CHAPTER IV

PATTERNS OF AGRICULTURAL AND NON-AGRICULTURAL WORKERS

From a nation dependent on food imports to feed its population, India today is not only self-sufficient in grain production but also has a substantial reserve. Agriculture and allied activities constitute the single largest contributor to the Gross Domestic Product, almost 33 percent of it. Agriculture is the means of livelihood of about two-thirds of the workforce in the country.

It is by now well known that, it is necessary to relieve agriculture from the pressure of excess labour in order to arrest further decline in land-man ratios and thereby increase labour productivity in agriculture and urban area can not absorb the growing rural labour. Due to these reasons promotion of non-agricultural employment in rural areas is advocated for enhancing the levels of living of the rural population (Dev, 1990).

According to population census of India 2001, there are about 402.5 million rural workers of which 127.6 million are cultivators and 107.5 million are agricultural labourers. In other words, core agricultural workers constitute nearly 58.4 per cent of the total rural workers of which 31.7 percent are owner cultivators and 26.7 percent are mainly agricultural wage earners (Agriculture Statistics at a Glance, 2001). The latest available agricultural census data (Agricultural Census Division, 2002) also reveal that about 78 percent of operational holdings in the country are marginal and small, having less than 2 hectares. About 13 percent holdings have 2 to 4 hectares and 7.1 per cent have 4 to 10 hectares of land. (Haque 2003)

Another important source of data is Census of India (2001), according to which there are nearly 127 million cultivators, 107.5 million agricultural labourers and only 6 million other farm workers engaged in livestock, forestry and plantations. Of the total agricultural labourers, 38.0 per cent were female and 61.9 percent male workers. Also among livestock, forestry and plantation workers, 78.3 percent were male workers and 21.7 percent were female workers. About 99.2 percent of agricultural workers were reported to be unorganized and unprotected.
According to Swaminathan, the famous agricultural scientist, some historians believe that it was woman who first domesticated crop plants and thereby initiated the art and science of farming. While men went out hunting in search of food, women started gathering seeds from the native flora and began cultivating those of interest from the point of view of food, feed, fodder, fibre and fuel. Women have played and continue to play a key role in the conservation of basic life support systems such as land, water, flora and fauna. They have protected the health of the soil through organic recycling and promoted crop security through the maintenance of varietal diversity and genetic resistance. Therefore, without the total intellectual and physical participation of women, it will not be possible to popularize alternative systems of land management to shifting cultivation, arrest gene and soil erosion, and promote the care of the soil and the health of economic plants and farm animals. (Prasad & Singh 1992)

Rural non-farm employment is considered to be particularly important to the landless and small and marginal farmers, leading to the conclusion that the growth of real per capita non-agricultural output can have a significant impact in reducing rural poverty. Rising non-agricultural incomes can, however, also increase inequality as a consequence of differential access between the less- and better endowed.

The rural non-farm is highly diverse, and is significant in both the secondary and tertiary sectors, utilising both simple and more advanced technologies. Traditional household industry is considered to be the most significant sub-sector of rural manufacturing in terms of size of workforce, and to be in decline, while more modern industries are growing, and constitute a large contribution to the export market. Consistent growth in the rural non-farm employment, although modest, is considered to reflect a structural change away from agriculture towards the non-farm sector (arguably principally in the male labour force). Recent growth, however, has largely been attributed to an increase in the proportion of casual workers rather than full-time employment, and significant variation is found across states as well as between different sub-sectors.

Increased participation in the rural non-farm employment has come mainly from the tertiary sector. The impact of liberalisation in the early 1990s has increased the demand for labour, albeit unevenly shared by rural and urban regions, by men and
women, and by regular and casual workers. Seasonal fluctuations in rural non-farm employment are largely explained by rural casual labourers shifting from agricultural to non-agricultural work. Growth in rural non-farm employment since the 1970s is more clearly observed in male rather than female workers, and while increasing participation in the non-farm sector has continued for men, it has recently declined for women. Gender disparities are also evident in non-farm incomes. The female to male sex ratio in both household and non-household manufacturing industries has risen significantly between 1981 and 1991, which has been linked to growth in the unorganised sector. Much of this work is considered to be part time and low paid, or to involve casual labour.

A large section of the literature seeks to identify the principal determining factors of growth (or lack of) in the sector. A key debate questions whether growth in rural nonfarm employment is a consequence of distress diversification, or because it is responding to demand as the rural economy develops through linkages with the agricultural sector. Other literature has identified the influence of additional 'prime movers', notably rural infrastructure, urbanisation and government rural development schemes. Acknowledgement of the diversity of the rural non-farm employment and thus the existence of multiple growth factors has helped to resolve the debate. Patterns of demand and the influence of markets beyond the local-level have also been identified in explaining the growth of rural non-farm sub-sectors. In addition, investigation of the impact of macroeconomic policies of structural adjustment in the early 1990s indicate increased demand for casual, intermittent, low remunerative and urban labour in the rural non-farm employment.

Against a background of poor performance of rural development policies, rural industrialisation has been promoted to alleviate rural poverty, and efforts from the early 1990s have sought to accelerate economic growth and nurture a 'spread effect'. Rural industrialisation policies have either been locational, encouraging regional dispersal, or aimed to generate development linkages with the rural sector. Literature examining the impact of government policies on the rural non-farm employment is limited, although the need to avoid a narrow rural non-farm employment focus is recognised. A number of failings of government regulation and promotion policies for the rural non-farm employment have been identified. Likewise, the literature argues that the rural non-farm
employment has been poorly served by the formal credit sector, characterised by government intervention and direction. In addition to institutional barriers, small rural enterprises have lost out to larger manufacturing units in accessing formal sources of credit, and gender bias against non-farm activities commonly conducted by women has been noted.

**Review of Literature**

Literature exploring the implications of democratic decentralisation is largely concerned with the impact on participation and institutional performance rather than measures of economic development in general, or the rural non-farm employment in particular. The impact of decentralisation and good governance on social and economic development is found to be ambiguous. Decentralisation literature in general largely assumes positive benefits to the economy to accrue indirectly through improvements in equity, transparency and accountability of local government growth, while there is little empirical evidence to suggest whether the decentralised provision of economic infrastructure actually promotes or hinders local economic activity. Barriers to rural livelihoods are categorised in the literature as issues of human capital (education and health), social institutions (culture, particularly for women), financial, and institutional barriers of policy and practice. Locational barriers, a consequence of poor infrastructure, are also noted as influential factors, particularly for remote rural regions in mediating access to markets. Women face greater barriers than their male counterparts in all categories. Provision of basic and primary education and access to effective credit for market-worthy activities are identified as key policy areas. Small town growth can positively influence the growth of the rural non-farm employment through the provision of local and non-local markets, infrastructure, inputs and technology, as well as employment opportunities. Conversely, such advantages may render certain rural manufacturing industries non-viable in the face of competition. The debate on small town growth versus village rural enterprise development, both of which have been targeted by government policy, remains ambiguous. Other sources, meanwhile, argue that rural-urban commuting and analytical definitions of rural and urban render the measurement of the significance of urbanisation on the rural non-farm employment problematic.
Definitions of the rural non-farm economy are problematic. There is no standard definition either internationally or within India as the sector is too diverse to allow neat classification (Fisher et al., 1997). The rural non-farm economy is defined in this paper to exclude primary agriculture, forestry, fisheries, but to include trade and processing of these products, in addition to other goods and services, as secondary and tertiary sectoral activities. The literature is beset with confusion and ambiguity as definitions of 'rural non-farm', 'non-agricultural', or indeed, 'employment' are rarely made explicit. Thus there is, for example, ambiguity as to whether non-farm employment refers to employment anywhere by rural households, or solely rurally-located employment. Nor are such definitional issues confined only to the literature. Chadha (1997) notes that while National Sample Survey (NSS) data show what percentage of the rural workforce are employed in different gainful activities, or the share of rural workers in total workforce in each production sector, there is no indicator of whether employment is in rural, semi-urban, or urban areas. Thus, while every effort has been made to maintain consistency here, ambiguity in the literature must be recognised. In their much-cited assessment of earlier literature examining employment patterns evident in the national Census and NSS data, Visaria and Basant (1994) summaries key national trends of participation of labour in the rural non-farm employment:

I. The share of non-farm activities of the total labour force has increased since the 1970s, and is more clearly observed in male rather than female workers;

II. This increase has mainly come from the tertiary sector;

III. The majority of the increase in non-farm employment has been a consequence of an increase in the proportion of casual non-agricultural workers, rather than full time employment or increases in the number of rural non-farm enterprises;

IV. The bulk of seasonal fluctuations in rural non-farm employment can be explained by changes in the employment structure of rural casual labour who shift between agricultural and non-agricultural work;

V. Casual agricultural workers report a much higher incidence of non-agricultural work in a secondary capacity than previously;
VI. Participation in rural non-farm employment is inversely proportional to size of household land holding Unni (1996b) further argues that according to the 1993-94 NSS, results indicate that such a structural shift away from agriculture is only evident in the male workforce, and differs to patterns of rural female employment.

