

Spatial Pattern of Workforce Participation and Occupational Structure in Mizoram: A Study at Block Level

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ABSTRACT: This paper is an attempt to assess the spatial variation of workforce participation and occupational structure of Mizoram. A detail analysis of data collected from Primary Census Abstract, Mizoram 2011 is presented at Rural Development Block level which will provide a deeper understanding and interpretation of the level and stages of economic development and gives information regarding the productive capacity of the State.

KEYWORDS: Workforce Participation Rate, Rural Development Block, Female Work Participation, Gender Disparity, Occupation Structure,

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I. INTRODUCTION:

The analysis of workforce participation and occupational structure is considered important because it determines the level of socio- economic development of a region. Workforce participation rate can be defined as the number of persons involve in economically productive activity. The quality and quantity of workforce greatly influence the productive capacity of any nation. Occupational structure refers to the amount of workforce engaged in various sector of economy. Colin Clark rightly stated that economic development and occupational structure are closely related and changes in occupational structure is necessary in order to experience economic progress (Clark, 1940) The spatial pattern of occupation structure in a region is influence by a number of factors including physical, social and even economic growth, thus resulting an uneven pattern of development.

II. THE STUDY AREA:

The study area Mizoram is located in the North Eastern corner of India, lying between 21°56' N - 24°31'N latitudes and 92°16'E - 93°26'E longitudes. The total geographical area of the State is 21,087 sq km which makes it the fifth smallest state in India. Before it became a full fledged State in 1987 it was under the administration of Assam. It is a landlocked State bounded on all sides by land. It shares domestic border with Tripura, Assam and Manipur; and international border with Myanmar on the East and South and Bangladesh on the West. According to 2011 Census, the total population of Mizoram was 10, 91,014, characterised by highly literate, highly urbanised but predominantly agrarian society. About 90% of the population belongs to tribal group of different origin. The state is divided into 8 districts (2011) and further sub divided into 26 Rural Development Blocks for administrative, social and economic development purposes.

III. METHODOLOGY:

The present study is mainly based on secondary data obtained from Primary Census Abstract, Mizoram 2011. For a detail spatial analysis, Rural Development Blocks have been taken as a unit of study. The collected data has been tabulated, processed and analysed with the help of statistical techniques such as simple percentage, Sopher's Disparity Index etc. The formula used is as under:-

i) For the measurement of Work Participation Rate:

$$\text{Crude Work Participation Rate} = \frac{\text{Total Workers}}{\text{Total Population}} \times 100$$

Total Population

(The same formula is used for calculating Main and Marginal Work Participation

ii) For calculating disparity between male/ female disparity in work participation:-

$$\text{Sopher's Disparity Index} = \log \left(\frac{X_2}{X_1} \right) + \frac{\log (100 - X_1)}{\log (100 - X_2)}$$

Where X1= % of 1st variable

X2 = % of 2nd variable.

Various tables and Maps have been prepared to represent the processed data. ArcGIS 10.3.1 is used for map preparation.

