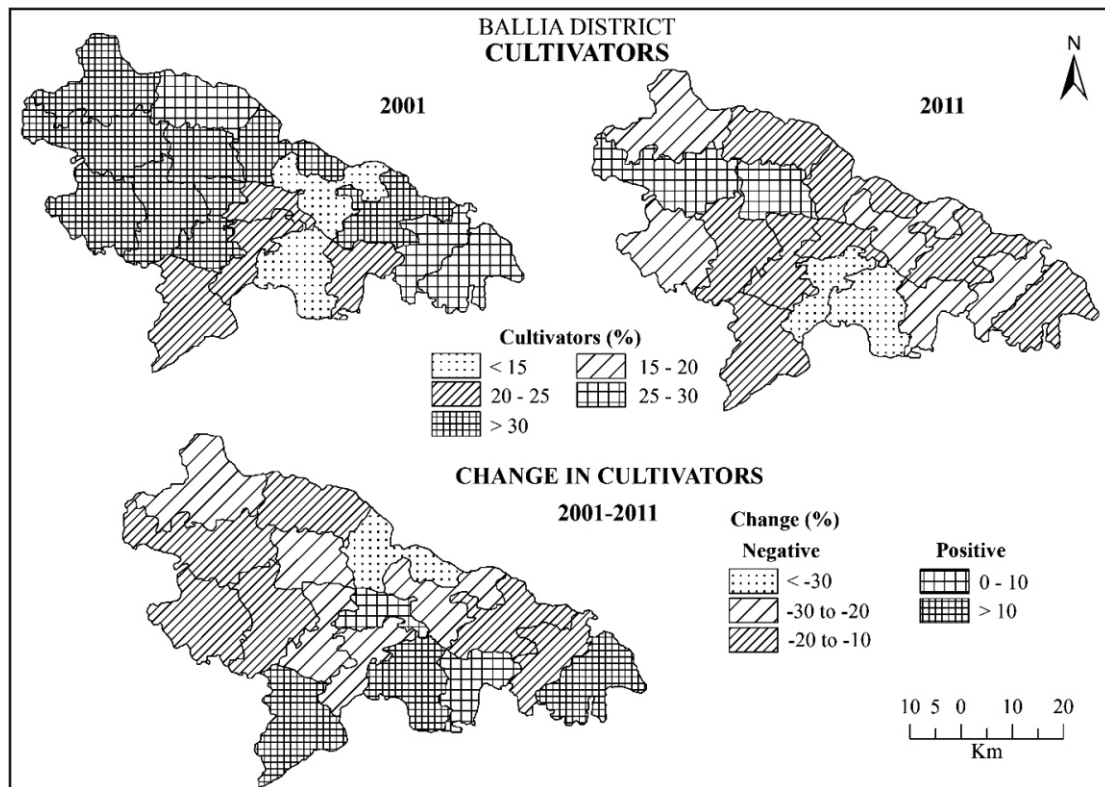


Figure 5: Spatial Distribution and Change in Cultivators, 2001-11

population was 43.26 per cent in 2001 that decreased to 37.64 per cent in 2011 (Table 3). The lowest proportion of agricultural labourers was found in Dubahad (34.38%) and Hanumanganj (21.92%) in 2001 and 2011 respectively, because of the presence of tertiary activities and decreasing agricultural activities. The highest proportion of agricultural labourers was reported in Veruarwari (53.08%) and Reoti (47.38%) blocks in 2001 and 2011 respectively, due to the predominance of agriculture and lack of service sector. Only 3 blocks of Pandah, Chilkahar and Bansdih reported a greater proportion of agricultural labourers in their working population from 2001 to 2011. Eastern blocks (Murlichhapra, Bairiya and Belhari) of the district corresponded to very high (>50%) level of agricultural labourers in 2001, while the southern blocks (Garwar, Hanumanganj, Sohaon, Dubhad, Belhari and Rasra) were having very low (<35%) share of these workers (Table 3 & Figure 6). The decadal change in agricultural