Disaggregation of the size of workforce in the literature is largely along lines of gender. In 1987-88 the NSS recorded only 24.5 per cent of rural women to be involved in the labour force, compared to 51.7 per cent of men (Fisher et al., 1997). Based on a study of secondary data from Census reports, NSS and Planning Commission, Srivastava et al. (1995) examine the current status of participation of female workers in rural non-farm employment and the trends, constraints and prospects they face. In terms of total employment, work participation of rural females was higher than that of urban females. 44.23 per cent of female workers worked as agricultural labourers, and 34.57 per cent as cultivators. The remainders were engaged in other forms of employment including the rural non-farm sector.

Mitra (1993) assesses the role of women in the non-agricultural sector based on Census data. He finds that the number and proportion of women is much lower than men in both the non-agricultural and rural non-farm sectors. Further, whilst the trend of increasing participation in the non-farm sector was found for women, as well as men, women’s involvement has recently declined, whilst that of the male work force has continued to grow.

Patterns of participation in rural non-farm literature often follow categorical definitions of different types of rural non-farm activity and levels of industry. Mukhopadhyay and Lim (1985) define rural non-farm employment as two sub-sectors:

i. Enterprises run on a stable basis with an eye on surplus generation and growth, using hired labour (perhaps over and above family labour) and a certain degree of technical sophistication.

ii. Often, but not always seasonal activities, run with help of unpaid household labour utilising primitive technology to serve local markets, and responding to the supply side of the labour market rather than to market demand for output. A third possible category is also defined, namely the wage paid employment sector such
as contract labour in handicraft industry. They argue that the key difference between the categories is most discernible in terms of capital use and production relations rather than output categories. They comment that sub-sector type 2 is the predominant form in South Asia.

Samal (1997a, 1997b), based on work in Orissa, makes similar divisions between formal and informal sectors, each of which are further subdivided into modern and traditional. He argues that the traditional sub-sectors consist of caste-based artisan and service activities, the former of which suffer as a consequence of agricultural development.

Fisher et al. (1997), in citing the RBI 1989 All-India Debt and Credit Investment Survey identify two rural household groups which particularly use credit: households with assets between Rs5000 and Rs10,000, and households in the group with the greatest value of assets. They argue that this demonstrates that non-farm activities are pursued most by two distinct groups, namely micro entrepreneurs such as weavers and potters, and small to large rural enterprise owners, such as of brick fields and rice mills. Regarding gender, Fisher et al. suggest, based on national Census data, that among different rural non-farm sub-categories, manufacturing, ‘other services’ and trade generated the most jobs for women, with almost half of all female employment found in manufacturing outside the household. Important manufacturing activities included tobacco products (bidi), cotton textiles, wood products and ceramics, which combined generated over a third of all female employment in the rural non-farm sector. Much of this work is part time and low paid, such as bidi making and matches, or involves casual labour, as in construction. Fisher et al. argue that in a number of cases, rural female workers were found to be taking over low paid jobs from male workers as the latter moved on to more remunerative employment in the non-farm sector. They also emphasise the importance of the secondary sector, which employs over half of all women in the rural non-farm employment, much more than men. Manufacturing employment for rural women is growing, and manufacturing outside the household is expanding at a much greater rate than household manufacturing, “shifting women away from being family workers to more highly paid work as self-employed single workers, or even employees” (Fisher et al., 1997: 39). Mitra (1993) finds that the manufacturing sub-
sector, particularly within the household, continues to exhibit the highest sex ratio of number of female per thousand male workers.

The proportion of children below the age of 15 in the labour force is lower in the rural non-farm sector than the agricultural sector, particularly so for boys. Between 20 and 30 percent of all rural women engaged in manufacturing, construction and mining were below 20, and over 10 per cent of the female labour force was below the age of 15. However, specific sub-sectors such as bidi making and carpet weaving are considered to be well known for child labour and low wages (Fisher et al., 1997).

In a micro study of 30 villages in Gujarat, Unni (1996a) concludes that older men specialise in agricultural activities whilst better-educated men specialise in nonagricultural employment. Men in households of significant assets (especially land) also specialise in non-farm activity. She finds that high population densities and proximity to rural towns (markets) also foster such specialisation.

Heterogeneity of rural non-farm activities as modeled by Mukhopadhyay and Lim (1985) and Samal (1997b) above is also found to be relevant when assessing the different causative factors of growth and access to differential opportunities within the sector (for example see Shylendra and Thomas, 1995; Singh and Tripathi, 1995; Basu and Kashyap, 1992; Samal, 1997b).

As noted above, the casual and part-time nature of much rural non-farm employment, particularly among women is recorded in the literature. This is particularly emphasised in literature assessing changing employment patterns over time (see below). It also reflects hypotheses of differential causes of growth in the sector. For example, Eapan (1996) notes that growth in the non-farm sector induced by distress is characterised by small, petty producers, and self employed and casual workers, as does Fisher et al. (1997). Interestingly, Chandrasekhar (1993) in his study of non-agricultural employment in West Bengal concluded that there were greater opportunities for self-employment and salaried employment than casual wage employment, consisting of activities such as simple manufacturing such as pottery and bamboo products supplying local markets.
Unni (1996a) argues that whilst only 24.5 per cent of rural women are recorded to be involved in the labour force in the 1987-8 the NSS, evidence from an extensive micro study of Gujarat demonstrates that many more women engage in casual and part time work, particularly concentrated in the agricultural labour sector, and that the RNF sector may be particularly important for women by drawing them away from poorly remunerated agricultural work.

An extensive field survey by the Gujarat Institute of Development Research conducted in 30 villages over five districts of Gujarat aimed to study the determinants of rural non-agricultural activities (Basant, 1993). It concluded that rural households undertook both agricultural and non-agricultural activities, and that the nature of diversification of household incomes was a consequence of both diversification of activities among different members of the household, and multiple activities of a single member. Fisher et al. (1997) argue that standard surveys such as the Census and NSS do not capture such complexity of rural employment where households and individuals may pursue a number of different activities, and employment patterns may vary seasonally and across different years. This leads to an underestimation of the degree of participation in the rural non-farm employment, especially when secondary activities are not considered.

While reviewing literature it is observed that agricultural and non-agricultural activities studied by many scholars in their own way while studying workforce where it can be noted that a large part of main workers occupied by core agricultural activities (Cultivators and Agricultural Labourers), therefore it is important to know the patterns of core agricultural and non-agricultural workers (Household Industry Workers and Other Workers).

