

# Availability and Distribution of Female Labour Force Participation in Jhunjhunu District and Its Correlation with Sex Ratio and Literacy Rate

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**Abstract:** The paper concerned on distribution and availability of female labour force participation in Jhunjhunu District and assessing correlation with sex ratio and literacy rate which are widely being used to evaluate the female growth and trends in society. The entire study is based on secondary data collected from Census of India and Directorate of Census Operations Rajasthan. From 1961 to 2011, there have been ups and downs in employment trends and gender gap in labour force participation rates in Jhunjhunu. There is moderately positive correlation between Sex Ratio, Female Literacy rate (FLR) and Female Labour Force Participation Rate (LFPR) due to mainly working in cultivation and agricultural labour and strengthening other industrial and educational area as well. Jhunjhunu has a large number of marginal workers that needs to be improved in main worker's category.

**Key Words:** Female work participation rate, Economic Activity, Education Level, Correlation, Youth workforce.

## 1. INTRODUCTION:

Labour is an essential factor of production that contributes to development. The total number of workers in labour supply is highly affected by the behavior of better half group particularly women with their dual responsibilities of home maker and worker. In an economy like India both economic and socio-cultural factors determine the level of female employment. Several studies have suggested and identified some of the possible determinants of female participation in India (Gulati, 1975; Dholakia & Dholakia, 1978; Bardhan, 1979; Dasgupta, 2005). A major conclusion that one may draw from these studies is that education and number of young (below 5 years) in household had a negative effect on women's labour force participation, while sex ratio significantly increased the participation rate in rural and urban areas.

The labour force participation rate (LFPR) plays a very essential role in determining socio-economic development and growth. It also has a strong bearing effect on poverty reduction. The labour force participation rate shows the supply of labour in the economy and the composition of the human resources of the country. The analysis of the labour force participation is helpful in determining employment and human resource development related policies at state level also.

## 2. OBJECTIVES:

The main objective of this study is to analyse female employment scenario in Jhunjhunu District and to find out its determinants and distribution. The study proposes to investigate keeping in view the existing literature:

- To understand the level and nature of female labour activity at the district level of Jhunjhunu.
- To analyse sectoral distribution of female labour into different occupational categories.
- To identify and explain various demographic and socio-economic factors responsible for the observed levels and changing patterns of female workforce participation rate across the district.

## 3. DATABASE AND METHODOLOGY:

The present study is mainly based on secondary source of data, which are obtained from census of India (Census Digital Library, 2011) and Directorate of Census Operations Rajasthan. The study area map is prepared with QGIS.

## 4. STUDY AREA:

Jhunjhunu district is situated in the north-eastern portion of Rajasthan and lies between 27°38' and 28°31' north latitudes and 75°02' and 76°06' east longitudes. It is bounded on the north-west by Churu district, on the north-east by Hisar and Mahendragarh districts of Haryana State and on the west, south and south-east by Sikar district.

