WOMEN EMPLOYMENT IN UNORGANISED SECTOR IN INDIA: AN EMPIRICAL ANALYSIS

Rashmi Tiwari<br>and<br>Shivani Tiwari*


#### Abstract

Women constitute nearly a third of the workforce in India. In 2011, out of a total workforce of 481.7 million, 149.9 million or 31 per cent are women. The present study of women workers is based on analysis of Census data. It describes the variations in work participation rate of men and women by States and regions and the distribution of workers among the principal occupational categories.

The macro overview of occupational structure of female work participation shows that a larger share of women workers is still in primary sector in India. Women's employment is much more concentrated in agriculture than men's; nearly 65 per cent of employed women work in agriculture compared to 50 per cent of employed men.

A multiple linear regression model is used to identify the factors determining women's participation in different types of economic activities, i.e., female literacy rate, per capita income, sex ratio and female work participation rate. A correlation matrix is also calculated to find out the relation between female WPR and female literacy rate, per capita income, sex ratio. The results reveal that sex ratio is positively related while per capita income and female literacy rate are negatively related to female WPR. It may be because of majority of women moving into the labour force during crisis or distress and withdraw when economic conditions of the household are better. There is a requirement of replacing the traditional value system, which is based on inequality of sexes where females play a subordinate role.


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## Introduction

Indian society is highly patriarchical. Despite the directive principles in the Constitution, there is gender discrimination in all spheres of life. Gender discrimination is evident even in the demographic indicators of the country. While most of the major countries have a sex ratio favourable to women, our sex ratio continues to remain favourable to men. Gender discrimination is omnipresent in the Indian labour market (Neetha, 2014; Sengupta \& Das, 2014). Out of 131 countries, India is placed 11 th from the bottom in female labour force participation. The Global Gender Gap data for 135 countries show that women's economic participation and opportunity is worse in India than in 95 per cent of all other countries studied (Gol, 2013). Though women constitute one- third of the labour force in India, they account for less than one-fifth of the employees in the organised sector (Kurian, 2007). Female earners often have to bear the double burden of work in the sense that they are expected to carry on their traditional role as homemakers also. Many of their socially highly valued activities like caring the children are not assigned any economic value in national income accounting. Gender empowerment has become a catch word without much achievement.

India, like other South Asian countries, has a low female labour force participation rate (LFPR ${ }^{1}$ ), which is clearly one indicator of the low level of autonomy enjoyed by women in society at large, and of their capability
deprivation (Thomas, 2012; Mehrotra, et al, 2014). As per Census 2011, the total number of workers in India is 481.7 million. The labour force increased from 180.4 million in 1971 to 481.7 million in 2011. However, in the last two decades (the 2000s), employment of women rose significantly.The labour force increased by 301.3 million (about 1.7 times) between 1971 and 2011 but female workforce has increased more than males, i.e., 3.8 times in comparison to 1.2 times of male workforce.

## Methodology of the Study

This paper aims to analyse existing inequities in work participation rates between male and female workers at regional and State levels in India. It also identifies the determinants of women employment in India. The present research work is entirely based on secondary source of data which is mainly derived from Census of India. State is selected as a basic unit of study for investigation. The correlation matrixes are calculated between female work participation rate (FWPR) and female literacy rate, per capita income and sex ratio. Multiple Linear Regression Models are used to study the impact of various determinants on female cultivators, agricultural labour, household industry and other workers.

## Gender Inequality in Work Participation Rate

At National Level: As in most other parts of the world, fewer women participate in employment in India compared to men. India has one of the lowest labour force participation
rates for women in the world (Bhalla \& Kaur, 2011). As per Census 2011, the work participation rate ${ }^{2}$ is 39.8 per cent which is marginally higher than the work participation rate of 39.1 per cent in 2001. Although WPR is low, there has been progress in improving WPR for both males and females in India over the last several decades (Table 1). In 1971, only 11.9 per cent of women and 52.5 per cent of men were engaged in economic activity. By 2011, about 25 per cent of women and 53 per cent of men are economically active.Thus, there has been a large increase in the proportion of women who are economically active in 40 years. However, male work participation rate
remained same during this period. The average gender participation gap - which is the difference between male and female labour force participation - has been declining since 1971, but remains significant. This may be due to a variety of structural constraints such as social environment dominated by patriarchy, legal frameworks which are not completely gender neutral and unequal access to education and skill training. These include the restrictions imposed on women's movements outside the household as also discouragement by the husband and in-laws (Dev, 2007;Thomas, 2012).