**Rural Agricultural Workers**

Work in agriculture is the predominant form of economic activity in India. It provides employment to **70.63 per cent** of the workforce. In which male agriculturist contributes **68.34 per cent** of the main male workers while female agriculturist are engaged **77.05** per cent of the total female main workers, this indicates, greater dependency on agriculture in rural India. In India, agriculture is predominantly organized
in family farms where work is carried on by family labour with the help of hired labour. The hiring of labour is on permanent or casual bases. Thus, there are two criteria for classification of farm workers: (1) family or hired; and (2) permanent or casual. Generally family or permanent workers are known as cultivators and hired or casual workers are about to agricultural labourers. Here in this chapter the agricultural workers are sum of cultivators and agricultural labourers only while it is categorised in to six broad categories i.e.

1. Very High Agricultural Workers (>80 %)
2. High Agricultural Workers (70-80 %)
3. Moderately High Agricultural Workers (60-70 %)
4. Moderate Agricultural Workers (50-60 %)
5. Low Agricultural Workers (40-50 %)
6. Very Low Agricultural Workers (<40 %)

While studying agricultural work participation rate it is observed that very high agricultural work participation rate is found in 164 districts of central India while some more visible patches may also seen in the rest part of India. The highest participation is found in Dantewada (91.54 %) district of Chhattisgarh followed by Dinori (91.53 %) and Jhabua (91.18 %) of Madhya Pradesh. Like wise high agricultural work participation rate is also found in largest number of districts i.e.171 districts greatly from the southern India while some patches also found all over the study area. In the same way moderately high agricultural work participation rate is found in 109 districts greatly from the western and eastern India (Fig. 4.1). It can also be observed that 75 per cent districts are observed above moderately high. The agricultural work participation rate is displayed in the table number 4.1.

The agricultural work participation rate is moderate in only 54 districts greatly from western, north-east and west India. Likely low agricultural work participation rate is found in 39 districts and very low observed on 46 districts greatly from the Kerala, southern and foot hills of Western Himalayan region because in these areas lack of agricultural land can be observed. The lowest participation rate is found in East Delhi
(1.49 %) followed by seven districts of union territory. The study also showed the clearly dependence on agriculture in respect of employment opportunity. It is also understandable that non-technical and low paid labour greatly involve in the agricultural work participation

Table. No. 4.1: INDIA – Rural Main Agricultural Workers – 2001.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts.</th>
<th>Rural Main Workers</th>
<th>Main Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>80&lt;</td>
<td>164</td>
<td>6550881</td>
<td>55620770</td>
<td>24.27</td>
</tr>
<tr>
<td>70-80</td>
<td>171</td>
<td>79436813</td>
<td>59712453</td>
<td>26.05</td>
</tr>
<tr>
<td>60-70</td>
<td>107</td>
<td>42763864</td>
<td>28032045</td>
<td>12.23</td>
</tr>
<tr>
<td>50-60</td>
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<td>2495242</td>
<td>1.09</td>
</tr>
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<td>5895</td>
<td>000</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>229186552</td>
<td>161863040</td>
<td>70.63</td>
</tr>
</tbody>
</table>

Compiled by Author.

**Rural Male Main Agricultural Workers**

Rural main male agricultural work participation rate is also categorised into six categories as categorised in total main agricultural workers in which very high participation is found in 121 districts greatly from the upper central area and patches also visible all over the study area. Highest participation is found in Budaun (90.25 %) district of Uttar Pradesh followed by Kishanganj (90.03 %) of Bihar state. Likely high main male agricultural work participation rate is found in 173 districts greatly from the southern India and some more patches also found in the rest part of India. In the same way moderately high main male agricultural work participation rate is found in 131 districts from eastern coast and western arid region. In this way the total strength of districts up to the moderately high accounts 425 (72.77 %) districts. This is just because the Indian society still in transitional period. The pattern of rural main male work participation rate is elucidating in the figure 4.2 and table 4.2.

Like wise rural main moderate agricultural work participation rate is found in 67 districts greatly in between the moderately high districts. The low rural main male workers are occupied in only 36 districts of north-east and coastal region in the form of patches. The very low main male workers are engaged with 55 districts greatly from the
Malabar Coastal area. The lowest participation rate is found in East Delhi (1.41 %) followed by eight districts of union territories.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts.</th>
<th>Rural Main Workers</th>
<th>Main Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
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<td>121</td>
<td>35678844</td>
<td>30108353</td>
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</tr>
<tr>
<td>70-80</td>
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</tr>
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<td>60-70</td>
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<td>3615271</td>
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<td>00</td>
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<tr>
<td>Total</td>
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<td>169101251</td>
<td>115566114</td>
<td>68.34</td>
</tr>
</tbody>
</table>

Compiled by Author.

**Rural Female Main Agricultural Workers**

Rural main female agricultural work participation rate is again categorised into six broad categories as categorised in total main and male agricultural workers. The participation rate of female workers is the higher than the males in the rural main agriculturists. The highest participation is found in Buldana (96.67 %) followed by Washim (96.32 %), Parbhani (96.26 %) and Hingoli (96.02 %) all of the Maharashtra state. The very high female participation is found in 301 (50.76 %) districts, which is stretched from east to west and north to south except some small patches. Likewise high female participation is observed in 84 districts of coastal region and some units also visible in the Gangetic Plain. The moderately high participation is found in 36 districts greatly from the Uttar Pradesh and West Bengal state. Likely low participation is found in 38 and very low found in 74 districts greatly from the Punjab, Kerala and eastern West Bengal. The lowest participation is found in East Delhi (1.81 %) and four districts of union territory. The pattern of rural main female work participation rate is elucidating in the figure 4.3 and table 4.3.
Table. No. 4.3: INDIA – Rural Main Female Agricultural Workers – 2001.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts</th>
<th>Rural Main Workers</th>
<th>Main Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>80&lt;</td>
<td>301</td>
<td>38613644</td>
<td>34118461</td>
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</tr>
<tr>
<td>70-80</td>
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<td>8116716</td>
<td>6156980</td>
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</tr>
<tr>
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<td>50</td>
<td>3518259</td>
<td>2320936</td>
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<td>40-50</td>
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<td>2385131</td>
<td>1056424</td>
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<td>1.85</td>
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<td>683</td>
<td>00</td>
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</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>60085301</td>
<td>46296926</td>
<td>77.05</td>
</tr>
</tbody>
</table>

Compiled by Author.

Rural Scheduled Castes Agricultural Workers

The overwhelming involvement of the scheduled castes in the agricultural sector in the rural area is the outcome of the overall changes in the social and economic organization of the Indian society. With the weakening of the jajmani system, allotment of surplus land to them and enactment of laws to eradicate bonded labour, demand for agricultural labour in the agriculturally developed areas, the participation of scheduled castes in the agricultural sector has increased. The scheduled castes workers are diverting from their traditional services. As per census 2001 the working force of rural scheduled castes population is dominantly agriculture as **72.93 per cent** in which male workers are **70.62 per cent** and female are **78.85 per cent** of the scheduled castes male and female main workers respectively. This indicates greater dependency on agriculture in rural India. The agricultural workers are sum of cultivators and agricultural labourers while it is categorised in to six broad categories i.e.

1. Very High Scheduled Castes Agricultural Workers (>80 %)
2. High Scheduled Castes Agricultural Workers (70-80 %)
3. Moderately High Scheduled Castes Agricultural Workers (60-70 %)
4. Moderate Scheduled Castes Agricultural Workers (50-60 %)
Studying agricultural work participation rate in scheduled castes it is observed that very high agricultural work participation rate is found in 172 districts greatly from the Andhra Pradesh, Uttar Pradesh, Madhya Pradesh, central Maharashtra and Karnataka while some more visible patches may also seen in the rest part of India. The highest participation is found in Chandel 97.67 per cent of Manipur followed by Madhepura (94.99 %) and Araria (94.72 %) of Bihar state. Like wise high agricultural work participation rate is also found in largest number of districts i.e.117 districts from all over the study area. In the same way moderately high agricultural work participation rate is found in 88 districts greatly from the western and eastern India (Fig. 4.4). The agricultural work participation rate is displayed in the table number 4.4.