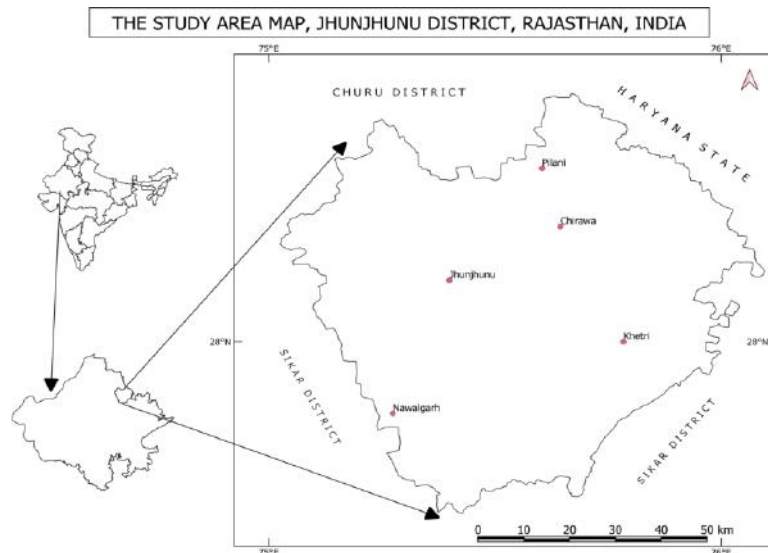


Figure 1: The Study Area Map

5. DEMOGRAPHIC SCENARIO OF WORKFORCE:

Table 1 : Gender Gap in labour force, Jhunjhunu, 2011

Total workers (Main+Marginal)	Male	Female	Gender Gap	Gender Gap %
319671	191872	127799	64073	15.2
235015	215036	19979	195057	40.1
416177	279926	136251	143675	22.2
528897	350296	178601	171695	19.3
760910	457623	303287	154336	13.92
894649	541392	353257	188135	15.47

Source: Census-2011, Directorate of Census Operations Rajasthan

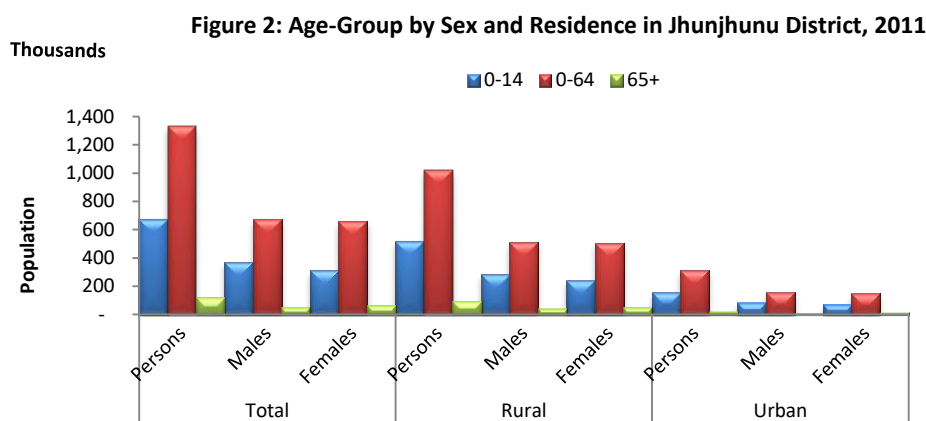
According to census of India, 2011 the total number of working people in Jhunjhunu district is 894649, which is 41.86 percent of the total number of the district. If we look at the number of women and men in the working population in the district, 541392 men and 353257 women are working in the district. If the number of people working in the district is analysed in the context of rural and urban areas, than we found that out of the total working population in the district, 752752 people are working in rural areas, which is 45.68 per cent of the district. A total of 425348 males and 327404 females are employed in the villages of the district. The district has a total marginal working population of 33.74 per cent, of which 17.97 percent of the men and 57.91 percent of the females fall under the marginal population.

Table 2: Age-group in Jhunjhunu District, 2011

Age	Total			Rural			Urban		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7	8	9	10
0-14	6,75,162	3,65,122	3,10,040	5,20,078	2,81,657	2,38,421	1,55,084	83,465	71,619
15-64	13,29,383	6,70,854	6,58,529	10,20,230	5,12,635	5,07,595	3,09,153	1,58,219	1,50,934
65+	1,18,485	52,925	65,560	96,499	42,910	53,589	21,986	10,015	11,971
Age not stated	14,015	6,995	7,020	11,159	5,516	5,643	2,856	1,479	1,377
All ages	21,37,045	10,95,896	10,41,149	16,47,966	8,42,718	8,05,248	4,89,079	2,53,178	2,35,901

