

Employment trends among females in India post 2004

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Abstract: The paper explores the trends of employment in India post 2004-05. It attempts to explain the fall in rural female labor force participation rate especially during the period when Indian economy was growing at a faster rate. In the early 2000s till 2004, more women were employed whereas post 2004 saw a drastic fall in women employment. The major finding of this includes the factors for the fall in female labor force participation rate - increase in the adult literacy rate especially among females, rise in the average wage rate after the MGNREGA scheme which led to the rise in household income inducing women to engage in household activities, structural transformation led to the shift towards the manufacturing and tertiary sector especially in construction sector which led to the mechanization in agriculture. Other factors that explain the fall in LFPR are lack of skills to operate machines, few entrepreneurial opportunities, unpaid family work and unfavorable working conditions. The paper concludes with the suggestions to increase the labor force participation rate and also to make an inclusive growth rate.

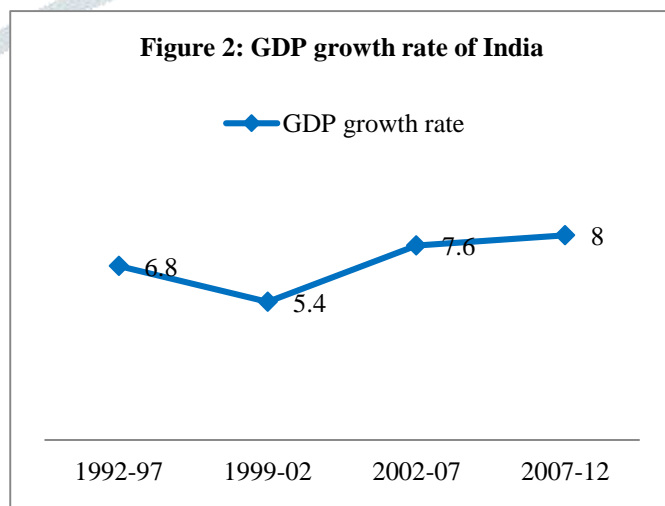
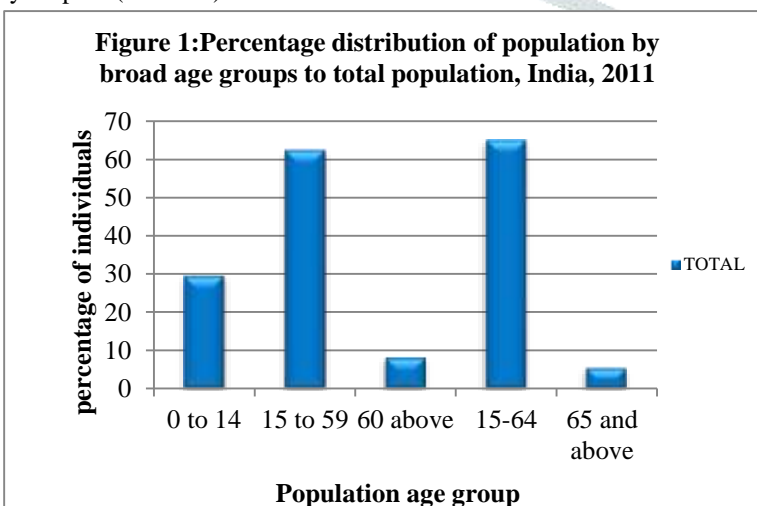
Index Terms- Female labor force, adult literacy rate, mechanization of agriculture, wage rates, self employment.

INTRODUCTION

The National Sample Survey Organization (NSSO) data on the employment shows that a limited number of jobs have been created between 2004-05 and 2009-10 and the agricultural sector shows a decline in the workforce participation. Further, the growth in the non agricultural sectors has been very slow from 2004-05 to 2011-12 with a widespread withdrawal from the labor force (especially by women in rural areas). The shift to the higher education among the youth has been a positive indicator but it does not explain the fall of the labor force participation rate. It is true that roughly 12 million people enter labor force every year from 2001-05. During this period employment opportunities increased especially the share of self employment increased but not after that. The period from 2005-2010 saw a drastic decline in the labor force participation.

Unemployment is a situation when an individual who is willing to work is unable to find a suitable job. Labor force is the number of individuals who are willing and able to work, are working or are currently unemployed. India has a total population of 1.35 billion. Current statistics shows that India's labor force participation rate has dropped to 53.8% in December 2017 as compared to 53.9% in December 2016. India is currently going through demographic dividend and will reach its peak by 2020. Demographic dividend is a phenomenon which occurs when the proportion of working population is high among the total population. India has about 65% population of working age and share of youth population in total population is 34.8% (people between the age group 15 to 35 years) which is far more than any other developing country.