The agricultural work participation rate is moderate in only 53 districts greatly from the eastern and western India. Likely low agricultural work participation rate is found in 37 districts and very low observed on 88 districts greatly from the Kerala, southern part of India and foot hills of Western Himalayan region because in these areas land is small and scattered, so demand for agricultural labourers is low. People work on their own land therefore female scheduled castes workers work on family farms, as a result proportion of female workers become high in these areas. The lowest participation rate is found in Baramula (0.36 %) proceeded by Punch (0.56 %) of Jammu and Kashmir.

<p>| Table No. 4.4: INDIA – Rural Scheduled Castes Main Agricultural Workers – 2001. |</p>
<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts</th>
<th>Rural Main Workers</th>
<th>Main Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
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<td>80&lt;</td>
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<td>14797883</td>
<td>37.05</td>
</tr>
<tr>
<td>70-80</td>
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<td>9698715</td>
<td>7342096</td>
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</tr>
<tr>
<td>60-70</td>
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<td>3446176</td>
<td>1891732</td>
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</tr>
<tr>
<td>&lt;40</td>
<td>88</td>
<td>2401731</td>
<td>731015</td>
<td>1.83</td>
</tr>
<tr>
<td>Nil</td>
<td>38</td>
<td>400</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>39906882</td>
<td>29103173</td>
<td>72.93</td>
</tr>
</tbody>
</table>

Compiled by Author.
Rural Scheduled Castes Main Male Agricultural Workers

Scheduled castes main male agricultural work participation rate is also categorised into six categories as categorised in total main male agricultural workers in which very high participation is found in 136 districts greatly in the form of patches in all over the study area. Highest participation is found in Chandel (95.65 %) of Manipur followed by Sheohar, Araria (93.83 %) and Madhepura (93.69 %) of Bihar state. Likely high main male agricultural work participation rate is found in 120 districts greatly in the form of patches. In the same way moderately high main male agricultural work participation rate is found in 97 districts from eastern and western arid region. In this way the total strength of districts up to the moderately high accounts more than 60 per cent districts. The pattern of scheduled castes main male work participation rate is reveal in the figure 4.5 and table 4.5.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts</th>
<th>Rural Main Workers</th>
<th>Main Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>80&lt;</td>
<td>136</td>
<td>9907999</td>
<td>8479787</td>
<td>29.53</td>
</tr>
<tr>
<td>70-80</td>
<td>120</td>
<td>7745085</td>
<td>5825699</td>
<td>20.29</td>
</tr>
<tr>
<td>60-70</td>
<td>97</td>
<td>4499961</td>
<td>2928085</td>
<td>10.20</td>
</tr>
<tr>
<td>50-60</td>
<td>69</td>
<td>3127046</td>
<td>1737288</td>
<td>6.05</td>
</tr>
<tr>
<td>40-50</td>
<td>41</td>
<td>1603410</td>
<td>745066</td>
<td>2.59</td>
</tr>
<tr>
<td>&lt;40</td>
<td>92</td>
<td>1830239</td>
<td>561467</td>
<td>1.96</td>
</tr>
<tr>
<td>Nil</td>
<td>38</td>
<td>393</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>28714133</td>
<td>20277392</td>
<td>70.62</td>
</tr>
</tbody>
</table>

Compiled by Author.

Like wise scheduled castes main male moderate agricultural work participation rate is found in 69 districts greatly in between the moderately high districts. The low scheduled castes main male workers are occupied in only 41 districts in the form of patches. The very low main male workers are engaged with 92 districts greatly from the Malabar Coastal area. The lowest participation rate is found in East Delhi (0.34 %) followed by Baramula (0.37 %) and Punch (0.38 %) of Jammu and Kashmir.

Rural Scheduled Castes Female Main Agricultural Workers

Agriculture labour constitutes an important segment of weaker section of the rural areas. Labour is generally provided by the economically and socially backward sections. The female population constitutes nearly half of the rural population. Hence, women play
a vital role in the rural economy of India. A majority of the rural female workers are engaged in agriculture and their contribution is significant. The pattern of scheduled castes main female work participation rate is clarified in the figure 4.6 and table 4.6.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts</th>
<th>Rural Main Workers</th>
<th>Main Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>80&lt;</td>
<td>255</td>
<td>7571760</td>
<td>6809350</td>
<td>60.63</td>
</tr>
<tr>
<td>70-80</td>
<td>67</td>
<td>1115378</td>
<td>844564</td>
<td>7.55</td>
</tr>
<tr>
<td>60-70</td>
<td>67</td>
<td>788258</td>
<td>512169</td>
<td>4.58</td>
</tr>
<tr>
<td>50-60</td>
<td>53</td>
<td>568301</td>
<td>316485</td>
<td>2.83</td>
</tr>
<tr>
<td>40-50</td>
<td>29</td>
<td>267912</td>
<td>117036</td>
<td>1.05</td>
</tr>
<tr>
<td>&lt;40</td>
<td>89</td>
<td>881121</td>
<td>226176</td>
<td>2.02</td>
</tr>
<tr>
<td>Nil</td>
<td>45</td>
<td>19</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>11192749</td>
<td>8825780</td>
<td>78.85</td>
</tr>
</tbody>
</table>

Compiled by Author.

Scheduled castes main female agricultural work participation rate is again categorised into six broad categories as categorised in total main and male agricultural workers. The participation rate of female workers is the higher than the males in the rural main agriculturists. The highest participation is found cent per cent in Senapati and Chandel of Manipur. The very high female participation is found in 255 (43.00 %) districts in all over the study area. Likewise high female participation is observed in 67 districts in the form of patches.

The moderately high participation is found in 55 districts and moderate participation is found 53 districts. Likely low participation is found in 29 and very low found in 89 districts. It is observed that there are some patches where very lo, low and moderate participation found in a belt like Orissa and Jharkhand another is Punjab-Haryana-western Uttar Pradesh and the western coastal belt.

Rural Scheduled Tribe Main Agricultural Workers

Scheduled tribes are also an important segment of the rural areas. They live in their own world and far away from the main stream of the society. Agriculture is their first and foremost occupation. Therefore a majority of the rural scheduled tribe workers are engaged in agriculture. As per census 2001 the working force of rural scheduled tribe population is dominantly in agriculture as **84.20 per cent** in which male workers are
82.37 per cent and female are 87.52 per cent of the scheduled castes male and female main workers respectively. The scheduled tribe agricultural workers are categorised in to six broad categories i.e.

1. Very High Scheduled Tribes Agricultural Workers (>80 %)
2. High Scheduled Tribes Agricultural Workers (70-80 %)
3. Moderately High Scheduled Tribes Agricultural Workers (60-70 %)
4. Moderate Scheduled Tribes Agricultural Workers (50-60 %)
5. Low Scheduled Tribes Agricultural Workers (40-50 %)
6. Very Low Scheduled Tribes Agricultural Workers (<40 %)

While studying agricultural work participation rate in scheduled tribes it is observed that very high agricultural work participation rate is found in 232 districts greatly from the central part of India, while some more visible patches also seen in the rest part of India. The highest participation is found in Jyotiba Phule Nagar, Shahjahanpur and Farrukhabad as cent per cent. Like wise high agricultural work participation rate is found in 101 districts from all over the study area in the form of patches. In the same way moderately high agricultural work participation rate is found in 52 districts (Fig. 4.7). The scheduled tribe agricultural work participation rate is displayed in the table number 4.7.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts.</th>
<th>Rural Main Workers</th>
<th>Main Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>80&lt;</td>
<td>232</td>
<td>20014312</td>
<td>17788641</td>
<td>67.11</td>
</tr>
<tr>
<td>70-80</td>
<td>101</td>
<td>4691689</td>
<td>3580834</td>
<td>13.51</td>
</tr>
<tr>
<td>60-70</td>
<td>52</td>
<td>804401</td>
<td>539026</td>
<td>2.03</td>
</tr>
<tr>
<td>50-60</td>
<td>35</td>
<td>411380</td>
<td>232911</td>
<td>0.88</td>
</tr>
<tr>
<td>40-50</td>
<td>29</td>
<td>189502</td>
<td>87940</td>
<td>0.33</td>
</tr>
<tr>
<td>&lt;40</td>
<td>72</td>
<td>391216</td>
<td>90569</td>
<td>0.34</td>
</tr>
<tr>
<td>Nil</td>
<td>72</td>
<td>5221</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>26507721</td>
<td>22319921</td>
<td>84.20</td>
</tr>
</tbody>
</table>

Compiled by Author.