Source: Census-2011, Directorate of Census Operations Rajasthan

In Non-working category, the elderly, handicapped, students, unemployed, wives, and pensioners are included. The total number of such population in Jhunjhunu district in 2011 is 1242396 in which 554504 are males and 687892 are females in the district. The total number of non-working people in the rural areas of the district is 895214 in which 417370 are 226 males and 477844 are females. Similarly, the total number of non-working women in cities of the district is 137134 and the number of non-working women in cities is 210048. The working age population is defined as those aged 15 to 64. Table 2 shows, according to this definition Jhunjhunu has 1,329,383 total persons as working age or available for work age. In which 49.54 percent is female population that is significant number as potential workers. In rural areas this number is 512,635 and in urban area 150,934. For measuring employment this age group is being used. So it is important to study age-structure of Jhunjhunu district for comparative study which is shown below figures:-



**6. LABOUR FORCE PARTICIPATION RATE (LFPR):**

LFPR is defined as the section of working population in the age group of 15-64 in the economy currently employed or seeking employment. It provides an indication of the size of the supply of labour available to engage in the population of goods and services, relative to the population at working age. People who are not looking for a job such Female participation in labour force has remained lower than male participation as women account for the most of the unpaid work, and when women are employed in paid work, they are overrepresented in the informal sector and among the poor. They also face significance wage differentials vis-à-vis their male counterparts. It has been observed that LFPR is the lowest for urban females. (Table 3 and Table 4)

**6.1.Methods of Computation:**

$$LFPR (\%) = \frac{\text{Total Working Population}}{\text{Total Working Age Population (15 – 64 years)}} \times 100$$

$$LFPR (\%) = \frac{\text{Persons employed} + \text{Persons unemploed}}{\text{Working – age population}} \times 100$$

Table 3: Work/Labour Force Participation Rate (LFPR) in Jhunjhunu District, 2011 (Main+Marginal Workers)

	Working Population	Working Age Population In (15-64 years)	LFPR	Male LFPR	Female LFPR
Total	1329383	894649	67.30	50.46	49.54
Rural	1020230	752752	73.78	50.25	49.75
Urban	309153	141897	45.90	51.18	48.82

Source: Census of India, 2011

	Rural	Urban	Combined
Female	53.64	17.13	53.64

Male	82.97	73.34	80.7
Total	73.78	45.9	67.3

Source: Census of India, 2011

### 7. SEX RATIO AND WORK RATIO:

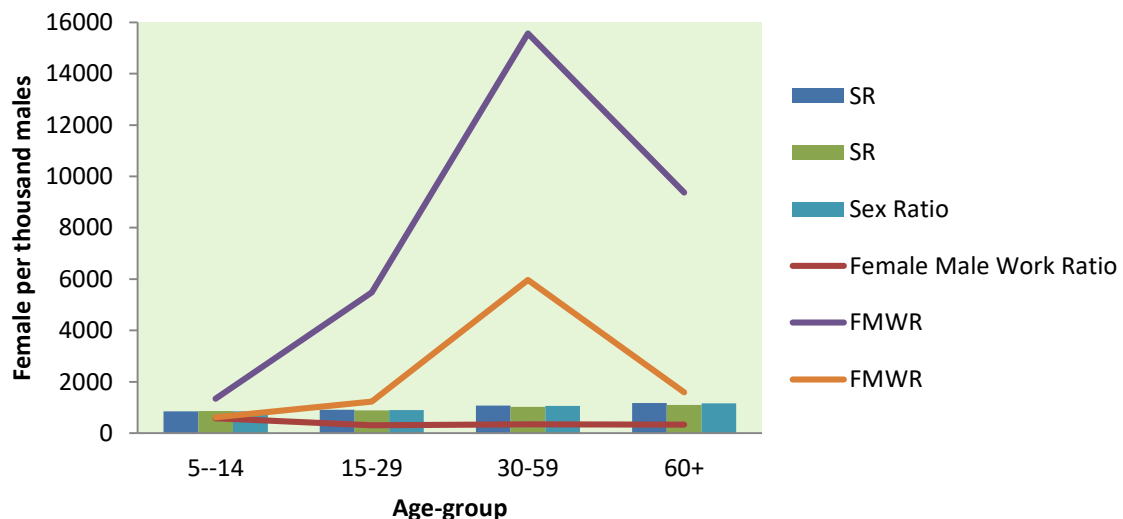
The well known relationship between the sex ratio (the number of women for every 1000 men) and women’s labour force participation rate has been widely interpreted. Here total sex ratio, workers and main workers data are shown below Table 5. The sex ratio at the district level had been lower than that of state level from 1901 to 1941. Since 1951 till 2011 the position reversed the sex ratio in favor of district as compared to that of state. In 2011, the district registered a sex ratio of 950 as against 921 of the state. The sex ratio in the rural areas of the district had been lower from 1901 to 1951 as compared to that of urban areas of the district. Since then the sex ratio has gone in favor of rural areas till 2011 than that of urban areas. In 2011, the rural areas of the district registered a sex ratio of 956 as against 932 of urban areas. Population of women in marginal areas is higher due to working in cultivation and agricultural sectors that increases its ratio. Total worker ration and main worker ratio graphs shows that there is a huge difference in women’s ratio. In total rural worker this ratio is 15573, where in main worker category in rural area this ratio is 3617. Indian Government scheme like MNREGA contributed increasing this number.