Table 1 : Work Participation Gap Between Male and Female Workers

| Year | Male | Female | Total |
| :--- | :---: | :---: | :---: |
| 1971 | 52.5 | 11.9 | 32.9 |
| 1981 | 51.2 | 19.3 | 35.8 |
| 1991 | 51.6 | 22.3 | 37.5 |
| 2001 | 51.7 | 25.6 | 39.1 |
| 2011 | 53.3 | 25.5 | 39.8 |

Source: Census of India (Various Years).

The gender gap varies strongly by rural and urban areas. Though, the gap is decreasing, it is significantly higher in urban areas as compared to rural areas (Figures $1 \& 2$ ).Various rounds of Census data suggest that rural women's WPR is quite high in comparision to
their counterparts. Higher WPRs per se do not indicate a higher level of welfare. Only when higher WPRs are accompanied by higher level of educational capabilities and income, they become meaningful from the welfare point of view. Rural female agricultural workers are
highly unemployed and under-employed, (Srivastava \& Srivastava, 2010). Greater participation of young women in education in urban areas, compared to their rural counterparts, is one of the factors responsible for this. Also, this may be because a significant proportion of middle-class women in urban areas prefer not to work outside the home, and are full-time housewives (Gol, 2011).Moreover, the participation of rural females in agricultural tasks, despite lower wages, is responsible for
the higher female WPR in rural areas (Masood \& Ahmad, 2009; Gol, 2011). One reason may be the higher proportion of urban females reporting their activity status as attending to domestic duties. In 2009-10, 34.7 per cent of all rural females and 46.5 per cent of all urban females in India were attending to domestic duties. The proportion of females attending to domestic duties increases with household consumption expenditures, particularly in the urban areas (Thomas, 2012).

Figure 1 : Work Participation Gap Between Male and Female Workers in Urban Areas


Source: Census of India, Various Years.

Figure 2 : Work Participation Gap Between Male and Female Workers in Rural Areas


Source: Census of India, Various Years.

At Regional Level: According to Census 2011, gender gap in work participation rate is 27.8 per cent. The gender gaps vary strongly by region, with the highest gap observed in the
western region, i.e., 31.2 per cent, followed by northern region, i.e., 28.37 per cent (Figure 3). It is lowest in north-east region, i.e., 18.75 per cent.

Figure 3: Work Participation Gap Between Male and Female Workers at Regional Level in 2011


Source: Census of India.

At State Level: There are large inter-State variations in work participation rates of women. The maximum rate for any State, 44.8 per cent is in Himachal Pradesh and the minimum, 10.6 per cent, is in Delhi (Appendix A). The States
fall into the following three groups on the basis of variation in this rate. It may be noted that both types of States, i.e., developed and undeveloped fall in each group.

Table 2 : Distribution of States by Female WPR in 2011

| Work Participation Rate | States |
| :--- | :--- |
| Below 20 per cent | Delhi, Haryana, Jammu \& Kashmir, Punjab, Uttar Pradesh, Bihar, <br> West Bengal, Kerala |
| 20 to 30 per cent | Uttarakhand, Jharkhand, Odisha, Assam, Tripura, Goa, Gujarat |
| Above 30 per cent | Himachal Pradesh, Rajasthan, Chhattisgarh, Madhya Pradesh, <br> Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, <br> Sikkim, Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu |

Source: Computed from Census Data.