The agricultural work participation rate is moderate in only 35 districts greatly in the form of patches. Likely low agricultural work participation rate is found in 29 districts and very low observed on 72 districts greatly from the southern part of India and
Gangetic Plain. The lowest participation rate is found in Andamans (0.38 %), preceded by Nicobars (0.41 %) and Ramanathapuram (0.94 %) of Tamilnadu.

**Rural Scheduled Tribes Main Male Agricultural Workers**

Scheduled tribes main male agricultural work participation rate is also categorised into six categories as categorised in total main male agricultural workers in which very high participation is found in 216 districts greatly central part of India. Highest participation is found in Jyotiba Phule Nagar, Shahjahanpur and Farrukhabad as cent per cent. Likely high main male agricultural work participation rate is found in 101 districts greatly in the form of patches. In the same way moderately high main male agricultural work participation rate is found in 60 districts in the form of patches.

Likewise scheduled tribes main male moderate agricultural work participation rate is found in 38 districts again in the form of patches. The low scheduled tribe main male workers are occupied in only 27 districts in the form of patches. The very low main male workers are found in 79 districts greatly from the southern coastal area, western Himalaya and middle Gangetic Plain. The lowest participation rate is found in Nicobars (0.24 %) followed by Andamans (0.41 %) and Ramanathapuram (1.11 %) of Tamilnadu state. The pattern of scheduled tribe main male work participation rate is reveal in the figure 4.8 and table 4.8.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts.</th>
<th>Rural Main Workers</th>
<th>Main Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>80&lt;</td>
<td>216</td>
<td>12197661</td>
<td>10684099</td>
<td>62.56</td>
</tr>
<tr>
<td>70-80</td>
<td>101</td>
<td>3209885</td>
<td>2437596</td>
<td>14.27</td>
</tr>
<tr>
<td>60-70</td>
<td>60</td>
<td>940169</td>
<td>626731</td>
<td>3.67</td>
</tr>
<tr>
<td>50-60</td>
<td>38</td>
<td>336571</td>
<td>188061</td>
<td>1.10</td>
</tr>
<tr>
<td>40-50</td>
<td>27</td>
<td>108013</td>
<td>50557</td>
<td>0.30</td>
</tr>
<tr>
<td>&lt;40</td>
<td>79</td>
<td>281567</td>
<td>80138</td>
<td>0.47</td>
</tr>
<tr>
<td>Nil</td>
<td>72</td>
<td>4524</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>17078390</td>
<td>14067182</td>
<td>82.37</td>
</tr>
</tbody>
</table>

Compiled by Author.
Rural Scheduled Tribes Female Main Agricultural Workers

Scheduled tribes main female agricultural work participation rate is again categorised into six broad categories as categorised in total main and male agricultural workers. The highest participation is found cent per cent in Muzaffarnagar and Shahjahanpur of Uttar Pradesh. The very high female participation is found in 273 (46.04 %) districts in all over the study area. Likewise high female participation is observed in 72 districts nearby areas of very high level in the form of patches.

The moderately high participation is found in 36 districts and moderate participation is found 34 districts. Likely low participation is found in only 20 and very low found in 92 districts greatly in the southern coastal region, western Himalaya and middle Gangetic Plain.

Finally it is observed that Agricultural main workers are dominant in those areas where cultivable land is available, production is high, pattern of food crops, rice cultivation and low proportion of scheduled tribe population. Very little districts are observed in low participation. The pattern of scheduled tribe main female work participation rate is light up in the figure 4.9 and table 4.9.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts.</th>
<th>Rural Main Workers</th>
<th>Main Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;40</td>
<td>66</td>
<td>166918</td>
<td>29637</td>
<td>0.31</td>
</tr>
<tr>
<td>Nil</td>
<td>92</td>
<td>834</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>9429331</td>
<td>8252739</td>
<td>87.52</td>
</tr>
</tbody>
</table>

Compiled by Author.
Rural Non-agricultural Workers

Work in agriculture is the predominant form of economic activity in India. It provides employment to more than 70 per cent while only **29.37 per cent** denotes to rural main non-agricultural work participation rate, in which males are **31.66 per cent** and females are **22.95 per cent**. The limitations of the agricultural sector as an employment and income provider to growing labour force have been increasingly realized by the policy makers. Therefore, non-agricultural sector as an alternative to boost employment and income in the country is attracting the attention of the academia and policy makers.

Non-agricultural workers refer to all workers in the household industry and other workers except livestock, fishing and hunting, forestry logging and fishing. As per census, other workers involve all these activities but the participation of these workers observed very low which doesn’t affect the categories of non-agricultural participation. All rural employment in non-agricultural activities, such as mining and quarrying, household and non-household manufacturing, processing, repairs, construction, trade and hotel, transport, storage, communication and community, personal and other services in rural area (Panda, 2006).

The employment in non-agriculture sector, assumes greater importance in the present context due to declining labour absorption in agriculture sector, which traditionally has been main sector generating employment in the rural area. In India the employment generation traditionally depends upon agriculture sector to a great extant, where also a decline has been observed due to agricultural mechanization, etc. This has made the non-agricultural sector a crucial one for planning future employment generation programmes. Although, this may be feasible in the plan areas of the country, in the mountainous region like the state of Himachal Pradesh the situation may be worse because of the fact of very limited industrialization, infrastructural development and limited market, etc.

Patterns of Rural Non-Agricultural Workers

Here in this chapter the rural non-agricultural work participation rate is sum of household industry workers and other workers while it is categorised into six broad categories i.e.
1. Very High Non-agricultural Workers (>60 %)
2. High Non-agricultural Workers (50-60 %)
3. Moderately High Non-agricultural Workers (40-50 %)
4. Moderate Non-agricultural Workers (30-40 %)
5. Low Non-agricultural Workers (20-30 %)
6. Very Low Non-agricultural Workers (<20 %)

While studying non-agricultural work participation rate it is observed that very high non-agricultural work participation rate is found in 47 districts greatly from Malabar coastal region, Delhi and some more visible patches may also seen in the north and north east part of India. The highest participation is found in Lakshadweep as cent per cent. Likely high non-agricultural work participation rate is found in 39 districts greatly from the north-east, southern and eastern India. In the same way moderately high non-agricultural work participation rate is found in 54 districts greatly from the border line India (Fig. 4.10).