Table 5: Sex Ratio and Main Workers Male-Female Work Ratio in Jhunjhun District, 2011

Age-group	Total		Rural		Urban	
	Sex Ratio	Male-Female Work Ratio	Sex Ratio	Male-Female Work Ratio	Sex Ratio	Male-Female Work Ratio
5—14	853	579	852	1100	856	922
15-29	903	311	906	1543	892	1224
30-59	1059	348	1071	3617	1020	5969
60+	1163	337	1179	2363	1100	1661

Female workers/1000 Male workers

Figure 3: Sex Ratio vs Worker Ratio in Various Age Group in Jhunjhunu District, 2011



### 8. ECONOMIC ACTIVITY AND FEMALE PARTICIPATION:

Cultivators are the main working force in the district as they form 58.3 percent of total workers. It is followed by other workers (32.5 per cent), Agricultural Labours (7.7 per cent) etc. Females (240,214) outnumber males (687,892) as Cultivators. Much variation in the percentage of Male workers (46.66 per cent) and female workers (76.18) classified as other workers is seen in the district. In agricultural labourers the percentage of male and female is almost same, 7.63 and 7.81 respectively. The economy of Jhunjhun district is mainly dependent on agriculture as 66.0 percent workers in the district are either cultivators or agricultural labourers. However the district percent of such workers is higher than the state average of 62.1 percent.

Table 6: Structure of Female Work Participation by Category and Residence in Jhunjhunu District(2001-2011)

Year	2001			2011		
	Total 2001	Rural	Urban	Total	Rural	Urban
Share in Total workers						
Cultivators	240214	237295	2919	265097	262551	6546
Agricultural Labourers	21881	21338	543	27592	26471	1121
Household Industry Workers	6916	4343	2573	4043	2131	1912
Other workers	34276	27102	7174	52525	36251	16274
Non-Workers	626876	452719	297340	687892	477844	210048
Total	303287	290078	13209	1037149	805248	235901

Source: Census of India, 2011



Figure 4: Female Work Participation by Economic Activity and Residence in Jhunjhunu District, 2011.

## 9. LITERACY AND FEMALE WORK FORCE:

Literacy, along with educational attainment is an important indicator in the dynamics of employment and unemployment. Female literacy is an important issue for number of reasons. Firstly, education of females increases female productivity by rising output in economic activity. Secondly, it increases children’s education profile which results in better educated people.