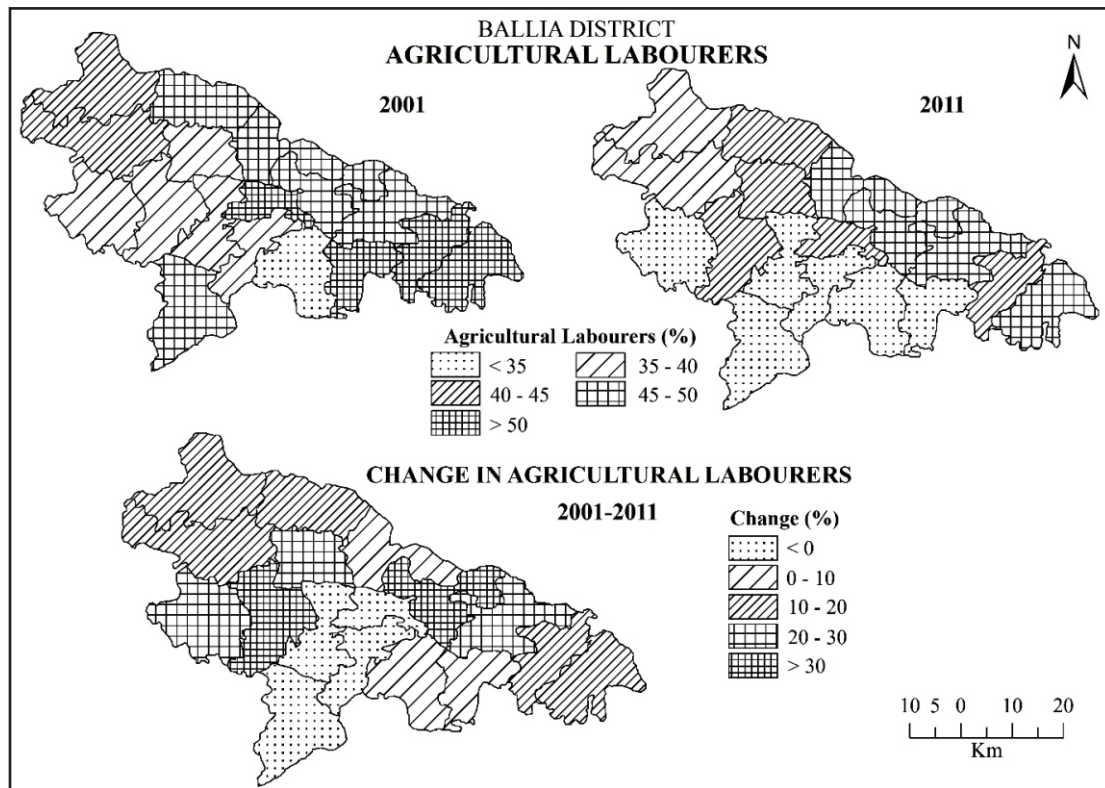


Figure 6: Distribution and Change of Agricultural Labourers, 2001-11

labourers was 11.54% from 2001 to 2011. The highest decadal change was observed in Chilkahar (37.60%) block while the lowest was in Veruarwari (-15.02%) block. 4 blocks (Sohaon, Garwar, Hanumanganj and Veruarwari) showed negative growth in agricultural labourers in the last decade (Figure 6), the reason being the modernization of agriculture, urban migration and growing service sector in nearby areas. 8 blocks were having less growth than the district growth regarding these labourers. Chilkahar and

Bansdih blocks showed very high (>30%) predominance of agriculture and relatively growth in agricultural labourers due to lower literacy.

Table 4: Block-wise Household Industry Workers, Other Workers and Decadal Change, (2001-2011).

Sl. No.	Blocks/ District	Types of Workers (per cent of Total Working Population)					
		Household Industry Workers		Decadal Change (%)	Other Workers		Decadal Change (%)
		2001	2011	2001-2011	2001	2011	2001-2011
1	Siar	3.92	7.08	130.38	26.56	36.01	73.08
2	Nagra	4.84	6.77	74.67	18.06	28.80	99.06
3	Navanagar	5.50	7.19	56.71	24.88	30.21	45.60
4	Pandah	4.30	6.40	80.27	17.04	23.88	69.60
5	Maniyar	3.62	5.34	53.76	16.29	25.54	63.70
6	Rasra	5.53	9.60	141.50	27.42	36.82	86.92
7	Chilkahar	4.93	8.32	122.48	14.78	28.65	155.64
8	Garwar	6.51	7.40	32.92	23.70	38.43	89.50
9	Sohaon	7.53	6.92	17.16	25.69	37.43	85.75
10	Hanumanganj	7.10	8.07	60.83	39.65	56.41	101.58
11	Dubhad	8.66	8.17	35.57	46.88	55.30	69.47
12	Belhari	6.98	7.85	73.40	23.42	41.91	175.86
13	Veruarwari	4.39	5.00	27.25	24.24	34.01	56.87
14	Bansdih	4.28	5.11	53.98	20.81	28.87	78.92
15	Reoti	4.48	5.10	43.32	15.12	25.94	115.96
16	Bairiya	4.54	6.91	101.27	19.14	29.71	105.19
17	Murlichhapra	4.15	6.43	90.16	18.88	22.30	44.92
	District	5.40	7.09	68.07	24.28	35.17	85.66

Source: Based on Computation from District Census Handbook of Ballia of 2001 and 2011.