The non-agricultural work participation rate is moderate in 109 districts greatly from hinterland India. Likely low non-agricultural work participation rate is found in 172 districts and very low observed on 163 districts greatly from central India. The lowest participation rate is found in Dantewad (8.46 %) followed by Dindori (8.47 %) and Jhabua (8.82 %) of Madhya Pradesh state. The non-agricultural work participation rate is displayed in the table number 4.10.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts.</th>
<th>Rural Main Workers</th>
<th>Main Non-Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60&lt;</td>
<td>47</td>
<td>10290151</td>
<td>7794909</td>
<td>3.40</td>
</tr>
<tr>
<td>50-60</td>
<td>39</td>
<td>12456454</td>
<td>6839621</td>
<td>2.98</td>
</tr>
<tr>
<td>40-50</td>
<td>54</td>
<td>18730389</td>
<td>8344692</td>
<td>3.64</td>
</tr>
<tr>
<td>30-40</td>
<td>109</td>
<td>42763864</td>
<td>14731819</td>
<td>6.43</td>
</tr>
<tr>
<td>20-30</td>
<td>172</td>
<td>79862898</td>
<td>19809597</td>
<td>8.64</td>
</tr>
<tr>
<td>&lt;20</td>
<td>163</td>
<td>65082796</td>
<td>9802874</td>
<td>4.28</td>
</tr>
<tr>
<td>Nil</td>
<td>9</td>
<td>00</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>229186552</td>
<td>67323512</td>
<td>29.37</td>
</tr>
</tbody>
</table>

Compiled by Author.
Rural Male Main Non-agricultural Workers

Rural main male non-agricultural work participation rate is also categorised into six categories as categorised in rural main non-agricultural workers in which very high participation is found in 56 districts greatly from the Malabar coastal area, Delhi and some patches also visible all over the study area. Highest participation is found in Lakshadweep as cent per cent followed by East (98.59 %) and South Delhi 98.10 per cent. Likely high main male non-agricultural work participation rate is found in 36 districts greatly in the form of patches. In the same way moderately high main male non-agricultural work participation rate is found in 67 districts from hinterland of India. The pattern of rural main male work participation rate is elucidating in the figure 4.11 and table 4.11.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts.</th>
<th>Rural Main Workers</th>
<th>Main Non-Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60&lt;</td>
<td>56</td>
<td>8668626</td>
<td>6458448</td>
<td>3.82</td>
</tr>
<tr>
<td>50-60</td>
<td>36</td>
<td>8061586</td>
<td>4446315</td>
<td>2.63</td>
</tr>
<tr>
<td>40-50</td>
<td>67</td>
<td>15965063</td>
<td>7240933</td>
<td>4.28</td>
</tr>
<tr>
<td>30-40</td>
<td>131</td>
<td>44367571</td>
<td>15487392</td>
<td>9.16</td>
</tr>
<tr>
<td>20-30</td>
<td>173</td>
<td>56359561</td>
<td>14331558</td>
<td>8.48</td>
</tr>
<tr>
<td>&lt;20</td>
<td>121</td>
<td>35678844</td>
<td>5570491</td>
<td>3.29</td>
</tr>
<tr>
<td>Nil</td>
<td>9</td>
<td>00</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>169101251</td>
<td>53535137</td>
<td>31.66</td>
</tr>
</tbody>
</table>

Compiled by Author.

Likewise rural main moderate non-agricultural work participation rate is found in 131 districts greatly in the form of large patches from all over the study area. The low rural main male workers are occupied in only 173 districts of southern India. The very low main male workers are engaged with 121 districts greatly from the central area. The lowest participation rate is found in Budaun (9.75 %) of Uttar Pradesh followed by Kishanganj (9.97 %) of Bihar state.

Rural Female Main Non-agricultural Workers

Rural main female non-agricultural work participation rate is also categorised into six broad categories as categorised in total main and male non-agricultural workers. The
participation rate of female workers is the lesser than the males in the rural main non-agriculturists. The highest participation is found in Lakshadweep as cent per cent. The very high female participation is found in 75 districts greatly from Kerala, Punjab and West Bengal. Likewise high female participation is observed in 38 districts in the form of patches. The moderately high participation is found in 36 districts in the form of patches. The moderate participation is observed in 50 districts greatly in the form of patches. Likely low participation is found in 84 districts and very low found in 301 districts which is more than 50 per cent of the total districts. The lowest participation is found in Buldan (3.33 %) followed by Washim (3.68 %), Parbhani (3.74 %) and Hingoli of Maharashtra state. The pattern of rural main female work participation rate is elucidating in the figure 4.12 and table 4.12.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts</th>
<th>Rural Main Workers</th>
<th>Main Non-Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60&lt;</td>
<td>75</td>
<td>4649604</td>
<td>3540403</td>
<td>5.89</td>
</tr>
<tr>
<td>50-60</td>
<td>38</td>
<td>2385131</td>
<td>1328707</td>
<td>2.21</td>
</tr>
<tr>
<td>40-50</td>
<td>36</td>
<td>2801947</td>
<td>1267023</td>
<td>2.11</td>
</tr>
<tr>
<td>30-40</td>
<td>50</td>
<td>3518259</td>
<td>1197323</td>
<td>1.99</td>
</tr>
<tr>
<td>20-30</td>
<td>84</td>
<td>8116716</td>
<td>1959736</td>
<td>3.26</td>
</tr>
<tr>
<td>&lt;20</td>
<td>301</td>
<td>38613644</td>
<td>4495183</td>
<td>7.48</td>
</tr>
<tr>
<td>Nil</td>
<td>9</td>
<td>00</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>60085301</td>
<td>13788375</td>
<td>22.95</td>
</tr>
</tbody>
</table>

Compiled by Author.

**Rural Scheduled Castes Non-agricultural Workers**

As per census 2001 the working force of rural scheduled castes population is **27.07 per cent** in which male workers are **29.38 per cent** and females are **21.15 per cent** of the scheduled castes male and female main workers respectively. The non-agricultural workers in scheduled castes are categorised into six broad categories i.e.

I. Very High Scheduled Castes Non-agricultural Workers (>=60 %)

II. High Scheduled Castes Non-agricultural Workers (50-60 %)
III. Moderately High Scheduled Castes Non-agricultural Workers (40-50 %)

IV. Moderate Scheduled Castes Non-agricultural Workers (30-40 %)

V. Low Scheduled Castes Non-agricultural Workers (20-30 %)

VI. Very Low Scheduled Castes Non-agricultural Workers (<20 %)

Studying non-agricultural work participation rate in scheduled castes it is observed that very high non-agricultural work participation rate is found in 104 districts greatly from the north-east states and some more visible patches may also seen in the rest part of India. The highest participation is found cent per cent in 16 districts of north-east and Jammu & Kashmir. Like wise high non-agricultural work participation rate is found in 37 districts from all over the study area. In the same way moderately high non-agricultural work participation rate is found in 53 districts greatly from the eastern and western India (Fig. 4.13). The non-agricultural work participation rate is displayed in the table number 4.13.

<table>
<thead>
<tr>
<th>Category (%)</th>
<th>No. of Districts.</th>
<th>Rural Main Workers</th>
<th>Main Non-Agricultural Workers</th>
<th>In Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60&lt;</td>
<td>104</td>
<td>2402131</td>
<td>1671116</td>
<td>4.19</td>
</tr>
<tr>
<td>50-60</td>
<td>37</td>
<td>1968019</td>
<td>1067358</td>
<td>2.67</td>
</tr>
<tr>
<td>40-50</td>
<td>53</td>
<td>3446176</td>
<td>1554444</td>
<td>3.90</td>
</tr>
<tr>
<td>30-40</td>
<td>88</td>
<td>5263161</td>
<td>1823325</td>
<td>4.57</td>
</tr>
<tr>
<td>20-30</td>
<td>117</td>
<td>96988715</td>
<td>2356669</td>
<td>5.91</td>
</tr>
<tr>
<td>&lt;20</td>
<td>172</td>
<td>17128680</td>
<td>2330797</td>
<td>5.84</td>
</tr>
<tr>
<td>Nil</td>
<td>22</td>
<td>00</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>39906882</td>
<td>10803709</td>
<td>27.07</td>
</tr>
</tbody>
</table>

Compiled by Author.

The non-agricultural work participation rate is moderate in only 88 districts greatly in the form of patches. Likely low non-agricultural work participation rate is found in 117 districts and very low observed on 172 districts greatly from the Gangetic Plain and southern part of India. The lowest participation rate is found in Chandel (2.33 %) of Manipur preceded by Madhepura (5.01 %), Araria (5.28 %), Purnia (5.91 %), Supaul (6.16 %) and Sheohar (6.31 %) all of Bihar state.
Rural Scheduled Castes Main Male Non-agricultural Workers

Scheduled castes main male non-agricultural work participation rate is also categorised into six categories as categorised in total main male non-agricultural workers in which very high participation is found in 108 districts greatly from the north-east, north-west and western coastal area. Highest participation is found cent per cent in 16 districts of north – east and Jammu & Kashmir. Likely high main male non-agricultural work participation rate is found in 41 districts greatly in the form of patches. In the same way moderately high main male non-agricultural work participation rate is found in 69 districts from eastern and western region.

