

An Analysis of the Gender Dimension in the Employment over the Period 2011-12 to 2017-18.

Poonam

PhD Research Scholar

Department of Economics

Kurukshetra University, Kurukshetra

Abstract: The participation of the female in economic activity is very crucial for the development of any developing country. As female constitute 50% of the total population so their economic participation can significantly contribute to the growth rate of the country and also to improve their own living standard of life. The various rounds of NSSO's on employment and unemployment show that female workforce participation rate is significantly low than male regional as well as at aggregate level. The present research paper explores the gender dimension of employment as well as the gender disparity in employment by region, sector, status of employment and level of education for the 17 major states over the period 2011-12 to 2017-18. By using the NSSO's unit level data for 68th round and PLFS (Periodic Labour Force Survey) 2017-18, a declined in male-female workforce participation rate and increased in gender disparity in employment in rural region was found over the period 2011-12 to 2017-18. A declined in male-female workforce participation rate and increased in gender disparity was also found for primary and secondary sector at both regions –rural and urban over the period 2011-12 to 2017-18. A slightly shift from self-employed and casual workers to regular workers for both male and female and a positive effect of education after a certain level of education was also observed over the period 2011-12 to 2017-18.

Keywords: Workforce participation rate, rural-urban, employment.

Introduction: Female faces different kinds of disparities from their counterpart such as disparities in Economic Participation and Opportunity, Educational Attainment, Health and Survival Political Empowerment. The gender disparity in economics participation and opportunity is major concern for any developing country like India. An increase in female participation in employment contributes to the growth rate of country and also help to make to growth to more inclusive. An increase in female workforce participation is helpful to make the quality better of their own life and also improved the quality of their household members. In India, since the liberalization period many major steps have been taken by the government but not much fruitful results have been achieved. The fruit of growth of the country has been not equally shared between male and female. The participation of male-female in employment in working age (15-59) plays very important role for the growth of a country. In India the female workforce participation is significantly low than her counterpart for the working age (15-59) in both regions rural and urban. The recent result of the NSSO's Periodic Labor Force Survey 2017-18 on

employment and unemployment indicate that all India female workforce participation rate declined from 32 percent in 68th round (2011-12) to 24 percent in 2017-18 (NSSO's unit level data) for the working age(15-59). Further, we find that female workforce participation rate is significantly low than male workforce participation rate in both region rural and urban region for the working age. Male workforce participation rate for the working age (age \geq 15 and age \leq 59) are 75 percent and 74 percent in rural and urban respectively (NSSO's PLFS 2017-18). For the female it is 25 percent and 20 percent in rural and urban respectively (NSSO's PLFS 2017-18).

Review of literature

The literature on male-female employment and gender disparity in employment in post-reform India is vast. Some recent important studies in this context are reviewed here.

Deshpande and Deshpande (1998) have examined the impact of liberalization on the Indian labour market by using NSSO's EUS data covering the 38th (1983), 40th (1987-88) and 50th (1993-94) rounds. The study finds that by the usual status, male work participation rate increased both in the rural and urban area while work participation rate declined for rural female and remained constant for the urban female after liberalization. Further, the study concludes that the age-specific work participation rate fell for both rural male and female in all age groups except the age group 60+.

K. Sundaram (2001) has analyzed the change in the size of workforce during the period 1993-94 to 1999-2000 by using the NSSO's data. The study finds that WPR declined both at all India level and region level (rural, urban) for both male and female during 1993-94 to 1999-2000 but MWFPR remained significantly higher than the FWFPR. The study also finds that the number of female workers slightly increased at all India level and urban level but declined in rural level while the number of male workers increased both at all India level and region level (rural, urban) and in all four segments: rural male; urban male; rural female; urban female, the growth rate of workforce was the less than the growth rate of population during the period 1993-94 to 1999-2000.

Unni and Raveendran (2007) have examined the trends in the workforce participation rate and growth rate of employment for both males and females by using NSSO's data during the period 1983 to 2004-05. The study finds that by the usual and weekly status, the workforce participation rate of rural males remained constant over the period 1983 to 2004-05 and the workforce participation rate of urban male increased steadily till the 1998 and increased rapidly after 1998 till 2004-05. The study also finds that the workforce participation rate of rural female workers was steady with steep decline in 1999 and fast increased after that till the 2004-05. The workforce participation rate of urban female remained constant till 1998-99 and then increased up to 2004-05.