Household industry workers

The household industry is defined as an industry conducted by one or more members of the household at home or other rural areas and only within the precincts of the house where the household lives in urban areas. The industry should not be run on the scale of a registered factory which would qualify or has to be registered under the Indian Factories Act and should be engaged in manufacturing, processing, servicing and repairs of goods. The activity relates to production, processing, servicing, repairing or making and selling of goods (Census of India, 2011). According to the census 2001, the proportion of household industry was 5.40 per cent which increased to 7.09 per cent of the total working population in 2011. The highest proportion of these workers

were reported in Dubhad (8.66%) and Rasra (9.60%) blocks in 2001 and 2011 respectively (Table 4 & Fig. 7). Similarly, the lowest proportion was found in Maniyar (3.62%) and Veruarwari (5.00%) in 2001 and 2011, which shows their dependence on agriculture. The increasing workers in this category during the last decade shows that smaller households activities and production has increased in the district. All blocks reported increased in household workers except Dubhad and Sohaon blocks. Western blocks (Siar, Pandah, Rasra and Chilkahar) of the district were having a much higher proportion of these workers in 2011 than their previous proportion, due to closeness with urban centres of Belthara Raod and Sikanardpur, where more household industries have set up like flowers and fragment

perfume industry of Sikandarpur and Sarees, & Figure7).
 are commonly made in Belthara Road (Table 4 The decadal change from 2001 to 2011 in