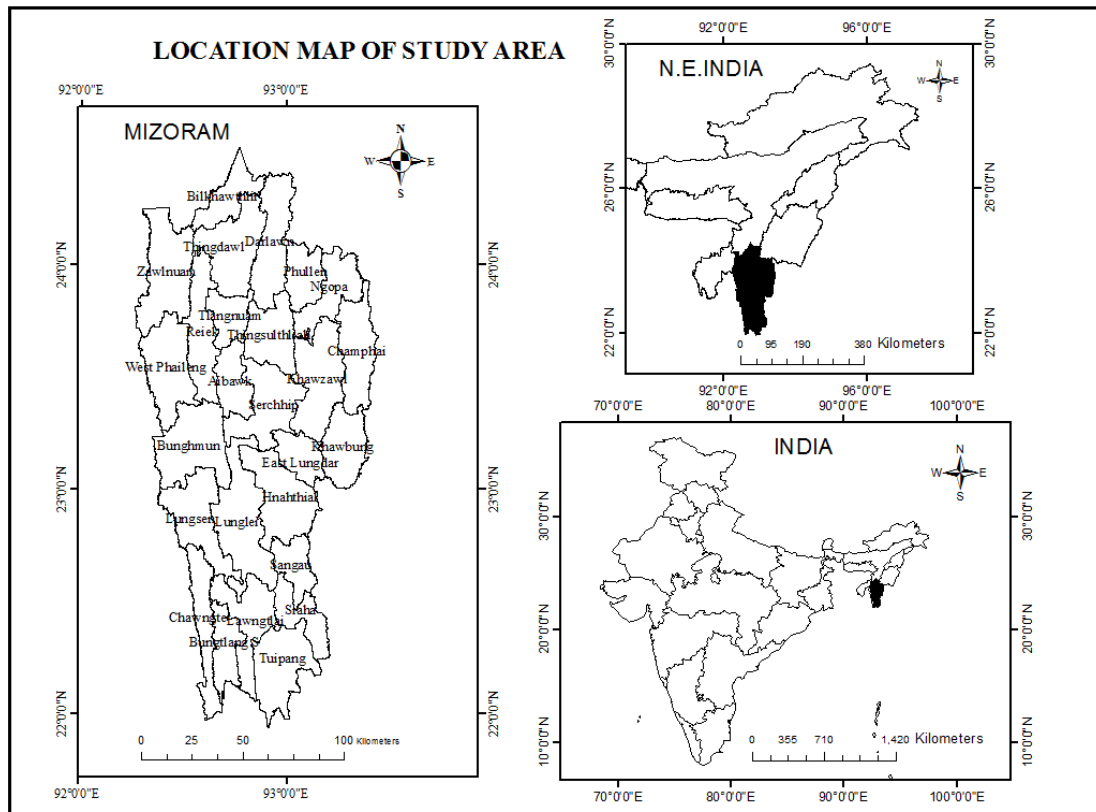


Fig.1: Location Map

SPATIAL PATTERN OF WORK PARTICIPATION RATE:

According to 2011 Census, the total Work Participation Rate in India is 39.8% and the corresponding figure for Mizoram is 44.35%, which is slightly higher than the national average. A closer inspection at the distribution of workforce participation rate reveals an uneven pattern across the entire State. The number of population actively engaged in economic activity is highest in Hnahthial RD Block at 73.3%, which is followed by Aibawk 54.13% and E.Lungdar 53.48%. Apart from these three RB Blocks, there are five other blocks that have work participation rate of more than 50%. All the RD Blocks with more than 50% work participation rate are more or less concentrated in the central part of the State. At the lower end of the scale, Sangau Block has the lowest percentage of 31.09%, followed by Siaha 32.73%, Lawngtlai 35.45% and Tuipang 37.21%/. All these four blocks are located in the southern most part of the State, bordering each other.

The Census of India further classified workers into two categories namely main workers and marginal workers. Those workers who worked for more than 6 months in one year before the date of enumeration are classified as Main workers and those who worked for less than six months in a year preceding the date of enumeration are classed as Marginal workers. The percentage of population recorded as Main Workers in Mizoram is 37.83% which is higher than the national average of 29.94%. East Lungdar has the highest number of main workers i.e 50.85% of total population. It is interesting to note that 22 RD Blocks recorded more main workers than the national average. The least performing blocks in this category are Tuipang 25.41%, Siaha 26.31% and 27.88%. In case of marginal workers, the proportion ranges from 33.37% in Hnahthial to 2.13 % in Reiek. The average for the whole State in this category stands at 6.52%. There are 8 RD Blocks which have higher percentage of marginal workers than the State’s average