Main and Marginal Workers: In Census 2011, out of 481.7 million total workers, 362.4 million are main workers and the remaining 119.3 million are marginal workers. The percentage of main workers among the total workers is 75.2 against 77.8 in Census 2001. On the other hand, the percentage of female main workers has increased from 57.3 to 59.6 in Census 2011. The percentage of main workers among the
male workers is 75.2 and female workers 59.6 (Figure 4). Delhi reported highest percentage of male main workers i.e., 95 as per Census 2011 and minimum of 52.1 was in Jharkhand while Delhi reported highest percentage of female main workers i.e., 90.3 as per Census 2011 and minimum of 30 per cent was in Jammu \& Kashmir (Appendix B).

Figure 4 : Percentage Distribution of Main Workers Between Male and Female Workers at Regional Level in 2011


Source : Calculated from Census Data.

## Categories of Economic Activities of the Workers

Census of India classifies the economic activities into four broad categories, i.e.,
cultivators, agricultural labourers, working in household industries and other workers. The cultivators and agricultural labourers ${ }^{3}$ broadly show the workers engaged in the agricultural
sector. In Census 2011, out of 481.7 million total workers, 118.7 million are cultivators and another 144.3 million are agricultural labourers. Thus, nearly 55 per cent of the workers are engaged in agricultural activities compared to 58.2 per cent.

Table 3 provides the percentage distribution of male and female workers in different economic activities. Indian women are
extensively involved in agricultural activities. Sixty five per cent of the entire female working force is engaged in agricultural operations as compared to 49 per cent male workers. Women's role in agricultural operations, animal husbandry and other economically productive activities is very significant. They contribute about 60-70 per cent of the labour required for these activities (NCW, 2005).

Table 3 : Percentage Distribution of Workers by Employment Activities and Gender in 2011

| Economic Activities | Male | Female | Total |
| :--- | :---: | :---: | :---: |
| Cultivators | 24.9 | 24 | 24.6 |
| Agricultural labourers | 24.9 | 41.1 | 30 |
| Household industry workers | 2.9 | 5.7 | 3.8 |
| Other Workers | 47.2 | 29.2 | 41.6 |

Source: Computed from Census Data.

While men predominate in activities such as ploughing and harvesting, women's share is much higher in operations like weeding and transplanting. For female workers, the share of agricultural labour is higher for each region compared to male workers (Table 4). However, both male and female workers have same percentage as cultivators, i.e.about 24 per cent. But women are not seen as principal producers in agriculture because they do not have ownership or control over the assets on which they work. Despite legislative changes, few women have control over land (Srivastava \&

Srivastava, 2010). Region-wise analysis shows that women workers as cultivators are higher in north and northeast regions than men. This brings out the regional pattern of women's control over landholdings. The percentage of such holdings was much higher in the more progressive southern States and in some of the north-eastern States (Srivastava \& Srivastava, 2010). However, cultural and social factors are also very important in explaining the fact that a minuscule proportion of women have control on this critical resource.
Table 4 : Percentage Distribution of Workers by Employment Activities, Gender and Region in 2011

| Region | Cultivators |  | Agricultural Labourers |  | HH Industry Workers | Other Workers |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female | Male | Female | Male | Female |
| North | 23.91 | 39.81 | 10.33 | 13.24 | 2.69 | 4.16 | 60.31 | 42.74 |
| Central | 32.6 | 27.33 | 30.63 | 48.1 | 2.93 | 5.03 | 33.83 | 19.53 |
| East | 23.8 | 17.13 | 33.7 | 49.35 | 3.4 | 8.65 | 39.13 | 24.88 |
| Northeast | 38.3 | 44.23 | 10.09 | 15.33 | 1.76 | 4.9 | 49.81 | 35.54 |
| West | 17.13 | 18.43 | 14.87 | 31.53 | 1.87 | 2.77 | 66.13 | 47.27 |
| South | 15.8 | 12.53 | 21.1 | 38.65 | 2.45 | 5.08 | 60.65 | 43.73 |
| India | 24.9 | 24 | 24.9 | 41.1 | 2.9 | 5.7 | 47.2 | 29.2 |

Source: Computed from Census Data.

