A Study on Women Employment in the Organised Sector – With Special Reference to Karnataka (Post-Reform Period)

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Abstract:

"You can tell the condition of a nation by looking at the status of its women"

– Jawaharlal Nehru

It is well known that economic growth is associated with sectoral transformation of labour. The progressive shift – away of workforce from primary sector to secondary sector and then onto the tertiary sector is well documented (Kuznets, 1979). It is equally well known that Indian economic growth since independence has not borne out this sectoral transformation. It would bring about a much needed structural balance in the economy, in the interest of a sustained and higher employment growth rate. A comparison of employment pattern between public sector and private sector manufacturing indicates that the share of public sector manufacturing employment in total organized manufacturing employment has risen. Almost the entire increase in organized manufacturing employment that took place in the 1990s can, therefore, be attributed to the private sector. The post-reform period witnessed a remarkable growth not only in the manufacturing sector but also in the services sector, especially since 1995-96. It is observed that employment of women in the organized sector has been improving over the years. Yet, women constitute an extremely small proportion of the total organized employment to this day. Social pressures, occupational constraints, lack of proper education and training, restrictions to work are some of the reasons for their low share in total organized sector employment. This study is based on secondary data from Ministry of Labour & Employment, Statistical Profile on Women Labour, Labour Bureau, GOI etc. Attempts have been made to reflect on the extent of Women Employment w.r.t. zone, sector, industry and the impact of independent variables like Female Literacy, Sex Ratio, FWPR, SDP etc. on Women Employment in the case of India and Karnataka have been analyzed.

Keywords: Women employment, organized sector, Female labour force participation rate, wage differential, state domestic product.

1. Introduction

During the post-reform period, with the opening up of the economy, private sector entered areas that were earlier exclusively reserved for the public sector. This was mainly due to rising fiscal deficits and decline in budgetary support to the public sector. As a result, public sector investment declined, which led to a tight fiscal position of all branches of the government. These fiscal pressures necessitated privatization of many services by the government (Mitra, 2002). All these factors have contributed to the unsteady growth of the organized labour market and the share of this sector in total employment has, therefore, declined significantly in the post-reform period.

Against this backdrop, as far as employment of women is concerned, it is observed that over the last twenty years more and more women are entering the organized labour market. Though there has been an increase in their number, yet their share in total organized employment is still very low. In this sector, it is noted that employment of women is restricted to certain fields of employment and they are usually employed only in a few occupations along with men. Also, women are mostly engaged in low-skill jobs. To this day, it is found that male workers have a monopoly in a majority of the occupations where the skill requirement is high. Organized sector, being a highly productive segment of the labour market, demands a greater degree of specialization. It is found that most women do not possess the necessary skills and training. Therefore, a majority of women are still employed in the unorganized sector of the economy and are mostly engaged in home-based enterprises and caste-based operations. Lack of training, to a large extent, restricts their scope in finding productive employment opportunities in the organized sector where there is immense competition and job scarcity. Women, therefore, face occupational constraints. In this context, it is essential to examine the changes that have taken place in the occupational and educational structure of women employees in the organized segment of the labour market. Detailed analysis on the occupational and educational distribution of the organized workforce constitutes an important dimension to our understanding of

the nature and structure of the economic activities in India. This study will, therefore, focus on the distribution of workers across different occupational and educational categories to get a better picture about the overall trend and pattern of employment in the organized sector.

1.1. Objectives of the Study
- ➢ To highlight the –
    - → extent of Women Employment in India and Karnataka from 2000 to 2011
    - → Zone-wise Women Employment - Organized Sector - India (in '000 s)
    - → Major Industry-wise Women Employment in India (in '000's)
    - → Sector-wise Total Women Employment in India
- ➢ To analyze the impact of select variables pertaining to Karnataka on Total Employment
- ➢ To determine   the influence of BR, DR, NSDP, Literacy Rate, Mean Age of Females pertaining to Karnataka on the Employment to Population Ratio of India (15 + females)
- ➢ To determine the factors that influence Women Employment of Karnataka – using Multiple Linear Regression
- ➢ To analyze the impact of LR, BR, DR, Mean Age of Females and GSDP on Female LFPR in the case of Karnataka

2. Data and Methodology
The present study is based on secondary sources. The EMI programme of DGE&T is one of the major sources of labour market data. The data for the study is taken from –
- ➢ Ministry of Labour and Employment
- ➢ Handbook of Statistics of Indian Economy, RBI
- ➢ Statistical Profile on Women Labour
- ➢ Labour Bureau, GOI
- ➢ CRISIL Research, Economy Insight, Employment in India

The collected data is analyzed using appropriate statistical tools like Pictorials, Multiple regression, coefficient of variation, Lagged Regression, Trend analysis etc.