**TABLE-1: BLOCK WISE WORK PARTICIPATION RATE IN MIZORAM, 2011
(in percentage)**

Sl. No	Name of RD Blocks	Work Participation Rate					Gender Disparity
		Persons	Male	Female	Main	Marginal	
	MIZORAM	44.35	26.49	17.87	37.83	6.53	0.22
1.	Zawnuam	43.63	27.12	16.51	39.07	4.56	0.28
2.	West Phaileng	43.62	27.57	16.04	40.69	2.92	0.30
3.	Reiek	52.94	29.92	23.03	50.81	2.13	0.16
4.	Thingdawl	47.63	28.18	19.45	38.38	9.25	0.21
5.	Bilkhawthlir	41.66	26.35	15.31	33.18	8.48	0.30
6.	Darlawn	49.31	28.16	21.15	44.79	4.52	0.16
7.	Phullen	50.61	29.18	21.43	43.21	7.4	0.18
8.	Aibawk	54.13	30.39	23.74	49.56	4.58	0.15
9.	Tlangnuam	41.65	25.30	16.35	35.6	6.05	0.24
10.	Thingsulthliah	50.89	29.82	21.07	47.41	3.48	0.20
11.	Ngopa	51.08	28.19	22.89	46.62	4.47	0.12
12.	Khawzawl	46.53	26.84	19.68	41.69	4.83	0.18
13.	Champhai	46.69	26.64	20.05	37.39	9.3	0.16
14.	Khawbung	49.39	27.30	22.09	47.02	2.38	0.12
15.	Serchhip	48.51	27.80	20.71	43.84	4.67	0.17
16.	East Lungdar	53.49	28.87	24.62	50.85	2.64	0.09
17.	Bunghmun	50.47	28.87	21.59	44.08	6.38	0.17
18.	Lungsen	45.81	26.24	19.57	36.56	9.25	0.17
19.	Lunglei	41.02	26.97	14.05	37.46	3.55	0.35
20.	Hnahthial	73.31	37.00	36.31	39.94	33.37	0.01
21.	Chawngte	41.34	25.16	16.19	32.67	8.67	0.24
22.	Lawngtlai	35.46	23.66	11.80	29.61	5.84	0.37
23.	Bungtlang S	46.13	25.41	20.72	41.73	4.4	0.12
24.	Sangau	31.10	21.54	9.55	27.88	3.22	0.42

Source: Computed by the author from PCA, Mizoram 2011

Spatial Pattern of Gender Disparities in Workforce Participation Rate:

An investigation of gender differences in workforce participation rate reveals that such differences do exist in Mizoram and like most State in India; workforce participation rate of male is higher than female. Several factors can be attributed to gender differences in workforce participation such as prevailing social norms, marriage and child birth, inequality in job opportunity etc. In a traditionally patriarchal society like Mizoram, men are considered the head of the household and bread earner of the family whereas women are expected to take care of their family. This does prevent many women to seek or find job and their role is more or less confine to taking care of household chores, which is not considered ‘work’.