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## Empirical Analysis

Correlation: A correlation matrix is calculated to find out the relationship among female WPR and female literacy rate, per capita income, sex ratio. Female literacy rate is negatively related to female WPR. One of the reasons that could possibly explain that the illiterates have to work for their survival, and with improvement in educational attainment females tend to continue in education provided there are opportunities around.

The results also reveal that per capita income is negatively related to female WPR (Table 5). Many studies find that participation of women in the labour force is more often led by poverty concerns rather than by choice. They put in their labour or pull back depending upon various other socio-economic dynamics like family income, migration, etc. They move
into the labour force during crisis or distress and withdraw when economic conditions of the household are better (Abraham, 2009; Srivastava \& Srivastava, 2010; Himanshu, 2011; Gol, 2013).

Sex ratio is another variable included in the model to capture the inter-State variations in women's labour force participation in India. It is evident that sex ratio is positively related and plays an important role in increasing female's WPR. Sex ratio affects women's labour force participation positively in two ways. First, the States with higher sex ratio have more women available to join labour force and hence high participation. Second, higher sex ratio shows the positive attitude of that particular State toward women and hence higher participation (Masood \& Ahmad, 2009).

> Table 5 : Correlation Between Female WPR, Female Literacy Rate,
> Per Capita Income and Sex Ratio

| Observation | Female WPR | Female Literacy | Per Capita Income | Sex-ratio |
| :--- | :---: | :---: | :---: | :---: |
| Female WPR | 1.0000 |  |  |  |
| Female Literacy | -0.0913 | 1.0000 |  |  |
| Per Capita Income | -0.2512 | 0.5722 | 1.0000 |  |
| Sex-ratio | 0.3226 | 0.361 | -0.0807 | 1.0000 |

Determinants of Female Employment: In this section, the determinants of female workers in different economic activities are analysed through Multiple Regression Analysis by using

Ordinary Least Square method. While economic factors principally determine a man's participation in employment, the forces that influence a woman's participation in work are
diverse and include demographic, reproductive, social, religious and cultural factors. The analysis attempts an explanation of why women participate in specific types of employment as cultivators, agricultural labour, household industry and other workers. The dependent variable in the study is female
labour force participation in different economic activities. The independent variables used are female literacy rate (FLR), per capita income ( PCI ), female work participation rate (Female WPR) and sex ratio.

The functional form of Regression models are as follows:
$C L T=b_{0}+b_{1} F L R+b_{2} P C I+b_{3} F W P R+b_{4} S R+U$,
$A G L=b_{0}+b_{1} F L R+b_{2} P C I+b_{3} F W P R+b_{4} S R+U$,

Where CLT is cultivators, AGL is the agricultural labour, HHI is the household industry, OTW is other workers, b0 is the intercept; $\mathrm{b}_{1}, \mathrm{~b}_{2}, \mathrm{~b}_{3}$ and $\mathrm{b}_{4}$ are the coefficients associated with FLR, PCI, FWPR and PCI, respectively and UI is the error term. FLR is female literacy rate, PCl is per capita income, FWPR is female work participation rate and SR is sex ratio.

The regression results bring out a number of interesting relationships between dependent and independent variables (Table 6). Female literacy rate is naturally an important determinant of women employment. It may be noted that education is positively and significantly related to cultivators and other workers while it is negatively related to agricultural labourers. That means, if female literacy rate increases by 1 per cent, on average,
probability of being cultivators and other workers, increase by about 33 and 69 per cent, respectively, but decreases the probability of being agricultural labour by 101 per cent.

Per capita income also affects women employment. It is positively related to other workers and negatively related to cultivators, agricultural labour and household industry. From these regressions, it is apparent that per capita income raises the possibility of a woman worker being other workers, but reduces this possibility in all other cases. However, it is only significant for household industry and other workers.

To see the effect of WPR on different types of employment, female WPR is also used as an independent variable. It is apparent that probability of being cultivators is increasing while the probability of working in household
industry and other workers are decreasing as WPR is increasing. It is significant at 1 per cent level to all these dependent variables.