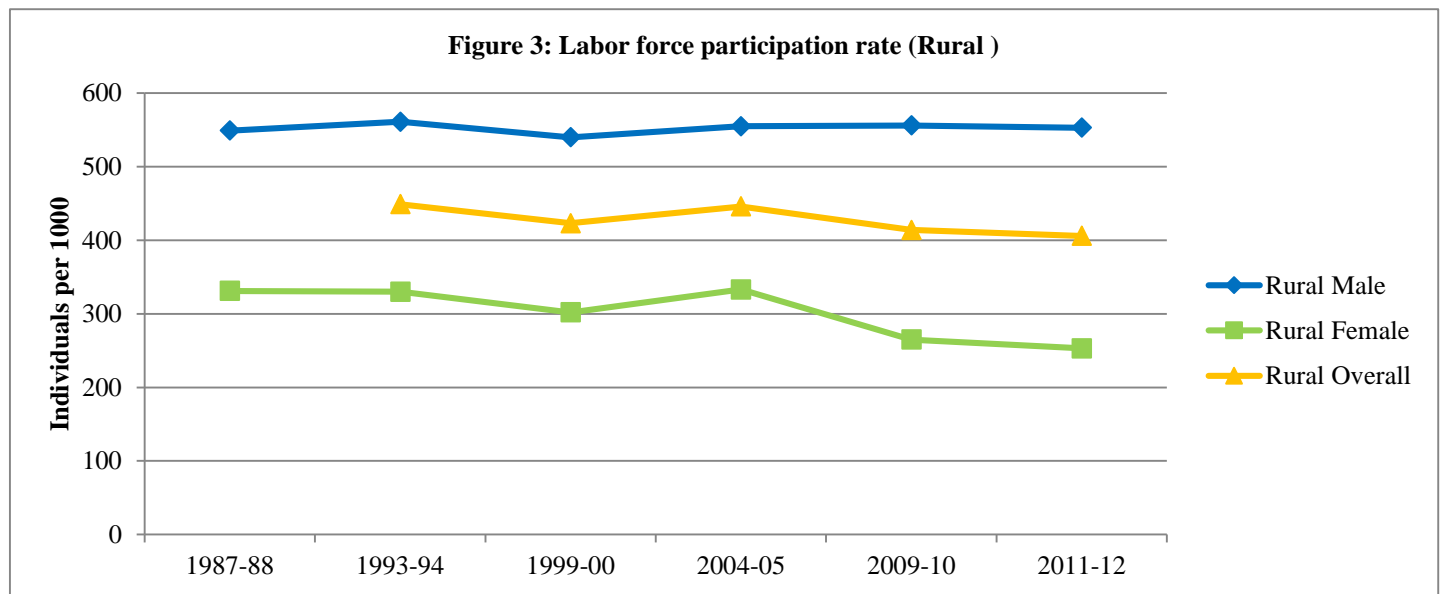
India is currently one of the fastest growing economies in the world. If we look at the previous GDP growth rates of the five year plans then India's GDP growth rate in the eighth five year plan (1992-97) was 6.8% which declined to 5.4% in the ninth five year plan (1997-2000) then rose to 7.6% in the tenth five year plan (2002-07) and then further increased to 8% in the eleventh five year plan (2007-12).



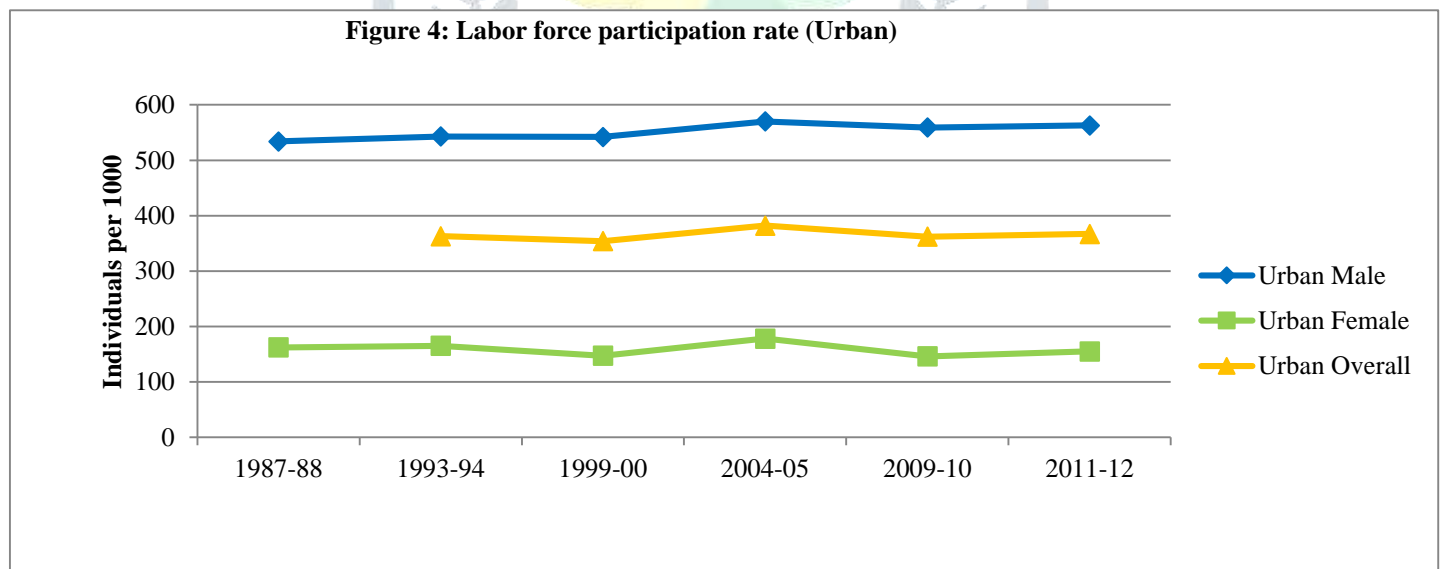
Source: Census of India, population composition, chapter 2 and NSSO 1993-94, 1999-00, 2004-05, 2011-12 report