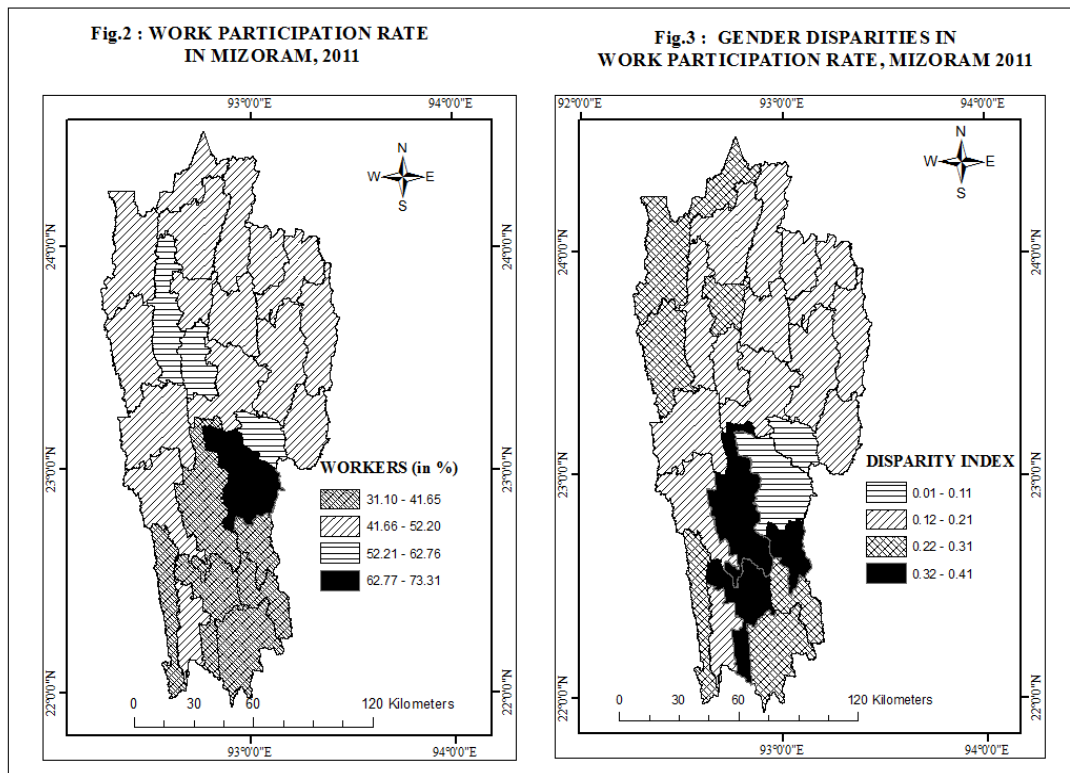


Fig.2 Work Participation Rate in Mizoram, 2011

Fig.3 Gender Disparities in Work Participation Rate, Mizoram 2011

The spatial pattern of male- female disparity in workforce participation differs from one RD Block to another. Table I shows the Sopher's disparity index of male-female work participation rate in Mizoram. The disparity is greatest in Sangau block (0.415) followed by Lawngtlai (0.365), Lunglei (0.354) and Siaha (0.31). All these blocks are located in the south and south eastern part of Mizoram and excepting Sangau, these blocks consist of rural and urban area. In urban area, agriculture and allied activities are less dominant thus reducing work opportunity for low educated female. In addition, higher income family prefer their female member to stay at home to take care of family.

Low disparity rate of less than 0.155 is mostly found in the east and central part of Mizoram. RD Blocks included in this group are Hnahthial (0.013), E.Lungdar (0.094), Bungtlang (0.116), Ngopa (0.121), Khawbung (0.122), Aibawk (0.147) and Reiek (0.155). These blocks are predominantly rural area and except in Hnahthial block, there is no area notified as town or urban. Agriculture is the main economic activity and horticultural crops like tea, oranges, ginger, turmeric, are widely cultivated in Ngopa, Khawbung etc. Blocks that are located near the city like Reiek and Aibawk grow seasonal vegetables all the year round and supply it to the city. The collection, processing and marketing of agricultural product engaged many female workers, therefore increasing female work participation rate.

The remaining RD Blocks can be considered as having medium disparity rate. Most of these blocks comprised of rural and urban area. As highlighted in the previous paragraph, female work participation rate is lower in urban area and the urban population in these blocks also shows the same pattern. The spatial pattern of gender disparity in workforce participation is presented in Fig.3

TABLE-II: BLOCK WISE OCUPATIONAL STRUCTURE OF MIZORAM, 2011
(in percentage)

<i>Name of RD Blocks</i>	<i>Cultivators</i>	<i>Agricultural Labourers</i>	<i>Household Industry</i>	<i>Other Workers</i>
Zawlnuam	65.38	10.68	0.87	23.06
West Phaileng	82.97	1.92	0.33	14.78
Reiek	79.27	1.86	0.54	18.33
Thingdawl	66.14	5.41	0.93	27.52
Bilkhawthlir	41.34	20.2	1.94	36.52
Darlawn	77.6	6.07	0.58	15.74
Phullen	84	2.58	0.28	13.13
Aibawk	72.29	7.67	0.87	19.17
Tlanguam	6.98	5.64	2.39	84.99
Thingsulthliah	58.9	15.49	0.96	24.65
Ngopa	75.65	4.94	1.28	18.13
Khawzawl	69.81	8.45	2.4	19.34
Champhai	39.6	17.31	1.78	41.31
Khawbung	82.58	4.12	0.52	12.79
Serchhip	63.16	4.69	3.2	28.95
East Lungdar	78.37	0.84	1.32	19.46
Bunghmun	88.19	2.37	0.9	8.54
Lungsen	75.65	9.81	0.88	13.66
Lunglei	28.65	20.84	1.38	49.13
Hnahthial	75.43	10.77	0.68	13.12
Chawngte	73.38	7.99	0.81	17.82
Lawngtlai	42.59	5.2	1.02	51.19
Bungtlang S	80.89	4.3	3.54	11.27
Sangau	61.59	11.59	0.79	26.03
Tuipang	65.5	9.07	1.19	24.25
Siaha	32.49	2.12	1.89	63.49