Sex ratio is also an important determinant of women employment. It is positively related to cultivators and negatively related to agricultural labour. It can be said if sex ratio increases by 1 per cent, on average, probability of being agricultural labour increases by about 15 per cent, but decreases the probability of being cultivators by 1.8 per
cent. Adjusted $R^{2}$ value is estimated 0.4466 for model (1), 0.2999 for model (2), 0.3751 for model (3) and 0.8096 for model (4). It reveals that about 44 per cent of the variation in cultivators, 30 per cent of the variation in agricultural labourers, 38 per cent of variation in household industry and 81 per cent of variation in other workers are explained by female literacy rate, per capita income female WPR and sex ratio. $F$ statistics is significant for model (1), (3) and (4).

Table 6 : Estimated Regression Equations for State-level Determinants of Women Employment

| Determining Factors | Model (1) <br> Cultivators | Model (2) <br> Agricultural <br> Labour | Model (3) <br> Household <br> Industry | Model (4) <br> Other <br> Workers |
| :---: | :---: | :---: | :---: | :---: |
| Constant | $\begin{gathered} 135.37 \\ \left(2.18^{* *}\right) \end{gathered}$ | $\begin{gathered} -31.6931 \\ (-0.49) \end{gathered}$ | $\begin{gathered} 8.8803 \\ -0.82 \end{gathered}$ | $\begin{gathered} -12.735 \\ (-0.34) \end{gathered}$ |
| FLR | $\begin{aligned} & 0.3306 \\ & \left(0.84^{*}\right) \end{aligned}$ | $\begin{gathered} -1.017 \\ \left(-2.47^{* *}\right) \end{gathered}$ | $\begin{aligned} & -0.009 \\ & (-0.14) \end{aligned}$ | $\begin{gathered} 0.6939 \\ \left(2.93^{* * *}\right) \end{gathered}$ |
| PCl | $\begin{gathered} -0.0001 \\ (-1.10) \end{gathered}$ | $\begin{gathered} -0.0002 \\ (-0.68) \end{gathered}$ | $\begin{gathered} -0.000072 \\ \left(-2.10^{* *}\right) \end{gathered}$ | $\begin{gathered} 0.0004 \\ \left(3.62^{* * *}\right) \end{gathered}$ |
| Female WPR | $\begin{gathered} 1.6551 \\ \left(4.58^{* * *}\right) \end{gathered}$ | $\begin{gathered} -0.2559 \\ (-0.68) \end{gathered}$ | $\begin{gathered} -0.2479 \\ \left(-3.93^{* * *}\right) \end{gathered}$ | $\begin{gathered} -1.1531 \\ \left(-5.30^{* * *}\right) \end{gathered}$ |
| Sex Ratio | $\begin{aligned} & -0.1755 \\ & \left(-2.30^{* *}\right) \end{aligned}$ | $\begin{aligned} & 0.1519 \\ & \left(1.90^{*}\right) \end{aligned}$ | $\begin{gathered} 0.0064 \\ -0.48 \end{gathered}$ | $\begin{aligned} & 0.174 \\ & -0.38 \end{aligned}$ |
| R-squared | 0.5318 | 0.4076 | 0.4712 | 0.8389 |
| Adjusted R-squared | 0.4466 | 0.2999 | 0.3751 | 0.8096 |
| F-Statistics | $6.25 * *$ | 3.78 | 4.90* | 28.64*** |

Note:The values in the parentheses are t-values. ${ }^{* * *}$ indicates 1 per cent, ** indicates 5 per cent and * 10 per cent level of significance.

## Legal Framework of Female Wage and Employment

Women form an integral part of the Indian workforce. Constitutional rights and duties enumerated in Part III and IV of the Constitution of India are pivotal to the demand for protection of laws of women workers. There are a few legislations, which are directly applicable for women workers, such as, The Maternity Benefit Act,The Equal Remuneration Act, The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), etc. The Equal Remuneration Act (ERA) was passed in 1976. Article 14 guarantees equality before the law and equal protection of laws; Article 15 prohibits discrimination on the ground of sex. The Equal Remuneration Act guarantees women equal treatment relative to similarly situated men in the workplace. Under this law, no discrimination is permissible in recruitment and service conditions except where employment of women is prohibited or restricted by the law (Gol, 2014).