Srivastava and Srivastava (2010) have analyzed the trends and nature of women's employment in rural India. The study used the NSSO's data from the 27th to the 61st round. The study finds that rural women's employment increased over the last few decades but still around 83% of rural working women are engaged in agriculture as a self-employed or casual worker. Moreover, the study finds that over a 32- year span the work participation rate of male and women did not show any systematic variation and rural female work participation varied from 31.8 % in 1972 to 32.7 % in 2004-05.

Preet Rustagi (2010) has studied the trends, patterns and nature of female workforce participation in India over the period 1993-94 to 2004-05 using NSSO's data. The workforce participation rate increased (WPR) from 52.1% in 1993 to 54.9% in 2004-05 and from 15.5% in 1993-94 to 16.6% in 2004-05 for both urban male and urban female for all age groups respectively. The WPR decreased from 55.3 in 1993-

94 to 54.6% in 2004-05 and from 32.8% in 1993-94 to 32.7 in 2004-05 for both rural man and women for all age groups respectively.

Himanshu (2011) has analyzed the employment trends in India by using NSSO's Employment and Unemployment Survey data since 1977-78 to 2009-10. The study notes the following trends in employment based on the thick round of NSSO's EUS since 1977-78 to 2009-10.

- (i) Rural workforce participation rate by all measure had a tendency to fall between any two rounds of EUS both for male and female till the 43rd round and then rural male workforce participation showed variation in low range since the 50th round.
- (ii) Urban male workforce participation slowly increased and urban female workforce participation varied in small range over the years.
- (iii) The rural male workforce participation rate was more than half of all the rural male population and rural female workforce participation rate varied from one-fifth to one-third of the rural female population.
- (iv) The gender gap in workforce participation rate was higher in the rural area than the urban area for all thick rounds between 1977-78 and 2009-10.

Mazumdar and Neetha (2011) have analyzed the trends in women's employment in India. The study period was 1993-94 to 2009-10. The study used the NSSO's EUS data from the 55th to 66th rounds and finds that FWPR for a rural female under the usual principal status declined between 1993 to 2009-10 except from in 2004-05. The FWPR for the urban female was more or less stable over the study period with increases in 2004-05. An increase in FWPR in 2004-05 both for the rural and urban female was mainly due to increase in unpaid labour and self-employment.

Kambo and Kaur (2012) have made an attempt to study the changing employment scenario of women in post-reform India for the period 1993-94 to 2009-10. The data was taken from the NSSO, CSO and Population Census. The major findings of the study were: (a) Female labour force participation rate (FLFPR) and its growth rate declined from 29.4% in 2004-05 to 23.3% in 2009-10 and from 3.97% in 2004-05 to -2.91% in 2009-10 respectively. (b) The growth rate of FWFPR declined from 3.78% in 2004-05 to -2.82% in 2009-10. (c) The growth rate of both male and female labour force was highest between 1993-94 and 2004-05. (d) The growth rate of FWFPR was significantly lower than the growth rate of GDP during the long period 1993-94 to 2009-10.

Bhaumik (2013) has examined the changing employment scenario during the post-reform period in rural India. The study sourced the data from the 38th, 43th, 50th, 55th, 61th and 66th rounds of employment and unemployment survey of NSSO. In the study, the time period before 1993-94 was termed as pre-reform period and the period after 1993-94 as post-reform period. The study finds that LFPR and WPR considering together male and female declined during post-reform period and this decline was mainly for females. The annual growth rate of rural employment declined during the post-reform period more than one half of the growth rate during pre-reform period and the rural female suffered higher decline.

Sharma and Saha (2015) have analyzed the trends, patterns, kind and quality of female employment in the rural and urban area of India over the period 1987-1988 to 2011-2012 using NSSO's data. The study notes more variation in the WPR for females than the males. The WPR for all ages for females declined from 28.5% in 1987-1988 to 21.9% in 2011-12 but remained more or less stable for males. The study also shows that the disparity in the workforce participation in both rural and urban area for females was more than males.

In the present research paper I will attempt to explore the gender dimension of employment over the period 2011-12 to 2017-18. The present research paper is organized in five sections. Section I of the paper deals with the concept, definitions, data source and research methodology applied in the present research paper. Section II explores the regional as well as sectoral changes in male-female workforce participation rate and disparity between male-female workforce participation rates. Section III attempt to analyze the employment status wise changes in male-female workforce participation rate and also disparity between male-female workforce participation rates by the status of employment. How does the education level affects the male –female workforce participation rate and to the disparity between male – female workforce participation rate is discussed in the VI section of the paper. Section V concludes and summarizes the present research paper.