Source: Computed by the author from PCA, Mizoram 2011

OCCUPATIONAL STRUCTURE:

From Table.II it can be observed that the occupational structure of Mizoram is dominated by agriculture sector, which in turn shows the level of economic development of the region. The percentage share of workers engaged as cultivators' accounts for as high as 88.19% in Bunghmun. There are 13 RD Blocks that recorded more than 70% of its workers as cultivators. Out of these 13 Blocks, 11 Blocks have 100% rural population. This signifies that cultivation still continues to be the mainstay of economy among rural population and Shifting Cultivation dominates the agricultural scene. Several factors can be attributed to the predominance of shifting cultivation, among which rugged topography of the region; insufficient road transport development and lack of modern farming technology are worth to be mention. The lowest percentage share of Cultivators i.e 6.98% is found in Tlanguam Block, in which the Capital city Aizawl is included. Other blocks with low share of cultivators are Lunglei 28.65%, Siaha 32.46%, Champhai 39.6% and Bilkhawthlir 41.34%. These blocks are more urbanised than others as their area include district capitals, so economic activity is more diversified. The proportion of agricultural labourers ranges from 0.84% in E.Lungdar to 20.84% in Lunglei. Generally speaking, areas having zero urban population recorded less number of agricultural labourers. The small proportion of land in Mizoram in which wet rice cultivation can be practised like Champhai, Bilkhawthlir etc and areas where horticulture farming is more developed like Zawlnuam, Thingsulthliah, Hnahthial etc have higher proportion of agricultural labourers.