Many studies find that women workers earn lower wages than men workers (Kelkar, 2011; Sankaran \& Madhav, 2011;Thomas, 2012 \& Das, 2012). The wage differentials between female and male agricultural workers are based on a pre-assumed gender character.Employers and contractors offer simply lower wages to women, regardless of their performance of the job. In the given situation of social and economic neglect, women have no better options (Kelkar, 2011). Studies indicate that on an average, women's pay is around 30 per cent
lower than that of men across all sectors and fields of employment (Sankaran \& Madhav, 2011). Employers divide the kind of work to be done between men and women and technically evade the provisions of the Equal Remuneration Act, 1976.

MGNREGA was passed in 2005 with a view to enforcing the right to work. The Act guarantees 100 days of work per household per year at a statutory minimum wage. There are several provisions in the Act which are focused on women workers. The Act ensures one-third of the workers to be women. The wages earned is equal for both men and women. Lastly, the Act provides for crèche facilities at worksites when more than five children under the age of six are present (Gol, 2014).

Kelkar (2009) in his study finds that there is no wage differential between female and male workers in the Mahatma Gandhi National Rural Employment Guarantee Programme in rural India. In case of employment, between 2004-05 and 2009-10, casual employment in public works increased by 2.5 million jobs created due to MGNREGA (Thomas, 2012). Thus, it can be said that government interventions (such as MGNREGA \& ERA) can play an important role in improving conditions of Indian women.

## Summary and Conclusion

The study describes the existing inequities in work participation rates of men and women. However, the average gender participation gap has been declining since

1971, but remains significant. There are dramatic differences in female work participation rate by place of residence, with rates in urban areas lagging behind rates in rural areas.

The paper highlighted the wide interregional disparities in work participation rate, percentage of main workers and the distribution of workers among the principal occupational categories. Western region reports highest male WPR and highest percentage of male main workers while northeast region reports highest female WPR and southern region reports highest percentage of female main workers among all regions. The macro overview of occupational structure of female work participation shows that a larger share of women workers is still engaged in primary sector in India.

The correlation results reveal that sex ratio is positively related while per capita income and female literacy rate is inversely related to female WPR. It can be said that States with high sex ratio are experiencing high participation of women in labour force. Regression analysis confirms that socioeconomic variables such as female literacy rate, per capita income, sex ratio and female work participation rate are significant determinants of women employment. Therefore, there is a need for replacing the traditional value system, which is based on gender inequality where females play a subordinate role and adopt legal frameworks that effectively address gender biases. However, it can be said that government interventions (such as MGNREGA \& ERA) can play an important role in improving conditions of Indian women.

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Appendix A: State-wise Work Participation Rate of Male and Female Workers (in Per cent)