Likewise scheduled castes main male moderate non-agricultural work participation rate is found in 97 districts again in the eastern and western moderately high districts. The low scheduled castes main male workers are occupied in 120 districts in the form of patches. The very low main male workers are engaged with 136 districts greatly from the Gangetic Plain to Nilegiri hills area. The lowest participation rate is found in Chandel (4.35 %) of Manipur preceded by Sheohar (5.52 %), Araria (6.17 %) and Madhepura (6.31 %) of the Bihar state. The pattern of scheduled castes main male work participation rate is reveal in the figure 4.14 and table 4.14.

### Table No.4.14: INDIA-Rural Scheduled Castes Main Male Non-Agricultural Workers-2001

<table>
<thead>
<tr>
<th>Category %</th>
<th>No. of Districts</th>
<th>Rural Main Workers</th>
<th>Main Non-Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60&lt;</td>
<td>88</td>
<td>1830632</td>
<td>1269165</td>
<td>4.42</td>
</tr>
<tr>
<td>50-60</td>
<td>41</td>
<td>1603410</td>
<td>858344</td>
<td>2.99</td>
</tr>
<tr>
<td>40-50</td>
<td>69</td>
<td>3127046</td>
<td>1389758</td>
<td>4.84</td>
</tr>
<tr>
<td>30-40</td>
<td>97</td>
<td>4499961</td>
<td>1571876</td>
<td>5.47</td>
</tr>
<tr>
<td>20-30</td>
<td>120</td>
<td>7745085</td>
<td>1919386</td>
<td>6.68</td>
</tr>
<tr>
<td>&lt;20</td>
<td>136</td>
<td>9907999</td>
<td>1428212</td>
<td>4.97</td>
</tr>
<tr>
<td>Nil</td>
<td>22</td>
<td>00</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>28714133</td>
<td>8436741</td>
<td>29.38</td>
</tr>
</tbody>
</table>

Compiled by Author.

### Rural Scheduled Castes Female Main Non-agricultural Workers

Scheduled castes main female non-agricultural work participation rate is also categorised into six broad categories as categorised in total main and male non-agricultural workers. The highest participation is found cent per cent in Baramul and
Kargil of Jammu and Kashmir while West Kameng of Arunachal Pradesh and West Khasi of Meghalya state. The very high female participation is found in 108 districts greatly from the north-east and north-west of the study area. Likewise high female participation is observed in 41 districts in the form of patches. The pattern of scheduled castes main female work participation rate is clarified in the figure 4.15 and table 4.15.

<table>
<thead>
<tr>
<th>Category %</th>
<th>No. of Districts</th>
<th>Rural Main Workers</th>
<th>Main Non-Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60&lt;</td>
<td>93</td>
<td>881140</td>
<td>654963</td>
<td>5.85</td>
</tr>
<tr>
<td>50-60</td>
<td>29</td>
<td>267912</td>
<td>150876</td>
<td>1.35</td>
</tr>
<tr>
<td>40-50</td>
<td>53</td>
<td>568301</td>
<td>251816</td>
<td>2.25</td>
</tr>
<tr>
<td>30-40</td>
<td>55</td>
<td>788258</td>
<td>276089</td>
<td>2.47</td>
</tr>
<tr>
<td>20-30</td>
<td>67</td>
<td>1115378</td>
<td>270814</td>
<td>2.42</td>
</tr>
<tr>
<td>&lt;20</td>
<td>253</td>
<td>7571713</td>
<td>762410</td>
<td>7.81</td>
</tr>
<tr>
<td>Nil</td>
<td>43</td>
<td>47</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>11192749</td>
<td>2366968</td>
<td>21.15</td>
</tr>
</tbody>
</table>

Compiled by Author.

The moderately high participation is found in 69 districts and moderate participation is found 97 districts. Likely low participation is found in 120 and very low found in 136 districts. It is observed that very low and low participation found in more than 43 per cent of the total districts.

**Rural Scheduled Tribe Main Non-agricultural Workers**

As per census 2001 the scheduled tribe non-agricultural working force is 15.80 per cent in which male workers are 17.63 per cent and females are 12.48 per cent of the scheduled castes male and female main workers respectively. The scheduled tribe non-agricultural workers are categorised into six broad categories i.e.

1. Very High Scheduled Tribes Non-agricultural Workers (>60 %)
2. High Scheduled Tribes Non-agricultural Workers (50-60 %)
3. Moderately High Scheduled Tribes Non-agricultural Workers (40-50 %)
4. Moderate Scheduled Tribes Non-agricultural Workers (30-40 %)
5. Low Scheduled Tribes Non-agricultural Workers (20-30 %)
6. Very Low Scheduled Tribes Non-agricultural Workers (<20 %)

While studying non-agricultural work participation rate in scheduled tribes it is observed that very high non-agricultural work participation rate is found in 83 districts greatly from the western coast and Gangetic Plain. The highest participation is found in cent per cent in 11 districts of Uttar Pradesh, Goa, Lakshadweep and One from Himachal Pradesh. Like wise high rural non-agricultural work participation rate is found in 30 districts from north-east and western coats of India. In the same way moderately high non-agricultural work participation rate is found in 34 districts (Fig. 4.16).

The non-agricultural work participation rate is moderate in only 52 districts greatly in the form of patches. Likely low non-agricultural work participation rate is found in 101 districts and very low observed on 229 districts greatly from the central part of India. The lowest participation rate is found in Kishanganj (2.99 %) of Bihar followed by Shrawasti (3.46 %) of Uttar Pradesh, Araria (3.88 %), Balrampur (3.92 %) of Utta Pradesh and Saharsa (3.97 %) of Bihar state. The scheduled tribe non-agricultural work participation rate is displayed in the table number 4.16.

Table No. 4.16: INDIA – Rural Scheduled Tribe Main Non-Agricultural Workers – 2001.

<table>
<thead>
<tr>
<th>Category %</th>
<th>No. of Districts</th>
<th>Rural Main Workers</th>
<th>Main Non-Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60&lt;</td>
<td>83</td>
<td>396437</td>
<td>305868</td>
<td>1.15</td>
</tr>
<tr>
<td>50-60</td>
<td>30</td>
<td>189582</td>
<td>101602</td>
<td>0.38</td>
</tr>
<tr>
<td>40-50</td>
<td>34</td>
<td>411300</td>
<td>178429</td>
<td>0.67</td>
</tr>
<tr>
<td>30-40</td>
<td>52</td>
<td>804401</td>
<td>265375</td>
<td>1.00</td>
</tr>
<tr>
<td>20-30</td>
<td>101</td>
<td>4691689</td>
<td>1110855</td>
<td>4.19</td>
</tr>
<tr>
<td>&lt;20</td>
<td>229</td>
<td>20014279</td>
<td>2225671</td>
<td>8.40</td>
</tr>
<tr>
<td>Nil</td>
<td>64</td>
<td>42</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>26507721</td>
<td>4187800</td>
<td>15.80</td>
</tr>
</tbody>
</table>

Compiled by Author.

Rural Scheduled Tribes Main Male Non-agricultural Workers

Scheduled tribes main male non-agricultural work participation rate is also categorised into six categories as categorised in total main male non-agricultural workers
in which very high participation is found in 91 districts greatly western coast and Gangetic Plain of India. Highest participation is found in cent per cent in 11 districts of Uttar Pradesh, Goa, Lakshadweep and One from Himachal Pradesh. Likely high main male non-agricultural work participation rate is found in 26 districts greatly in the form of single units. In the same way moderately high main male non-agricultural work participation rate is found in 39 districts in the form of patches. The pattern of scheduled tribe main male work participation rate is reveal in the figure 4.17 and table 4.17.