The literacy rate in Jhunjhunun district is 74.1 percent which is higher than the State Average (66.1 percent) and it ranks 3rd among the other districts of the state. Gender Gap of the literacy rate is 25.9 percent in the district. 33.93 percent literate plus illiterate women are working in main and marginal sectors. Urban women working percent is extremely low, 10.96 percent where in rural area it is 40.66 percent. There is less number in higher educated women with technical degree or diploma equal to degree or post-graduate degree. (Table 7)

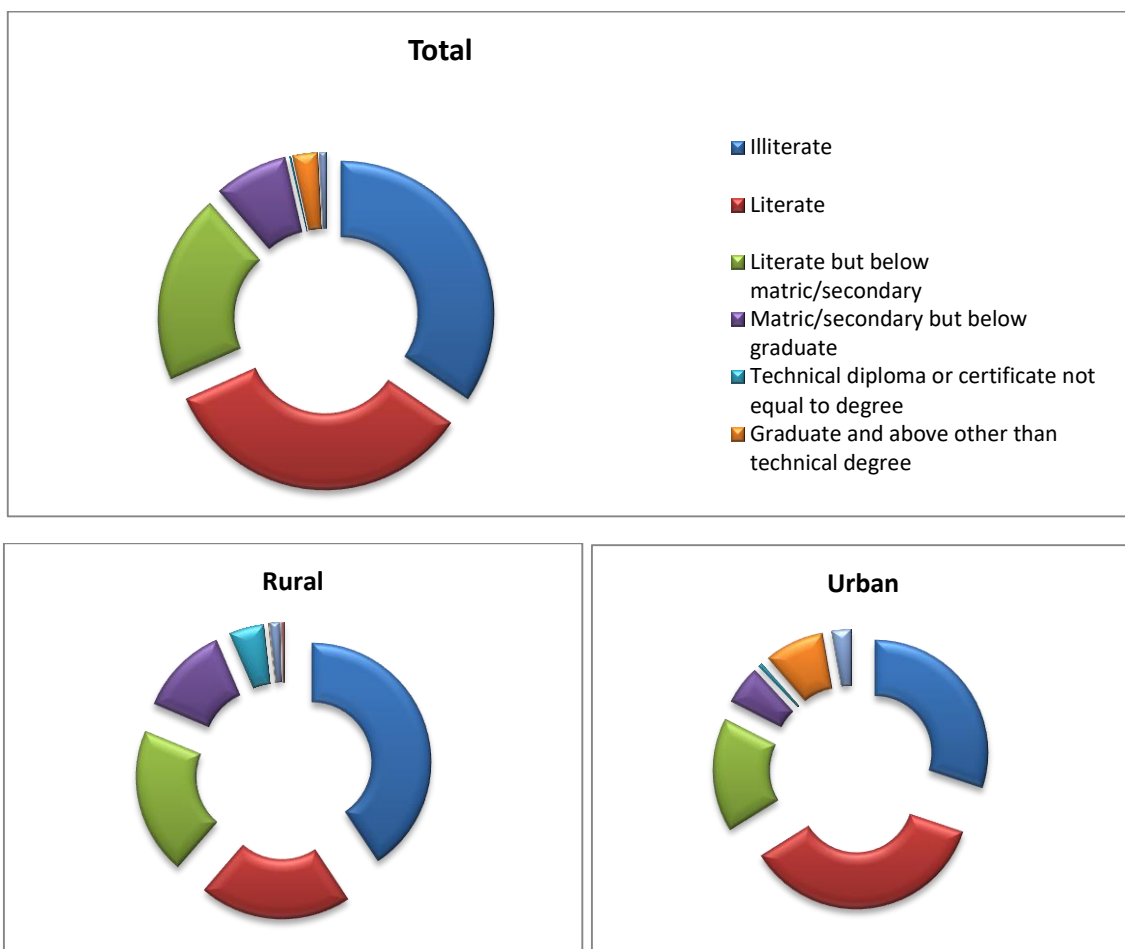


Figure 5: Working Population by Education level and Residence in Jhunjhunu District, 2011