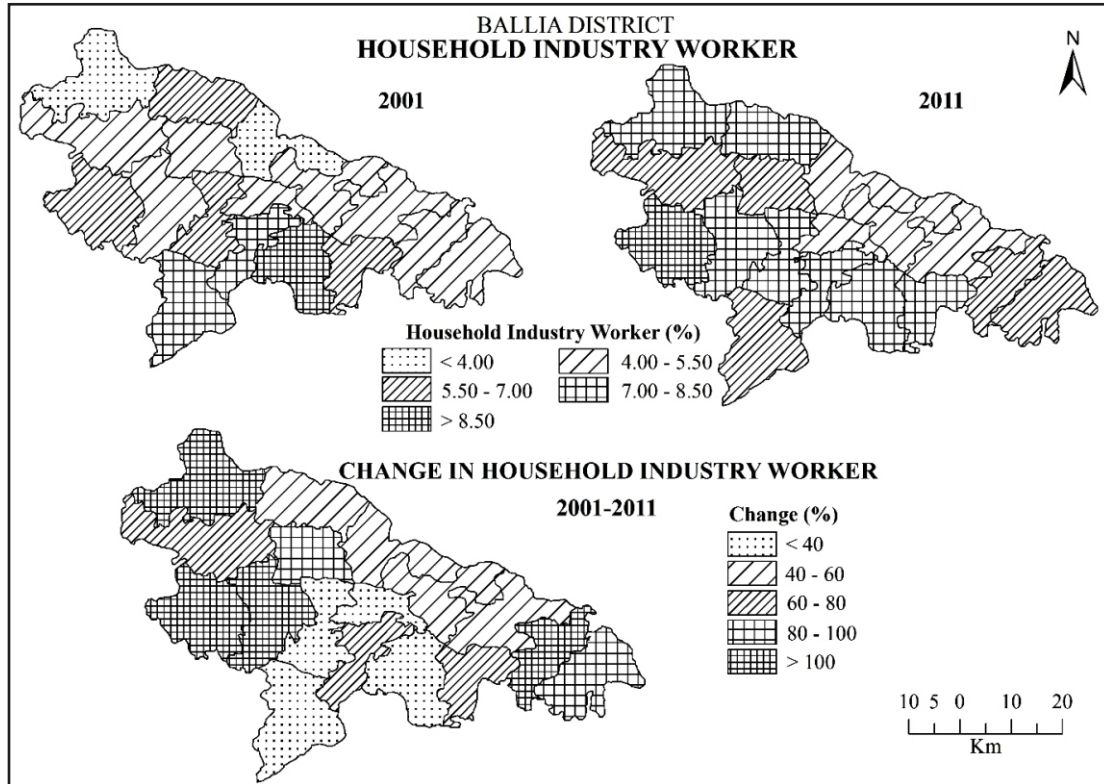


Figure 7: Distribution and Change of Household Industry Worker, 2001-11

Ballia district in terms of household industry workers was 68.07 per cent, indicating positive growth. 8 blocks reported higher growth than the district average of 68.07%, with Rasra (141.50%) block showing the highest growth, while Sohaon (17.16%) being the lowest growing block in the district (Figure 7). There were six blocks (Pandah, Murlichhapra, Siar, Rasra, Chilkahar and Reoti) in which the decadal change of household workers was high (80-100%) to very high (>100%), the main reason of this higher growth can be attributed to the nature of economic activities moving rapidly from agriculture to industries, good infrastructure and availability of market and town. The decadal change in the middle part of the district of Sohaon, Garwar, Dubahad and

Veruarwari blocks was very low (<40%) due to the availability of fertile land and other tertiary occupation.

Other workers

A person, who has been engaged in some economic activity during the last year of reference period but not as a cultivator or agricultural labourer or worker in Household Industry. The type of workers that come under this category includes all government servants, municipal employees, teachers, factory workers, plantation workers, those engaged in trade, commerce, business, transport, banking, mining, construction, political or social work, priests, entertainment artists, etc (Census of India, 2011). The proportion of other workers in the total population in Ballia district was

24.28 per cent in 2001, which increased to 35.17 per cent in 2011 (Table 4). The highest proportion of other workers was found in Dubahad (46.88%) and Hanumanganj (56.41%) blocks in 2001 and 2011 respectively. This high proportion indicates the presence of greater tertiary activities in these blocks, also proximity to the urban centre has contributed to these areas. The lowest proportion of other workers was found in Chilkahar (14.78%) and Murlichhapra (22.30%) blocks in 2001 and 2011 as these blocks corresponded to higher cultivators and agricultural labourers. All block reported an increased proportion of other workers in the last decade. 13 blocks reported very low (<20%) and low proportion (less than 26%) in 2001, which reduced to only 4 blocks in 2011. Belhari and Hanumanganj had other workers upwards of 50% of the total working population in 2011 (Table 4 & Figure 8).