| State | Male WRP |  |  | Female WRP |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2011 |  |  | 2011 |  |  |
|  | Total | Rural | Urban | Total | Rural | Urban |
| India | 53.3 | 53 | 53.8 | 25.5 | 30 | 15.4 |
| North | 52.37 | 51.49 | 52.84 | 24 | 26.94 | 13.37 |
| Delhi | 53 | 49.3 | 53.1 | 10.6 | 9.7 | 10.6 |
| Haryana | 50.4 | 50.1 | 51.1 | 17.8 | 20.8 | 12.1 |
| Himachal Pradesh | 58.7 | 59 | 55.7 | 44.8 | 47.4 | 19.9 |
| Jammu \& Kashmir | 48.1 | 46.3 | 52.7 | 19.1 | 20.8 | 14.5 |
| Punjab | 55.2 | 54.9 | 55.5 | 13.9 | 14.3 | 13.2 |
| Rajasthan | 51.5 | 51.7 | 50.8 | 35.1 | 42.7 | 12 |
| Uttarakhand | 49.7 | 49.1 | 51 | 26.7 | 32.9 | 11.3 |
| Central | 52.3 | 52.7 | 51.23 | 29.67 | 34.63 | 24.6 |
| Chhattisgarh | 55.6 | 56.4 | 53.1 | 39.7 | 46.3 | 47.4 |
| Madhya Pradesh | 53.6 | 54.3 | 51.7 | 32.6 | 39.3 | 15.1 |
| Uttar Pradesh | 47.7 | 47.4 | 48.9 | 16.7 | 18.3 | 11.3 |
| East | 52.38 | 52.8 | 50.63 | 23.38 | 26.08 | 12.5 |
| Bihar | 46.5 | 46.7 | 44.9 | 19.1 | 20.2 | 10.4 |
| Jharkhand | 49.8 | 50.8 | 46.7 | 29.1 | 35 | 10.1 |
| Odisha | 56.1 | 56.5 | 54.1 | 27.2 | 29.7 | 14.1 |
| West Bengal | 57.1 | 57.2 | 56.8 | 18.1 | 19.4 | 15.4 |
| Northeast | 52.91 | 53.36 | 52.58 | 34.16 | 38.06 | 23.85 |
| Arunachal Pradesh | 49.1 | 48.5 | 50.9 | 35.4 | 39.5 | 21.3 |
| Assam | 53.6 | 53.1 | 56.8 | 22.5 | 23.7 | 14.9 |
| Manipur | 51.6 | 52.4 | 49.9 | 38.6 | 41.2 | 33.2 |
| Meghalaya | 47.2 | 47 | 47.7 | 32.7 | 35 | 23.6 |

(Contd...)

Journal of Rural Development, Vol. 35, No. 4, October - December : 2016

Appendix A (Contd...)

| State | Male WRP |  |  | Female WRP |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total |  |  | Rural | Urban | Total |
| Rural | Urban |  |  |  |  |  |
|  | 52.4 | 53.9 | 50.9 | 36.2 | 41.9 | 31.1 |
| Mizoram | 53.4 | 55.7 | 49.9 | 44.7 | 52.3 | 25.9 |
| Nagaland | 60.2 | 61 | 57.5 | 39.6 | 44.6 | 24.8 |
| Sikkim | 55.8 | 55.3 | 57 | 23.6 | 26.3 | 16 |
| Tripura | 56.67 | 56.43 | 56.63 | 25.47 | 32.37 | 16.57 |
| West | 56.8 | 55.5 | 57.5 | 21.9 | 22.6 | 21.5 |
| Goa | 57.2 | 57.1 | 57.2 | 23.4 | 32 | 11.4 |
| Gujarat | 56 | 56.7 | 55.2 | 31.1 | 42.5 | 16.8 |
| Maharashtra | 57 | 57.95 | 55.55 | 29.53 | 36.2 | 19.43 |
| South | 57 | 58.4 | 54.1 | 36.2 | 44.6 | 19.1 |
| Andhra Pradesh | 59 | 59.8 | 57.8 | 31.9 | 38.8 | 20.8 |
| Karnataka | 52.7 | 53.6 | 51.8 | 18.2 | 20.2 | 16 |
| Kerala | 60 | 58.5 | 31.8 | 41.2 | 21.8 |  |
| Tamil Nadu | 59.3 |  |  |  |  |  |

Source: Census of India.