Section I

- 1. Concept and definitions:** The various concept and definition related to employment given by NSSO(National Sample Survey Organization) used in my research paper are follows

Workforce participation rate: it measures the proportion of total population which is engaged in the work.

Female workforce participation rate: it measures the proportion of the female population which is engaged in the work.

Male workforce participation rate: it measures the proportion of the male population which is engaged in the work.

The different concepts of workforce participation are following:

Usual principal status (US): usual principal activity status indicates that activity status on which a person spends a long time during the 365 days before the date of the survey.

Usual principal and Subsidiary status (UPSS): when usual principal activity status and subsidiary activity status of a person a taken together is known (US+SS) activity status of person. A person is said to be (US+SS) workers if he/she works either in usual principal status or in subsidiary activity status. Subsidiary status indicates that activity status on which a person spends 30 days or more before the date of survey.

- 2. Data sources and research methodology:** NSSO's unit level data from the employment and unemployment round 2011-12 and Periodic Labor Force Survey 2017-18 is used in the present study. The data is collected for the following 17 major states of India : Andhra Pradesh, Assam, Bihar , Chhattisgarh, Gujarat, Haryana , Jharkhand, Karnataka , Kerala, Madhya Pradesh Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal . The paper used the data for working age population (age \geq 15 and age \leq 59). Employment is measured in terms of the workforce participation rate. The analysis of the male-female workforce participation rate is based on the usual principal and subsidiary status (US+SS) of employment. The concept of gender disparity in employment is measured by the ratio of female work force participation rate (FWFP) to Male workforce participation rate (MWFP), which ensures the disparity between female and male workforce participation rates. The value of ratio of female workforce participation rate to male workforce participation rate varies from zero (absolute gender disparity) to one (absolute gender parity).

Summary of the statistic of sample				
Sample Characteristics	Sample Size		Proportions	
	2011-12	2017-18	2011-12	2017-18
Total Rural Sample	136914	126492	–	–
Rural Male	68815	64215	50.3	50.8
Rural Female	68099	62277	49.7	49.2
Total Urban Sample	89559	95353	–	–
Urban Male	45689	48288	51	50.6
Urban Female	43870	47065	49	49.4

Source: Computed from unit level data of NSSO's rounds 68th (2011-12) and PLFS 2017-18 for the sample of individual belongs to (15-59) age group in 17 states.

SECTION II

Table1. Region wise workforce participation rate by usual status (us+ss)

	2011-12			PLFS 2017-18		
	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP
Rural	822	367	0.45	753	248	0.33
Urban	786	213	0.27	745	201	0.27

Source: Computed from unit level data of NSSO's rounds 68th (2011-12) and PLFS 2017-18 for the sample of individual belongs to (15-59) age group in 17 states.

Table1 and figure1 show that male workforce participation rate fall in both regions rural and urban by 8.4% and 5.3% respectively from 2011-12 to 2017-18. A fall in female workforce participation rate was also observed in both rural and urban region by 33%, 6% respectively from 2011-12 to 2017-18. Male workforce participation rate was significantly higher than this counterpart in both regions rural and urban. The ratio of the female-male workforce participation fall in rural but remained constant in urban which indicated that gender disparity in employment increased in rural region and remained constant in urban region over the period 2011-12 to 2017-18 and it was higher in urban region.