Nearly half of the India's population comprises of females but there labor force participation rate (LFPR) is less than a quarter as per the employment and unemployment report of NSSO. There has been a consistent decline in female LFPR since 1980s. However, this paper focuses on the female LFPR after 2004-05, when the decline in female LFPR was more prominent.

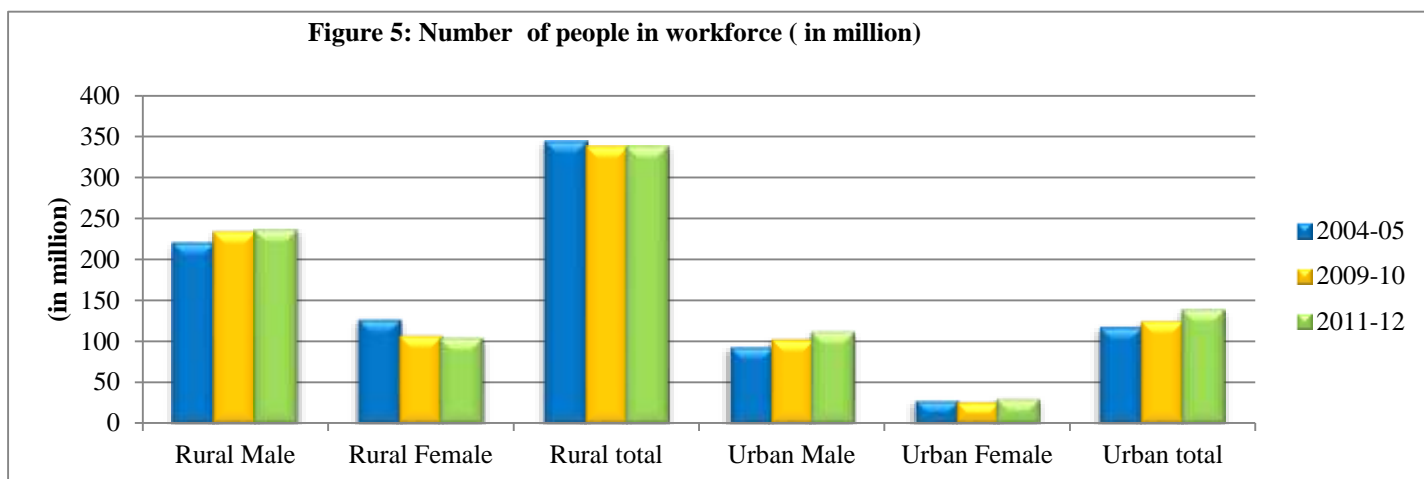
Although, India’s GDP was growing at the rate of 8% during 2007-12, the employment rate did not show a similar growth. This was the jobless growth of Indian economy. According to the census 2011, India has a workforce of 481.7 million which is 39.79%. The male working population is 53.26% and female working population is 25.51%. Total working population in rural areas is 41.83% of which 53.03% are male and 30.02% are female. Total working population in urban areas is 35.31% of which 53.76% are male and 15.44% are female. Statistics shows that the LFPR has decreased drastically in both rural and urban areas from 2004-5 to 2011-12, the period when India was doing a rapid growth. The fall in LFPR has been higher among rural females. During the period 2004-05 to 2009-10, the LFPRs according to usual status remained almost same for rural males but decreased by about 6% points for rural females and it decreased by about 1% point for urban males and by about 3% points for urban females. This fall in rural areas was seen despite of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). The LFPR for rural males has increased slightly in 2011-12 but has remained more or less constant for urban males whereas the LFPR for females has fallen both in rural and urban. In this paper we will focus mainly on the fall in LFPR post 2004-05. Figure 3 and figure 4 shows the LFPR in rural and urban areas for both males and females.



Source: NSSO EU report 1993-94, 1999-00, 2004-05, 2011-12



Source: NSS EU report 1993-94, 1999-00, 2004-05, 2011-12



Source: NSSO reports 61st round, 66th round, 68th round. Note: Workforce is given according to usual status.