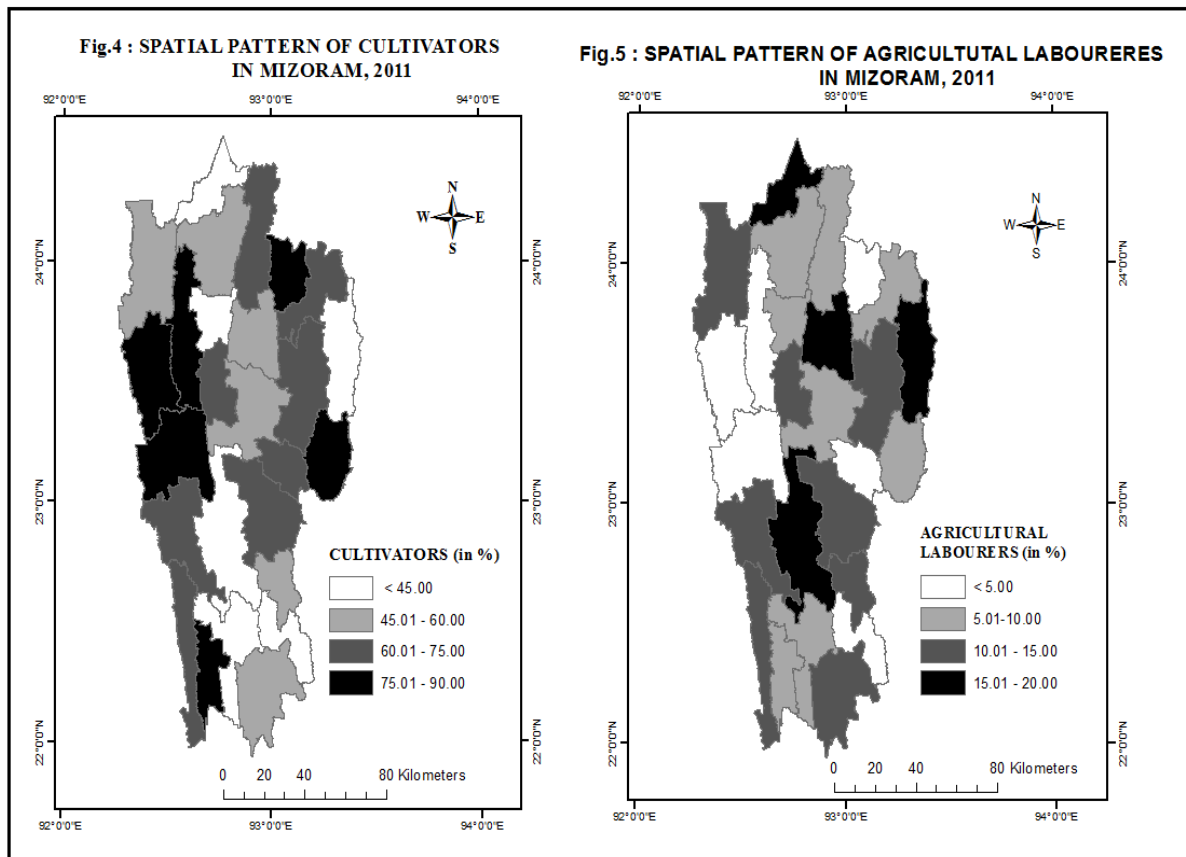


Fig.4 Spatial Pattern of Cultivators in Mizoram, 2011
 Fig.5 Spatial Pattern of Agricultural Labourers in Mizoram, 2011

Household Industry workers contributed a meagre 1.61 % of working population in Mizoram. The RD Block with highest share of household industry workers is Bungtlang with 3.54%, followed by Serchhip 3.2 % and Khawzawl 2.4%. These three blocks are located in the central part of Mizoram and they are the handloom cluster of Mizoram in general and these RD Blocks in particular. Main production includes traditional Mizo ‘Puan’ (skirt) and bags, which are of great demand in Mizoram and among Mizo’s living outside Mizoram. Besides these three Blocks, RD Blocks with district capital inside its area like Tlangnuam, Lunglei, Champhai, Saiha and Bilkhawthlir have higher proportion of workers engage in household industry. Major. There are 13 RD Blocks, scattered all over Mizoram that have less than 1% of household industry workers. Tailoring, Carpentry, Cane and Bamboo processing, Bakery, Food processing etc are other main household industry’s activity.

In Mizoram, workers engaged in activities other than the aforementioned activities constitute 42.62%. These types of workers are classified by the Census of India as Other Workers. Work included in this category are all those activity, be it manufacturing, servicing, processing etc if it not located at the premise of the household. The proportion of workers categorise as Other Workers is highest in Tlangnuam Block, 84.99%. Tlangnuam Block is a highly urbanised region, with more than 94% of its population living in urban area. It is also the administrative capital and business centre of the State. Therefore, economic activity is more diversified and primary sector of economy is less prominent than other Block. The spatial pattern of distribution of other workers again follows the location of district capitals in RD Blocks. The proportion of other worker claim 63.49% of economically active population in Siaha, 51.19% in Lawngtlai, 49.13% in Lunglei and 41.31% in Champhai. At the other end of the scale, there is Bnghmun with 8.54% of workers engage in work classified as other, 11.27 in Bungtlang, 12.79 in Khawbung and 13.12% in Hnahthial. The absence of manufacturing industry, insufficient road transport network and lack of power supply in all parts of Mizoram, especially in rural areas contributed to low level of diversity in economic activity, thus resulting in low proportion of other workers in many parts of the region.