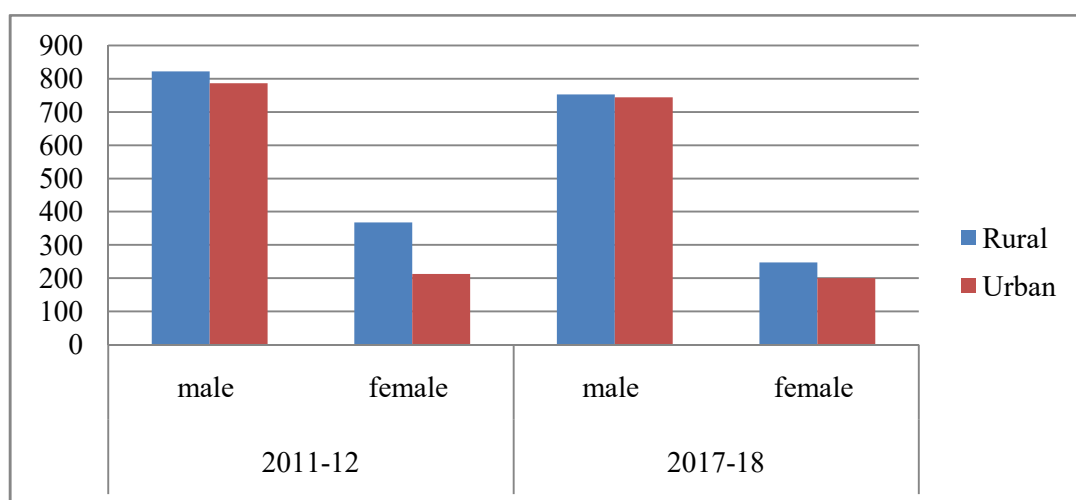


Figure1. Regional-wise workforce par

Table 2. Sector wise workforce participation rate by usual status (us+ss)

Primary sector						
	2011-12			2017-18		
	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP
Rural	478	274	0.57	398	180	0.45
Urban	41	22	0.55	36	17	0.47
Secondary sector						
	2011-12			2017-18		
	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP
Rural	187	62	0.33	185	34	0.19
Urban	282	75	0.26	275	63	0.23
Tertiary sector						
	2011-12			2017-18		
	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP
Rural	157	31	0.19	170	33	0.2
Urban	463	116	0.25	434	121	0.28

Source: Computed from unit level data of NSSO's rounds 68th (2011-12) and PLFS 2017-18 for the sample of individual belongs to (15-59) age group in 17 states.

Primary sector

A fall in male workforce participation has been observed in both rural and urban by 17% and 11% respectively from 2011-12 to 2017-18. A noticeable fall in female workforce participation was also found in rural and urban by 35% and 23% respectively. Male workforce participation rate was high in both rural and urban than female in both period 2011-12 and 2017-18. A fall in the ratio of female-male workforce participation rate was observed in both region rural and urban from 2011-12 to 2017-18 which shows rise in gender disparity in employment in primary sector in both rural and urban region from 2011-12 to 2017-18.

Secondary sector

In the secondary sector, a fall in both regions rural and urban was examined for both male-female workforce participation rates from the period 2011-12 to 2017-18. Both male-female Workforce participation was higher in urban region than rural region and male workforce participation rate remained high than female in both region in both period 2011-12 and 2017-18. A fall in the ratio of female- male workforce participation rate in both rural and urban from 2011-12 to 2017-18 indicated the rise in gender disparity in employment in secondary sector.

Tertiary sector

An increase in male workforce participation was observed in rural but it fall for the urban region from the period 2011-12 to 2017-18. A slightly increase in the female workforce participation has been observed in both region rural and urban from the period 2011-12 to 2017-18. Female workforce participation remained significantly low than male in both region rural-urban and in both period 2011-12 and 2017-18. There was an increase in the ratio of female –male workforce participation rate for the both region rural and urban over the period 2011-12 to 2017-18.

Some important points:

- Out the all three sectors in the rural the male-female workforce participation rate was remained highest in primary sector and lowest in tertiary sector for both period 2011-12 and 2017-18.
- Out the all three sectors in urban male-female workforce participation rate was remained highest for tertiary sector and lowest in primary sector for both period 2011-12 and 2017-18.
- In 2011-12 the gender disparity in employment out of all three sectors was higher in tertiary sector in both rural and urban region but in 2017-18 it was highest for the secondary sector in rural as well as urban region.

Section III

Table 3. Workforce participation rate by status of employment by (us+ss)

2011-12									
	Self employed			Regular			Casual		
	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP
Rural	431	212	0.49	86	21	0.25	306	134	0.44
Urban	319	91	0.28	346	91	0.26	121	31	0.25
2017-18									
	Self employed			Regular			Casual		
	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP
Rural	418	139	0.33	110	27	0.25	224	81	0.36
Urban	284	69	0.24	342	105	0.31	119	27	0.22

Source: Computed from unit level data of NSSO's rounds 68th (2011-12) and PLFS 2017-18 for the sample of individual belongs to (15-59) age group in 17 states.