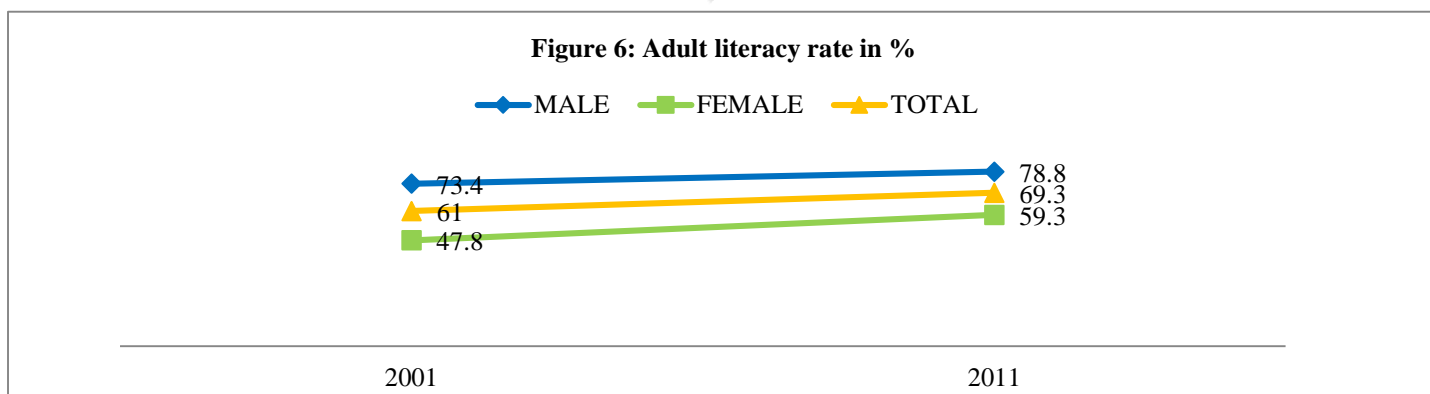
Figure 5 shows the number of people in workforce. It is seen that there has been a fall in employment in rural areas mainly because of the significant fall in employment of rural females whereas employment increased in urban areas in 2009-10 because of marginal increase in male employment but it was also accompanied with the fall in female employment. In 2011-12 female employment showed a marginal increase.

We need to explore the probable reasons for this fall in LFPR. As argued by economists that during 2000-05, there was a rise in the rural female LFPR especially the unpaid family workers who work in agriculture sector. They joined the labor force because during 1996-2004, there was distress in farming households due to the fall in agricultural growth rate and thus acting as a helping hand they worked in family farms. There are various other factors which led to the fall in the rural female LFPR. It could be due to following reasons like women opting for higher education and therefore leaving their jobs, wage disparity, unable to find better jobs, voluntarily not working, migration from rural areas to urban areas for better job and social notions like early marriage.

If we talk about the social stigmas then it seems quiet impossible that women drop out of employment due to them because LFPR among women was lower in 2009-10 as compared to 2004-05 which means more women were employed during 2004-05. In the span of five years it is not possible that there was a sudden rise in the social stigmas. If we talk about migration from rural to urban areas for the search of better jobs then the data shows that the LFPR decreased in both rural and urban areas in 2009-10 with a slight increase in urban areas in 2011-12 even if women migrated to urban areas in search of better jobs, the increased LFPR in urban areas is very less as compared to the fall in LFPR in rural areas. So it leaves us with higher education, wage disparity and lesser opportunities for employment as the possible reasons for the fall in LFPR.

ADULT LITERACY RATE

As per the study of Ministry of Human Resource Department, there has been an increase in the overall adult literacy rate from 61% to 69.3% during 2001-2011. Adult literacy rate is the percentage of population between 15 -24 years gaining education. The adult literacy rate has shown an upward trend in both males and females. People opting for higher education are a good indicator for the economy. Adult literacy rate for males increased from 73.4% to 78.8% and for females from 47.8% to 59.3% from 2001 to 2011. This shows that the increase in adult literacy rate was higher among females than males.