Appendix B: Percentage Distribution of Main Workers by Gender in 2011

| State | Percentage of main workers to total |  |  | Percentage of main workers to total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | workers (male) |  |  | workers (Female) |  |  |
|  | Total | Rural | Urban | Total | Rural | Urban |
| India | 75.2 | 70.5 | 87.6 | 59.6 | 55.6 | 77 |
| North | 74.69 | 70.29 | 88.61 | 56 | 50.74 | 75.51 |
| Delhi | 95 | 91 | 95.1 | 90.3 | 79.8 | 90.5 |
| Haryana | 78.7 | 73.9 | 88.5 | 54.7 | 47.4 | 78.5 |
| Himachal Pradesh | 57.9 | 55.4 | 89 | 41.1 | 39.5 | 78.2 |
| Jammu \& Kashmir | 61.2 | 53.6 | 80.5 | 30 | 24 | 53.7 |
| Punjab | 85.4 | 82.6 | 89.9 | 65.1 | 58.2 | 77.7 |
| Rajasthan | 70.5 | 66.3 | 88.8 | 50.2 | 48.1 | 72.6 |
| Uttarakhand | 74.1 | 69.2 | 88.5 | 60.6 | 58.2 | 77.4 |
| Central | 69.13 | 65.2 | 85.23 | 51.03 | 48.1 | 72.03 |
| Chhattisgarh | 67.7 | 63.3 | 88.6 | 52.4 | 49.6 | 77.7 |
| Madhya Pradesh | 71.9 | 67.7 | 87.1 | 55.5 | 52.6 | 75.6 |
| Uttar Pradesh | 67.8 | 64.6 | 80 | 45.2 | 42.1 | 62.8 |
| East | 62.13 | 57.65 | 83.3 | 40.18 | 36.35 | 67.65 |
| Bihar | 61.5 | 59.7 | 78.3 | 43 | 41.9 | 60.9 |
| Jharkhand | 52.1 | 45.3 | 83.2 | 33.9 | 30.8 | 68.5 |
| Odisha | 61 | 57.1 | 85.5 | 33.9 | 30.6 | 70.3 |
| West Bengal | 73.9 | 68.5 | 86.2 | 49.9 | 42.1 | 70.9 |
| Northeast | 76.89 | 75.08 | 84.51 | 63.39 | 61.6 | 73.61 |
| Arunachal Pradesh | 81.5 | 80.2 | 86.4 | 74.8 | 74.7 | 75.8 |
| Assam | 72.6 | 70.5 | 85.9 | 48.2 | 46 | 69.8 |
| Manipur | 73.8 | 73 | 75.5 | 60.9 | 60.1 | 62.8 |
| Meghalaya | 77.7 | 75.1 | 89.8 | 69.7 | 66.9 | 86.1 |

(Contd...)

Journal of Rural Development, Vol. 35, No. 4, October - December : 2016

| Appendix B (Contd...) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State | Percentage of main workers to total |  |  | Percentage of main workers to total |  |  |
|  | workers (male) |  |  | workers (Female) |  |  |
|  | Total | Rural | Urban | Total | Rural | Urban |
| Mizoram | 85.3 | 86.3 | 84.2 | 77.4 | 77.3 | 77.6 |
| Nagaland | 76.1 | 74.7 | 81.2 | 70.1 | 70.5 | 67.8 |
| Sikkim | 74.8 | 71.2 | 88.1 | 61.4 | 57.2 | 83.7 |
| Tripura | 73.3 | 69.6 | 85 | 44.6 | 40.1 | 65.3 |
| West | 84.4 | 79.7 | 90.1 | 71.17 | 66.5 | 81.1 |
| Goa | 82.5 | 76.3 | 86.1 | 75.5 | 67.9 | 80.5 |
| Gujarat | 82.2 | 76.3 | 92.3 | 56.1 | 50.7 | 77.5 |
| Maharashtra | 88.5 | 86.5 | 91.9 | 81.9 | 80.9 | 85.3 |
| South | 83.25 | 80.88 | 87.03 | 73.93 | 71.7 | 78.5 |
| Andhra Pradesh | 83.8 | 83.1 | 85.8 | 76 | 76.1 | 75.3 |
| Karnataka | 83.9 | 81.4 | 89 | 73.4 | 70.3 | 82.5 |
| Kerala | 80.3 | 77.7 | 83.4 | 67.9 | 64.7 | 72.2 |
| Tamil Nadu | 85 | 81.3 | 89.9 | 78.4 | 75.7 | 84 |

Source: Census of India.


[^0]:    * Guest Lecturer and Research Scholar, Respectively, Department of Economics, Babasaheb Bhimrao Ambedkar University, Lucknow - 226025, E-mail: rshukla1176@gmail.com