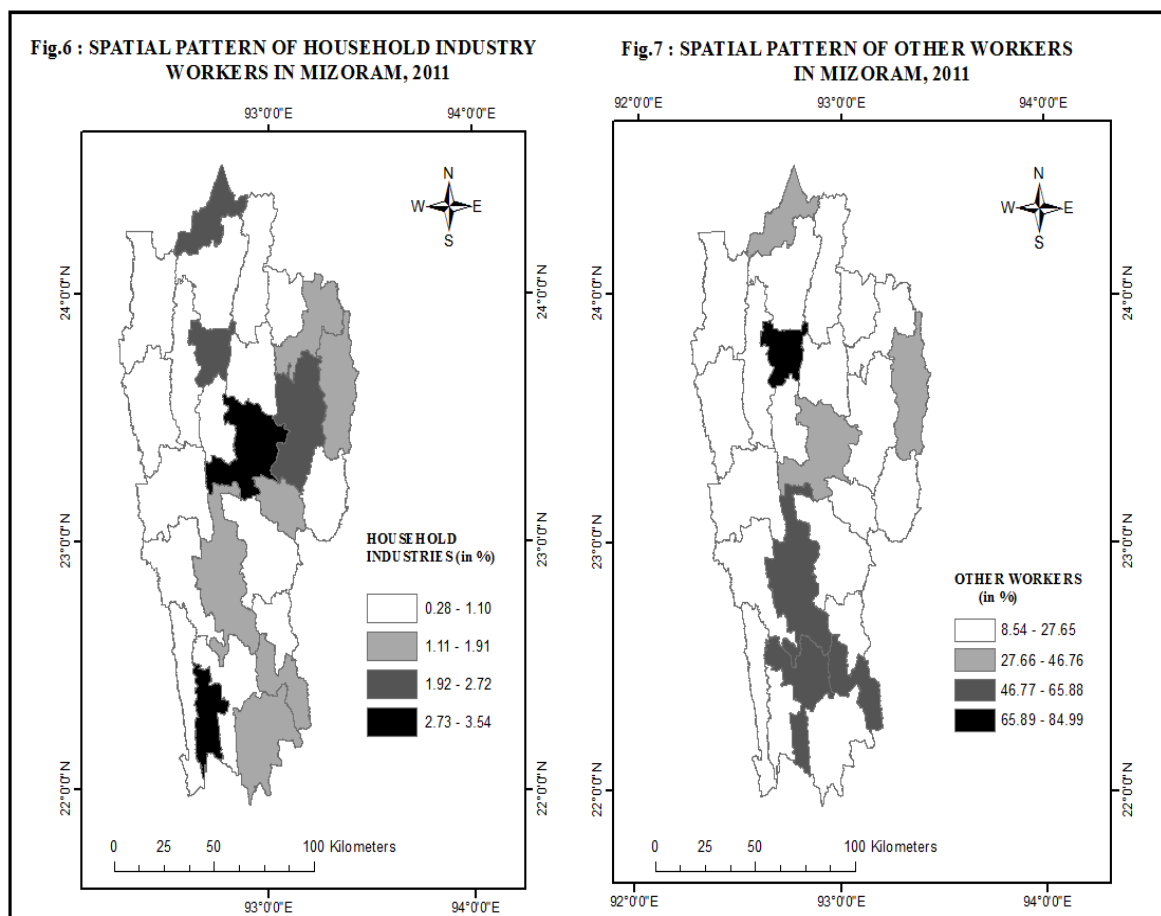


Fig.6 Spatial Pattern of Household Industry Workers in Mizoram, 2011

Fig.7 Spatial Pattern of Other Workers in Mizoram, 2011

IV. CONCLUSION:

It can be concluded from the above analysis that the economic activity of Mizoram is still dominated by Primary activity, i.e cultivation. Although the average workforce participation rate is higher than the national average, there are some regions that required improvement in this area. Modernisation of traditional farming practice is necessary to raise agricultural productivity. Bridging the gap between male-female differences in workforce participation is also necessary for overall economic development. Generating employment opportunity that is women friendly, especially in the industrial and tertiary sector may help in increasing female workforce rate in urban area as well as in rural area.

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