Source: Table 4, figure 1, Education statistics at a glance 2016, MHRD

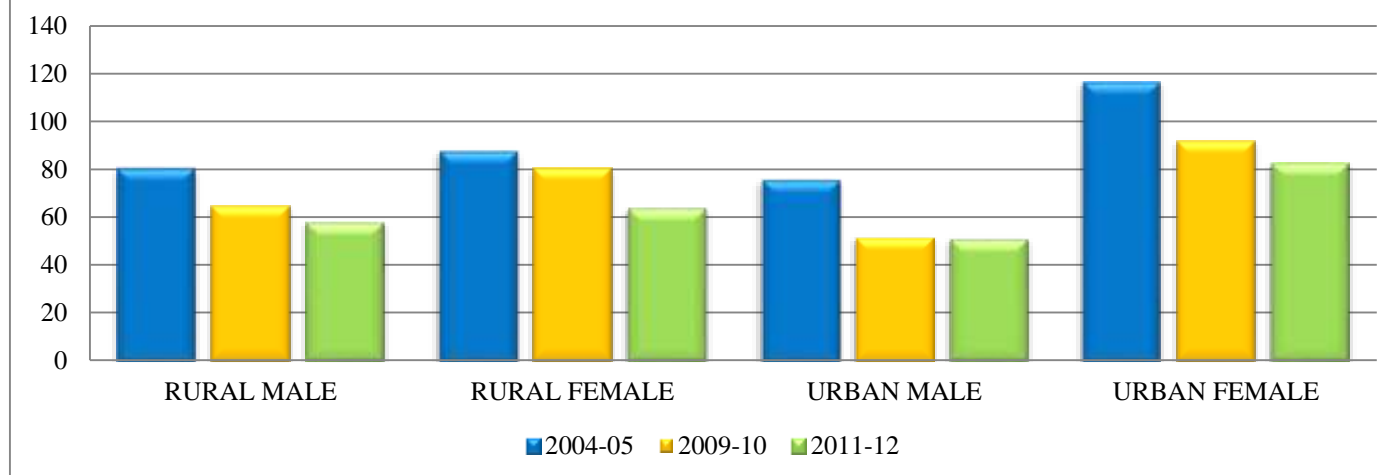
Table 1: Labor force participation rate in different age groups (per 1000)

AGE GROUP (in years)	2004-05				2009-10				2011-12			
	RURAL		URBAN		RURAL		URBAN		RURAL		URBAN	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
15-19	529	331	381	144	390	195	263	85	333	164	256	89
20-24	891	435	769	250	813	314	682	197	788	297	664	197
24-29	982	530	957	261	975	404	947	222	963	369	951	253
30-34	988	593	987	308	990	434	985	239	990	431	989	259
35-39	991	642	984	340	992	497	991	278	991	481	990	284
40-44	985	627	983	317	994	498	987	256	988	482	988	276
45-49	982	616	976	269	984	492	979	231	988	484	979	245
50-54	963	562	939	259	967	485	948	228	966	444	946	219
55-59	931	509	832	218	934	411	855	191	935	393	869	177
60 above	645	254	366	100	647	226	342	70	678	210	350	55

Source: Table P5, NSS: Key Indicators of Employment and Unemployment in India, 2011-12, NSS: Key Indicators of Employment and Unemployment in India, 2009-10 and statement 4.3, NSS Report No. 515: Employment and Unemployment Situation in India, 2004-05

If we look at the LFPR of different age groups as depicted in table 1, we see that there is a decline in the LFPR of males and females between the age group 15-24 years in both rural and urban areas during 2004-05 and 2011-12 and this decline in LFPR may occur because they are opting for higher education. The NSSO report of 2009-10 shows that the unemployment rate was predominantly high in both the rural and urban areas among the educated youth (15-29 years). The rates were 8% for rural males, 18% for rural females, 10% for urban males and 23% for urban females. But if we look further we see that this decline persists for females of all age groups from 2004-05 to 2011-12. It increased marginally from 2009-10 to 2011-12 for urban females. Now, it is not possible that females from all age groups are going for higher education. Although the LFPR declined for males belonging to the age group 15-24 year which might be due to participation in higher education. However, it changed marginally for all other age groups from 2004-05 to 2011-12 but the case is not the same for females. So, it might not be correct to reason that the decline in female LFPR is solely due to higher adult literacy rate. Thus, there are other reasons also which are causing a decline in female workforce.

Figure 7: Unemployment rate for all workers (per 1000)



Note: unemployment rate is based on current daily status

Source: NSS: Key Indicators of Employment and Unemployment in India, 2011-12, NSS: Key Indicators of Employment and Unemployment in India, 2009-10 and NSS Report No. 515: Employment and Unemployment Situation in India, 2004-05.

If we look at the figure 7 which shows the unemployment rate for all workers from 2004-05 to 2011-12, we see that there is a decline in unemployment rates. From 2004-05 to 2009-10, the decline in unemployment in rural areas is less than that of urban areas and further from 2009-10 to 2011-12 the decline in unemployment is marginal in both urban and rural areas except for rural women which shows comparatively more decline than the others. Now the point to be noted here is that this decline in unemployment rates from 2004-05 to 2011-12 is not because of increase in employment opportunities rather it is a result of fall in LFPR especially among females. According to the 66th round of NSS there has been hardly any significant increase in the employment opportunities.

EMPLOYMENT IN FARM AND NON-FARM SECTOR

Further if we explore the employment status as given in table 2, we see that the proportion of self employment was higher among females. The workers engaged in self employment declined drastically from 2004-05 to 2009-10 for males and females in both rural and urban areas and the decline was far more among rural women. Later from 2009-10 to 2011-12, there was a marginal increase in self employment in both rural and urban areas. Regular employees saw an upward trend from 2004-05 to 2011-12 with a slight decline among rural males from 2004-05 to 2009-10 which later increased in 2011-12. If we look at the casual labors there was an increase from 2004-05 to 2009-10 in urban and rural population but it decreased in 2011-12. The fall in casual labor was higher among the females.