<table>
<thead>
<tr>
<th>Category %</th>
<th>No. of Districts.</th>
<th>Rural Main Workers</th>
<th>Main Non-Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60&lt;</td>
<td>91</td>
<td>287476</td>
<td>206784</td>
<td>1.21</td>
</tr>
<tr>
<td>50-60</td>
<td>26</td>
<td>106628</td>
<td>56625</td>
<td>0.33</td>
</tr>
<tr>
<td>40-50</td>
<td>39</td>
<td>336736</td>
<td>148576</td>
<td>0.86</td>
</tr>
<tr>
<td>30-40</td>
<td>59</td>
<td>940004</td>
<td>313372</td>
<td>1.83</td>
</tr>
<tr>
<td>20-30</td>
<td>101</td>
<td>3209885</td>
<td>772289</td>
<td>4.52</td>
</tr>
<tr>
<td>&lt;20</td>
<td>213</td>
<td>12197628</td>
<td>1513562</td>
<td>8.86</td>
</tr>
<tr>
<td>Nil</td>
<td>64</td>
<td>33</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>17078390</td>
<td>3011208</td>
<td>17.63</td>
</tr>
</tbody>
</table>

Compiled by Author.

Likewise scheduled tribes main male moderate non-agricultural work participation rate is found in 59 districts again in the form of patches. The low scheduled tribe main male workers are occupied in 101 districts in the form of patches from all over of India. The very low main male workers are engaged with 213 districts greatly from the central region of India. The lowest participation rate is found in Kishanganj (3.22 %) of Bihar preceded by Araria (4.20 %) of Bihar, Sonbhadra (4.26 %) Uttar Pradesh, Saharsa (4.50 %) of Bihar, Shrawasti (4.71 %) and Balrampur (4.85 %) of Uttar Pradesh state.

**Rural Scheduled Tribes Female Main Non-agricultural Workers**

Scheduled tribes main female non-agricultural work participation rate is again categorised into six broad categories as categorised in total main and male non-agricultural workers. The highest participation is found cent per cent in 21 districts of
different parts of India. The very high female participation is found in 87 districts greatly in the southern coasts and Gangetic Plain of India. Likewise high female participation is observed in 22 districts in the form of patches.

The moderately high participation is found in 32 districts and moderate participation is found 36 districts. Likely low participation is found in only 73 and very low found in 270 districts greatly in the central and north-eastern India. The pattern of scheduled tribe main female work participation rate is light up in the figure 4.18 and table 4.18.

<table>
<thead>
<tr>
<th>Category %</th>
<th>No. of Districts</th>
<th>Rural Main Workers</th>
<th>Main Non-Agricultural Workers</th>
<th>In Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>60&lt;</td>
<td>87</td>
<td>167752</td>
<td>138115</td>
<td>1.46</td>
</tr>
<tr>
<td>50-60</td>
<td>22</td>
<td>65240</td>
<td>35502</td>
<td>0.38</td>
</tr>
<tr>
<td>40-50</td>
<td>32</td>
<td>62223</td>
<td>28556</td>
<td>0.30</td>
</tr>
<tr>
<td>30-40</td>
<td>36</td>
<td>253570</td>
<td>86592</td>
<td>0.92</td>
</tr>
<tr>
<td>20-30</td>
<td>73</td>
<td>714550</td>
<td>173486</td>
<td>1.84</td>
</tr>
<tr>
<td>&lt;20</td>
<td>270</td>
<td>8165986</td>
<td>714341</td>
<td>7.58</td>
</tr>
<tr>
<td>Nil</td>
<td>73</td>
<td>10</td>
<td>00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>9429331</td>
<td>1176592</td>
<td>12.48</td>
</tr>
</tbody>
</table>

Compiled by Author.

Lastly it is observed that non-agricultural workers are dominant only where, there agricultural possibilities are either zero or negligible population. Urban agglomeration, high participation of scheduled tribe and literacy rate also affects the non-agricultural strength. Therefore an educated work force is crucial for the dynamic growth of the non-agricultural work participation rate. The co-efficient of correlation between literacy rate and percentage of non-agricultural work force is 0.502, which considered as positive moderate/normal relationship. A regression model is fitted to explain the relationship between literacy rate and rural main non-agricultural workers with the help of trend line.
The results of regression analysis indicate that the non-agricultural workers is the significant and literacy rate both are positively interlinked with each other and literacy rate positively affects the strength of non-agricultural workers. All the coefficients are found to be significant at 0.01 % level of significance. R-square value is computed to be 0.502 indicating that about 50.2% of inter-district variations in yield are explained by our regression model.

Overall it is observed some major points that conclude facts about agricultural and non-agricultural workers;

1. There is need to improve agro-based industry which mean any activity involved in cultivation, under controlled conditions of agricultural and horticultural crops, including floriculture and cultivation of vegetables and post-harvest operation on all fruits and vegetables. The development of agro-industries has assumed crucial importance in the economic planning and progress of the country because a great amount of females are seasonal workers.
2. There is also need to improve food industry which includes four activities: processing, packaging, flavours and additives, and storage and handling; food processing includes only processing activities.

3. The export of fish and fish product is one of the main sources of foreign exchange for the country like India.

4. It is also need to understand carefully why workers and particularly women workers are under counted and why women’s work is invisible. To start with, women’s work is predominantly seasonal, intermittent and uncertain. Also, they frequently work as unpaid workers on family farms/enterprises or in informal sector activities, which are not properly recorded. Again, their household work and economic work frequently gets mixed and it is difficult to demarcate between the two at the conceptual level. Even at the operational level it is not easy to capture their work and net them as workers due to methodological problems. The available methods of investigation do not seem to capture the workers in the economy.

5. There is a great attention need to improve the condition of deprived section of the society through increasing their participation in the non-agricultural activities.

6. An expanded programmed of development and utilisation of wasteland for crop-cultivation and forestry;

7. Development of an appropriate support and policy framework for the growth of non-agricultural, particularly manufacturing activities, in rural areas, including rural towns;

8. Greater attention to the needs of the small and decentralised manufacturing sector as a major source of industrial growth, particularly in the production of consumption goods and manufactured exports;

9. Large scale programmes of construction of infrastructure and residential accommodation, the latter to be encouraged particularly in the private sector through appropriate land, financial and fiscal policies;

10. Strengthening of basic health and education facilities, particularly in the rural areas;

11. Facilities for faster growth of the services and informal sector activities through greater ease of entry and suitable support systems;
12. Identification and relaxation of legislative and policy measures found to restrict growth of employment;

13. Greater flexibility in special employment programmes and their integration with sectoral development with a view to ensuring their contribution to growth and sustainable employment, and; Revamping of training systems to introduce greater flexibility and responsiveness to labour market trends, and larger involvement of users of the system's output, and to provide opportunities for upgradation of skills of the employed workers and also., for the development of entrepreneurship for the actual and potential self-employed.

14. Rural infrastructures include irrigation, roads, power supply, marketing channels, and storage and transport facilities. Under services extension service, credit delivery, input supply, crop insurance may be considered. In India the rural infrastructures are quite underdeveloped and rural services are inadequate.

15. Increase credit provision to the rural areas for both agricultural credit and non-agricultural areas.

16. Dairy cooperatives could be set up in every village for procurement of milk to enable the farmers/agriculturist to enhance their income.

17. Rural non-farm employment is considered to be particularly important to the landless and small and marginal farmers, leading to the conclusion that the growth of real per capita non-agricultural output can have a significant impact in reducing rural poverty. Rising non-agricultural incomes can, however, also increase inequality as a consequence of differential access between as the less- and better endowed.

18. The share of non-farm activities is more clearly observed in male rather than female workers; this increase has mainly come from the tertiary sector.

19. Education is regarded a crucial input for rural non-agricultural employment.

20. More educated and literate individuals have greater access to information and facilities from government institutional systems, including technology transfer.
REFERENCES


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