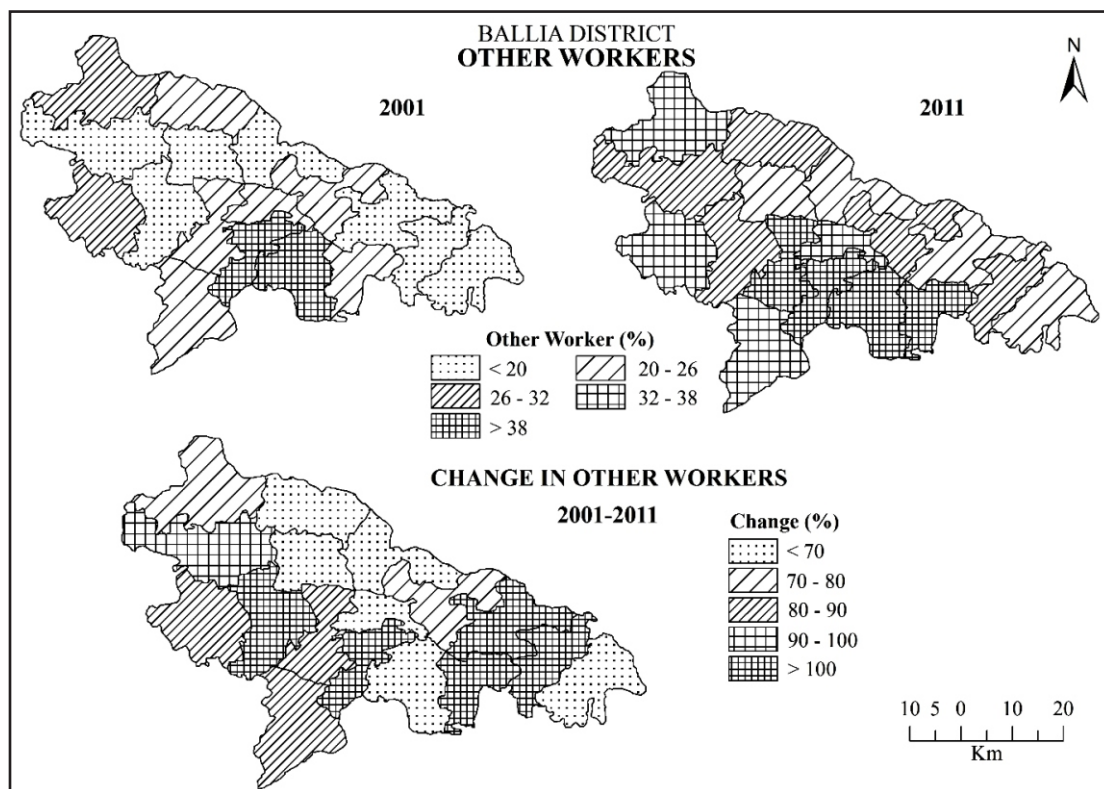


Figure 8: Distribution and Change of Other Worker, 2001-11

The decadal change in Ballia district in terms of other workers was 85.66 per cent from 2001 to 2011. The highest and the lowest decadal change were respectively in Belhari (175.86%) and Murlichhapra (44.92%). Six blocks of Murlichhapra, Dubahad, Veruarwari, Maniyar Pandah and Nawanagar had very low (<70%) growth, while the decadal change of other workers in the eastern part (Bairiya, Reoti, Belhari) and middle of district Hanumanganj and Chilkahar is very high (>100%) (Table 4 & Fig. 8). The main reason for these high positive changes in the engagement of workers in petty tertiary activities like van repairing, cleaning, public and private works etc.

Conclusion

By the analysis of the main and marginal workers of Ballia district, we found that the main worker which was 63.00 per cent in 2001 has reduced at the level of 55.99 per cent in 2011. It is clear that the proportion of main workers is decreasing because some of the small cottage industries have closed or not working in good condition that's why the duration of work is decreasing and the proportion of marginal workers is increasing because most of the people are engaged in building construction, fishing, poultry form, vender, tailor etc that provide for few days work. The total population of cultivators are growing but the proportion of cultivators of the total working population is decreasing because of the low landholding of the peasant, and due to low agricultural income, many cultivators are abandoning farming. Similarly, the proportion of agricultural labourers is decreasing in all blocks. But there is a good thing that the proportion of household industries workers and other workers has grown up because secondary and tertiary occupations have increased of the total working population during 2001 to 2011, which are a very auspicious indication for the economic development of the district.

Reference

- Chandana, R.C., 2010, *Geography of Population: Concepts, Determinants and Patterns*, Kalyani Publisher, New Delhi, pp.308-331.
- District Census Handbook of Ballia District, 2001 and 2011, Village and Town Wise Primary Census Abstract, Directorate of Census Operations, Uttar Pradesh.
- Karthikesan, K., Emayavaramban, V., Kanndasan, K., and Vinoothakanna, S., 2018, A Geographical Analysis of Occupational Structure in Nagapattinam District, Tamil Nadu, *Research Review International Journal of Multidisciplinary*, 3(10), pp. 565-571.
- Khadke, P.A., Kharat, R.U., and Kamble, K.R., 2019, Changing Occupational Structure in Aurangabad City, *International Journal of Research in Engineering IT and Social Science*, 9(3), pp.25-32.
- Kumar, P., Kumar, N., and Singh, J., 2016, Changes in Occupational Structure of Rural Population: A Study of Jaunpur District (Uttar Pradesh), *Uttar Bharat Bhoogol Patrika*, 46(2): pp.17-25.
- Reddy, A.A., and Kumar, P., 2009, Occupational Structure of Workers in Rural Andhra Pradesh, *Journal of Indian School of Political Economy*, 18(1&2), pp. 77-91
- Singh, R.P., 2015, Spatial Pattern of Occupational Structure in Haryana, *Paripex-Indian Journal of Research*, 4(6), pp. 418-420.
- Bhutia, S., 2014, A Spetio- Temporal Study on Occupational of Population in Darjeeling District of West Bengal, *Research Journal of Social Science & Management*, 4, pp 232-240.
- Rai, G., and Kumari, B., 2012, Occupational Structure of Chiraigaon Development Block, Varanasi District. *National Geographical Journal of Indi*, 58, pp. 34-40.
- Patidar, H., and Singh, M.B., 2010, Occupation Structure of Tribal Population in South East Rajsthan: A Geographical Analysis. *National Geographical Journal of India*, 56(1), pp. 31-42.