Table 2: Distribution (per 1000) of workers according to broad employment status (usual status)

Employment status	YEAR	RURAL		URBAN	
		MALE	FEMALE	MALE	FEMALE
Self employed	2004-05	581	637	448	477
	2009-10	535	557	411	411
	2011-12	545	593	417	428
Regular employees	2004-05	90	37	406	356
	2009-10	85	44	419	393
	2011-12	100	56	434	428
Casual labors	2004-05	329	326	146	167
	2009-10	380	399	170	196
	2011-12	355	351	149	143

Source: NSS: Key Indicators of Employment and Unemployment in India, 2011-12, NSS: Key Indicators of Employment and Unemployment in India, 2009-10 and NSS Report No. 515: Employment and Unemployment Situation in India, 2004 -05

Out of the three categories of employment status, higher proportion of female workforce is found to be engaged in self employment which includes a large segment of unpaid work. This includes the work as helper in household. In 2004-05, 76% of the rural self employed women were engaged in unpaid works. The unpaid work here means the activities in production of primary goods for own consumption or the help in the construction work like lifting sand and gravels for free as a helping hand to their male counterparts. However this share was 48.7% in urban areas.

Table 3: Worker in different sectors in India (in millions)

	AGRICULTURE			INDUSTRY			SERVICE		
	2004-05	2009-10	2011-12	2004-05	2009-10	2011-12	2004-05	2009-10	2011-12
RURAL MALE	141.73	141.88	136.42	42.72	42.65	49.22	40.72	40.96	42.74
RURAL FEMALE	74.11	63.69	53.69	9.83	8.81	9.84	6.81	7.61	7.38
URBAN MALE	5.37	5.9	5.99	31.37	35.19	37.76	54.02	60.69	64.13
URBAN FEMALE	3.22	2.47	1.86	6.28	6.7	7.63	11.34	11.98	13.77
TOTAL	224.43	213.94	197.96	90.2	93.35	104.45	112.89	121.24	128.02

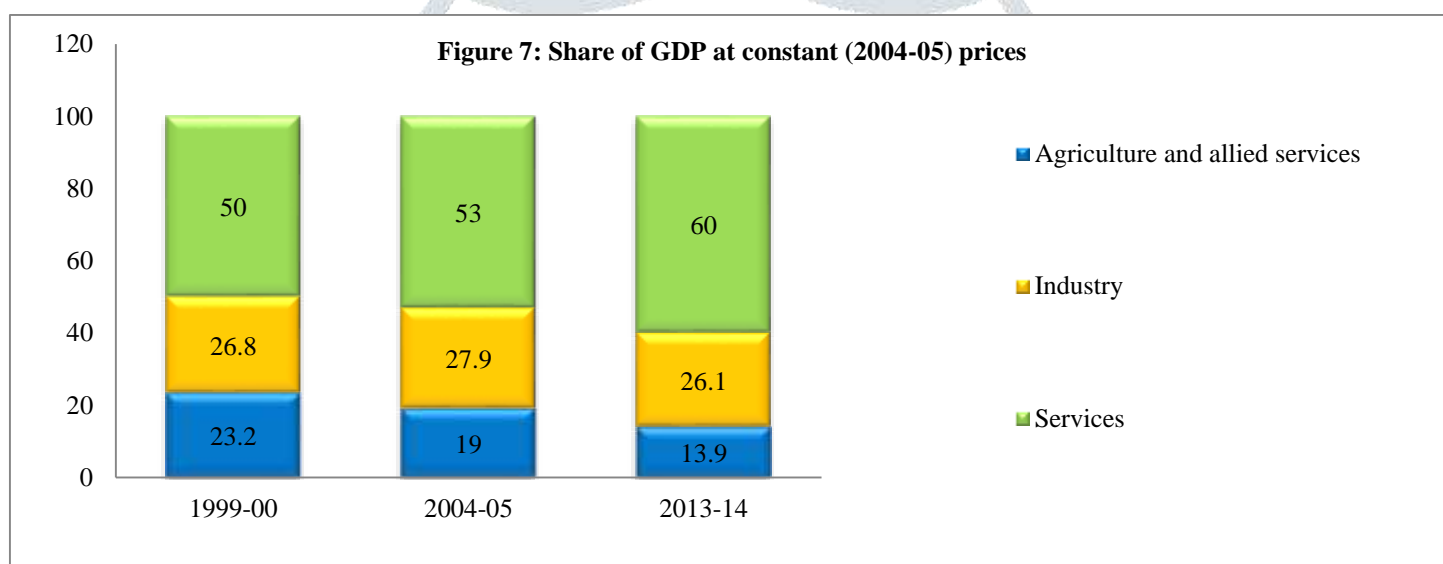
Source: NSS: Key Indicators of Employment and Unemployment in India, 2011-12, NSS: Key Indicators of Employment and Unemployment in India, 2009-10 and NSS Report No. 515: Employment and Unemployment Situation in India, 2004 -05