<b>Table 7: Working Population by Education level and Residence in Jhunjhunu District, 2011</b>			
Educational level-District	Total	Total	working %
Total	1041149	353257	33.93
Illiterate	486623	178120	36.60
Literate	554526	175137	31.58
Literate but below matric/secondary	366929	104258	28.41
Matric/secondary but below graduate	122958	40512	32.95
Technical diploma or certificate not equal to degree	2024	1106	54.64
Graduate and above other than technical degree	30345	13615	44.87
Technical degree or diploma equal to degree or post-graduate degree	7873	3913	49.70
Educational level-Rural	Total	Rural	working %
Total	805248	327404	40.66
Illiterate	384371	166343	43.28
Literate	420877	161061	38.27
Literate but below matric/secondary	281580	97876	34.76
Matric/secondary but below graduate	95287	38319	40.21
Technical diploma or certificate not equal to degree	1549	841	54.29

Graduate and above other than technical degree	18873	10296	54.55
Technical degree or diploma equal to degree or post-graduate degree	5221	2959	56.67
Educational level-Urban	Total	Urban	working %
Total	235901	25853	10.96
Illiterate	102252	11777	11.52
Literate	133649	14076	10.53
Literate but below matric/secondary	85349	6382	7.48
Matric/secondary but below graduate	27671	2193	7.93
Technical diploma or certificate not equal to degree	475	265	55.79
Graduate and above other than technical degree	11472	3319	28.93
Technical degree or diploma equal to degree or post-graduate degree	2652	1067	40.23

Source: Census-2011, Directorate of Census Operations Rajasthan

	Total Population	Females	Percent	% in Total Population
All Ages	2137045	1041149	48.72	
Female Total	459571	213288	46.41	9.98
Rural	350484	162639	46.40	7.61
Urban	109087	50649	46.43	2.37

Source: Census-2011, Directorate of Census Operations Rajasthan

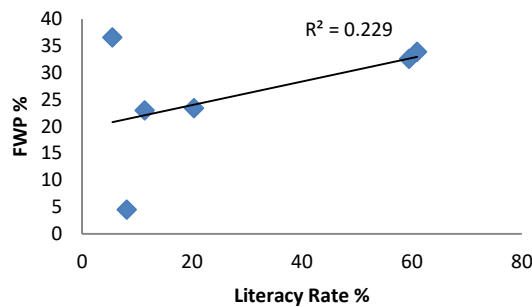


Figure 6: Scatter Plot of Literacy Rate and Female Working Participation in Jhunjhunu District (1961-2011)

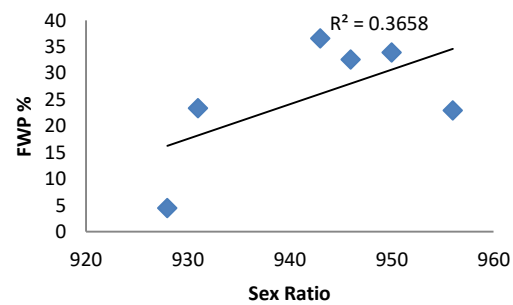


Figure 7: Scatter Plot of Sex Ratio (Females/1000 Males) and Female Working Participation in Jhunjhunu District (1961-2011)

**10. FINDINGS AND CONCLUSION:**

- There have been ups and downs in employment trends and gender gap in labour force participation rates in Jhunjhunu. (Table 1)
- Jhunjhunu has a large number of marginal workers that needs to be improved in main workers category.
- There is an imbalance in female work participation in Jhunjhunu. A sudden decline in FWP in 1971 noticed and then increased. There are various factors responsible namely, socioeconomic, political, demographic, and biological and so forth.
- The analysis (Figure 6) indicates that Literacy Rate is moderately positive correlated with the female work participation rate, as well. ( $r = 0.478492$ )
- The analysis (Figure 7) indicates that Sex Ratio is moderately positive correlated with the female work participation rate (All ages) ( $r = 0.604787$ )
- Female Youth (15-24 years) Population as Potential Labour Force is 46.41 percent in total female youth population and 9.98 percent in total population of Jhunjhunu District. (Table 8)

Thus, to enhance the participation of women in labour force some affirmative action such as increasing quality education that will improve the number of main workers.

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