The table3 shows that the male -female workforce participation rate fall for both self-employed and casual workers in both regions rural and urban from 2011-12 to 2017-18. For the regular workers female workforce participation rate increased for both region rural and urban and for male it increased for rural but fall in urban from 2011-12 to 2017-18. Its show slightly shifts of the workforce from self-employed and casual workers to regular workers which good for the status of nature of the work for both male and female. Among the all workers (self employed, regular, casual) the male –female workforce participation rate was highest for self-employed workers in rural and for regular workers in urban region the both period 2011-12 and 2017-18. Female workforce participation rate remained significantly low in comparison to male for all self employed, regular and casual workers in both periods 2011-12 and 2017-18. The ratio of the female to male workforce participation rate fall for both self-employed and casual workers but increased for the regular workers in urban from 2011-12 to 2017-18. The gender disparity in employment increased for the self-employed and casual workers in both regions rural and urban over the period 2011-12 to 2017-18. The gender disparities fall for the regular workers in urban but constant for rural region from 2011-12 to 2017-18. In the 2017-18 the gender disparity was highest for regular workers in rural region and for casual workers in urban region.

Section VI

Table 4. Education specific workforce participation rate by the usual status (us+ss)

Rural						
	2011-12			2017-18		
Level of education	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP
Not Literate	961	470	0.49	922	344	0.37
Literate & up to primary	924	367	0.4	896	264	0.3
Middle	775	270	0.35	748	179	0.24
Secondary	672	213	0.32	612	147	0.24
Higher Secondary	616	162	0.26	544	117	0.22
Diploma/certificates	759	412	0.54	591	359	0.61
Graduate & above	800	291	0.36	714	209	0.29
All	822	367	0.45	753	248	0.33
Urban						
	2011-12			2017-18		
Level of education	MWFP	FWFP	FWFP/MWFP	MWFP	FWFP	FWFP/MWFP
Not Literate	932	297	0.32	879	272	0.31
Literate & up to primary	913	254	0.28	883	255	0.29
Middle	798	170	0.21	773	151	0.2
Secondary	685	117	0.17	664	114	0.17
Higher Secondary	600	112	0.19	529	100	0.19
Diploma/certificates	725	346	0.48	735	359	0.49
Graduate & above	848	288	0.34	799	282	0.35
All	786	213	0.27	745	201	0.27

Source: Computed from unit level data of NSSO's rounds 68th (2011-12) and PLFS 2017-18 for the sample of individual belongs to (15-59) age group in 17 states.

From the table 4 it has been observed that male-female workforce participation was high for level of education: not literate and literate up to primary both regions rural and urban in the both period 2011-12 and 2017-18. We find a negative relation between male-female workforce participation rate and the level of education up to high secondary i.e. as level of education increase up to high secondary male-female workforce fall in both region rural and urban in both period 2011-12 and 2017-18.

But in case of male workforce participation rate rise after high secondary the level of education for the diploma /certificates and graduate& above but in case of female workforce participation rate rises after high secondary the level of education for the diploma /certificate but fall for the graduate& above level of education in both rural and urban in both period 2011-12 and 2017-18. The male workforce participation rate showed a downward trend for the all level of education in both rural and urban except the level diploma/certificates in urban region from 2011-12 to 2017-18. Female workforce participation rate also showed downward trend for all level of education in both rural and urban except the literate & up to primary and diploma/certificate in urban region. Gender disparity increased in the all levels of education in rural except the level of education –diploma& certificates from 2011-12 to 2017-18. Gender disparity remained all most same in urban for all levels of education from 2011-12 to 2017-18. Among the all levels of education gender disparity was low for the diploma& certificate level of education in both period 2011-12 and 2017-18. An U- shaped relationship between given different level of education and male workforce participation rate was found but this relationship didn't exist for the female.

Conclusion: In the present study we find some interesting fact related to male-female workforce participation rate and gender disparity in employment over the period 2011-12 to 2017-18. A declined trend in male-female workforce participation was noticed in both rural and urban region and gender disparity in employment increased in rural region over the period 2011-12 to 2017-18. Structural changes in male-female workforce participation were also observed. A downward trend in male-female workforce participation rate in both primary and secondary sector was observed for both region rural-urban and gender disparity increased in both (primary & secondary) sector for both regions rural-urban over the period 2011-12 to 2017-18. An upward trend in male-female workforce was noticed in tertiary sector for both regions except male in urban region over the period 2011-12 to 2017-18. A fall in gender disparity in employment was observed for tertiary sector in both regions rural-urban. An observed shift of the self-employed and casual workers to regular workers for both male-female over the period 2011-12 to 2017-18 is good indicator for the status of male-female employment. A high level of education is required for the high male-female workforce participation in regular nature job.

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