Agricultural sector has shown a decline in LFPR from 2004-05 to 2011-12. The decline is highest among rural females. Industry sector shows a meager increase in workforce participation. However, for rural females it declined in 2009-10 but increased in 2011-12 and service sector also shows a marginal increase in workforce participation. The decline in LFPR of rural females in agricultural sector is far more than the increase in other sectors. Further which means that withdrawal of female workers from work in rural areas is more than what were added in industry and service sector. Although female workers have added in urban areas in industry and service sector but this increase is very little compared to females withdrawing out of workforce in rural areas. Agricultural sector involves the maximum LFPR but due to the decline in this sector people were unable to find working opportunities in non agricultural activities especially women, which has led to the fall in their LFPR. The agricultural sector has been an important contributor of India's GDP. This is mainly because of the fact that Indian economy has been an agricultural economy which employs around 60% of the total workforce in India. The contribution of agricultural sector to the India's GDP was 18.6% in 2004-05. Agricultural growth has been very slow between 1999 and 2004 as can be seen from table 4.

Table 4: Growth rate of various sectors of the economy

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-2010	2010-2011	2011-12
Real GDP growth rates	8	4.15	5.39	3.88	7.97	7.05	9.48	9.57	9.32	6.72	8.59	8.91	6.69
Agriculture growth (%)	2.67	-0.01	6.01	-6.6	9.05	0.18	5.14	4.16	5.8	0.09	0.81	7.55	7.81
Industry growth (%)	5.96	6.03	2.61	7.21	7.32	9.81	9.72	12.17	9.67	4.44	9.16	7.55	7.81
Services growth (%)	12.05	5.07	6.61	6.74	7.89	8.28	10.91	10.06	10.27	9.98	10.5	9.67	6.57

Source: Planning commission, India- Macro-economic summary 1999-00 to 2011-12



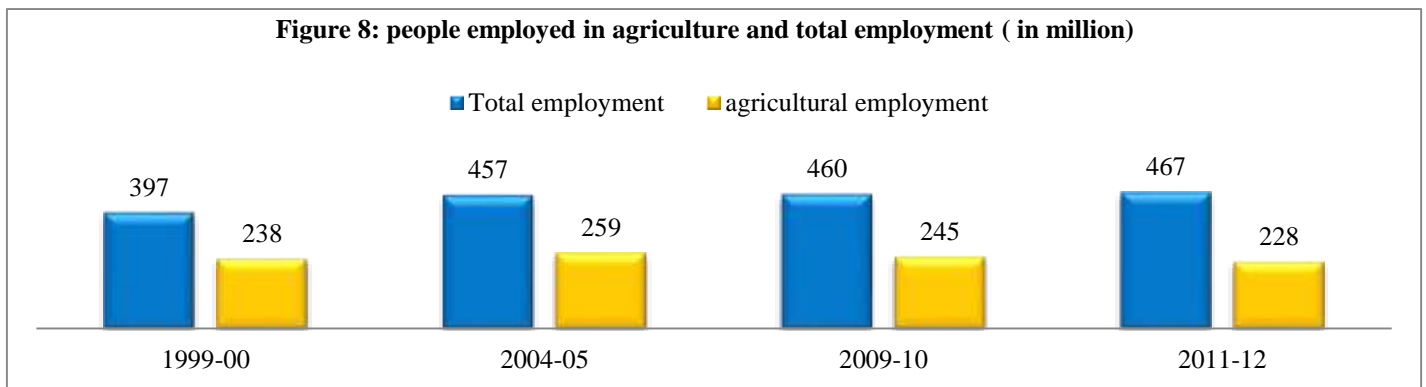
Source: NSS EU report 1999-00, 2004-05, 2013-14

Agricultural growth has been slow because of illiteracy, small size of farms, inadequate marketing, insufficient finance and lack of modern technology. Agriculture provides employment to not only males but also to females. Females work extensively in production of major grains, threshing, winnowing, seed selection, seed production, sowing and harvesting. NSSO data shows that only 2 million people were added since 2004-05 compared to 12 million people from 1999-00 to 2004-05. Between 1999-00 and 2004-05 there was an increase in the LFPR of rural women because the agricultural sector was growing at a very slow rate which increased the rural distress leading to more rural women joining workforce. Approximately 23 million women join the work force during this time.

MECHANIZATION OF AGRICULTURE

As the economy matures there is a natural movement of excess workers from low productivity sector to high productivity sector. However in case of India this movement is happening at a very slower pace. The movement of workers away from agricultural sector to the other sectors has also been affected by the wages in rural areas. The scheme like MGNREGA has boosted the rural wages but the effect is not same for both the genders. Further there has been less diversification in the occupation of rural women and also in their movement away from primary sector unlike their male counterparts. This was due to the rise of technology in areas such a construction sectors, agricultural sector, handicrafts and textiles where the manual work has been replaced by machines which led to the withdrawal of female labor force.

Figure 8: people employed in agriculture and total employment (in million)



Source: NSS EU report 1999-00, 2004-05, 2009-10, 2011-12

Table 5: Distribution (per 1000) of workers according to usual status in various industry sections

	RURAL						URBAN					
	2004-05			2009-10			2004-05			2009-10		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
Agriculture and allied	665	833	727	673	802	716	61	181	88	60	139	75
Mining and quarrying	6	3	5	8	3	6	9	2	8	7	3	6
Manufacturing	79	84	81	70	75	72	235	282	246	218	279	230
Construction	68	15	49	113	52	94	92	38	38	114	47	102
Wholesale retail trade	74	20	54	72	23	56	246	97	214	239	99	213
Hotel and Restaurants	9	5	7	10	5	8	34	25	32	31	22	30
Transport, storage, communication	38	2	25	41	2	29	107	14	86	104	14	87
Real estate, renting and business activities	4	0	3	4	1	3	37	17	33	45	26	41
Public administration and other services	52	38	45	48	44	48	149	327	187	147	346	185

Source: NSS: Key Indicators of Employment and Unemployment in India, 2009- 10 and NSS Report No. 515: Employment and Unemployment Situation in India, 2004 -05

From 2004-05 there has been a decline in the LFPR in agriculture sector and increase in industry and service sector which means with the increase in income, workers shifted to higher productivity sectors. As shown in the Table 5, with the decline of labor force from agriculture sector there has been a huge increase in labor force in construction works this is due to availability of work due to MGNREGA in rural areas.

INCREASE IN HOUSEHOLD INCOME

The analysis of wage data of regular salaried worker and casual worker shows that the wages and salaries increased in both rural and urban areas. The results are contradictory because even though the wages increased, females chose to dropout from the labor force. The probable reason could be that when the wage increased then the workforce shifted to the high productive sectors but the statistics shows that the fall in workforce in primary sector is much higher than the rise of workforce in non agricultural sector. Another reason could be that with the rise in wage rate of males lead to stabilization of family income and thus females choose to stay at home and engage in household activities.

Table 6: Average daily real wages of workers in 2004-05 prices (Rs.)

		Rural		Urban	
		Male	Female	Male	Female
Regular salaried	2004-05	144.93	85.53	203.28	153.19
	2009-10	165.13	103.31	259.77	212.68
Casual workers	2004-05	55.03	34.94	75.1	43.88
	2009-10	67.29	45.69	90.86	52.85

Source: NSS: Key Indicators of Employment and Unemployment in India, 2009-10 and NSS Report No. 515: Employment and Unemployment Situation in India, 2004-05

The rural wages rose from 2006-07 due to the effect of MGNREGA, and construction sector boomed during that time which led to the migration of labor force to urban area where the construction work was more prominent followed by the participation in higher education caused the fall in LFPR led to the mechanization in agricultural sector. This largely affected rural women who were mostly in agriculture sector. The mechanization reduced the demand for labor in agriculture sector therefore affecting the female workforce as most of the manual work is done by women. Apart from this other factors also affected the female participation like poor skill training, lack of support for female entrepreneurs and challenges at work place. Thus the women who entered workforce during 1999-00 to 2004-05 due to low productivity in agricultural sector withdrew from the labor force after 2004-05 and engaged in household activities when the wages increase. After mechanization in agriculture, the manual work used to be by women were taken over by machines and the machinery operated work is highly dominated by males. Thus they withdrew from the labor force given the rise in household income.

CONCLUSION

India is one of the fastest growing economies in the world. The young population constitutes 66% of its total population. By 2020, India is expected to be the youngest country in the world. Demographics can change the pattern and pace of economic growth. This can be done through various channels like – more people reaching the working age, more employment opportunities, rise in female workforce, better working conditions, skill enhancement and growth in education. In order to utilize this phase of demographic dividend and saving this boon from turning into Bain, enough jobs should be created to absorb the increasing labor force. Investing more and more on efficiency in people will enable India to tap into its demographic dividend. The focus should be laid on investment in education and health. The country should also ensure more women join workforce.

The adult literacy rate increased among female but it did not explain the reason for the ultimate fall in labor force participation rate. Recent trends show that one of the reason for decline in female labor force participation rate was that due to rise in incomes women withdrew from the labor force in order to focus on their families. Another explanation was that the migration of workers from rural to urban areas or to the far off places led to the mechanization of agriculture sector where most of the manual work was done by females and due to the lack of skill to work with machines they were forced out of workforce. Now this lack of skills and unfriendly working environment will have serious implications on future growth of the economy. There is a need to create opportunities for women to move from farm work to non farm work, a friendly environment should be created for women to work even while raising families. Further the education should be job friendly. Recent reports says that the college graduates in India are not fit for the job i.e. they lack basic skills. The education system is not keeping pace with the fast changing business needs therefore there is a serious need to implement changes in the education sector to make it more employment friendly.

Appropriate policies and changes are required to realize the full potential of youth and especially women who play a crucial role in the seizing the opportunity of demographic dividend and expansion and growth of Indian economy.

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