Organized sector includes public and private sectors of the economy. It is important to analyze the employment in the organized sector as it gives us an idea about the level and pattern of employment. It can be observed from the table that there has been an increase in employment levels in the organized sector over the years, from 206.36 lakhs in 1977 to nearly 282.43 lakhs in 1997, after which there has been a steady decline. The percentage change in employment over the previous year's shows that, though in the initial years the employment levels in the organized sector was greater, there has been an increase but at a decreasing rate over the last few years. In fact, since 1998, the percentage change in employment over the previous years has been negative as a result of the decline in the organized sector employment levels.

2.1. Public Sector
The public sector employment levels comprise a major component of the overall employment in the organized sector. From the logistics, it can be observed that public sector employment rose from 137.67 lakhs in 1977 to 185.80 lakhs in 2003 (a 35 per cent increase in employment). However, it is important to note that employment in the public sector started to decline drastically since late 1990s. From 195.59 lakhs in 1997, employment in this sector declined to 185.80 lakhs in 2003. Also, during the post reform period, employment in the public sector has been virtually stagnant. From 1991 to 1999, employment in this sector, on average, remained at approximately 194 lakhs. This, therefore, is an indication of the withdrawal of the government from some key sectors in the post-reform period.

The earlier periods, before the implementation of reforms, were marked by the public sector expansion and the dominance of this sector is indicated by the fact that its share in total organized employment was more than 70 per cent at the beginning of the reform process. However, with the introduction of reforms, there has been a gradual decline in the funds allotted to the public sector and as a result private sector entered areas, which were earlier, the domain of the public sector. Below is the graphical representation, clearly indicates the decline in total outlay and development outlay, during the post reform period.
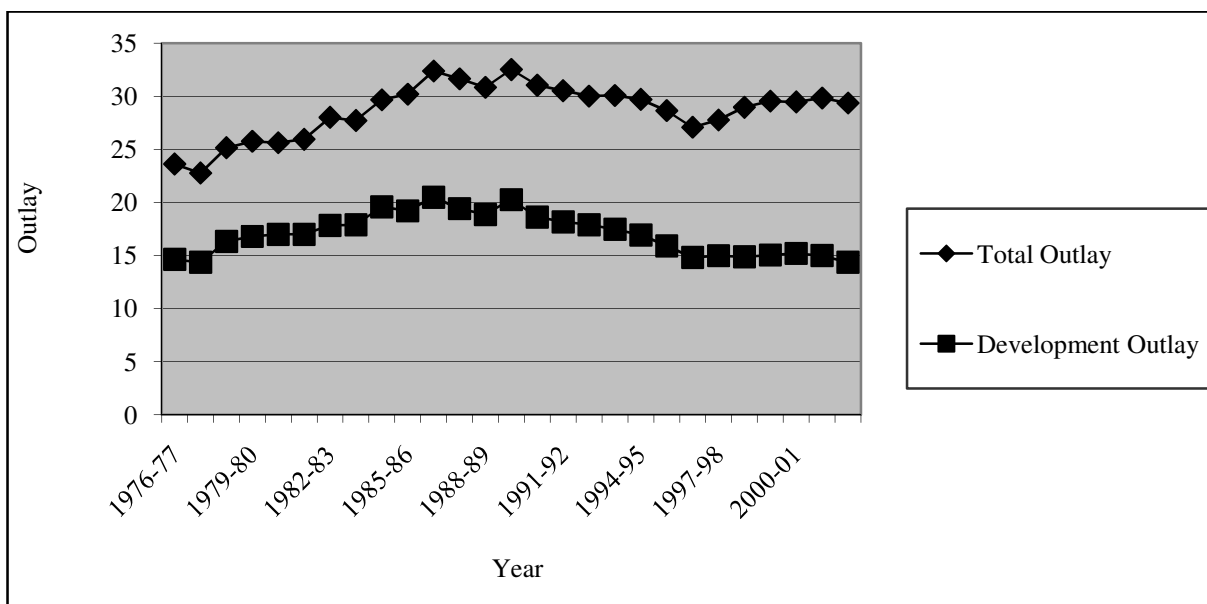
Figure 1: Budgetary Transactions of the Central and State Governments and Union Territories (As percent of GDP at current market prices)

It can, therefore, be stated that as a result of these changes in the budgetary transactions, total public sector investment declined, which further led to the decline of public sector employment. This has had an adverse effect on the organized labour market, since the share of public sector employment in total organized employment has always been much higher in comparison to the share of private sector employment. It should also be noted that any decline in public expenditure would not only affect employment in the public sector directly but would also lead to a decline in investment and hence employment in the private sector indirectly. Therefore, in the last few years, the share of organized sector employment in total employment has been further shrinking from an already low share.
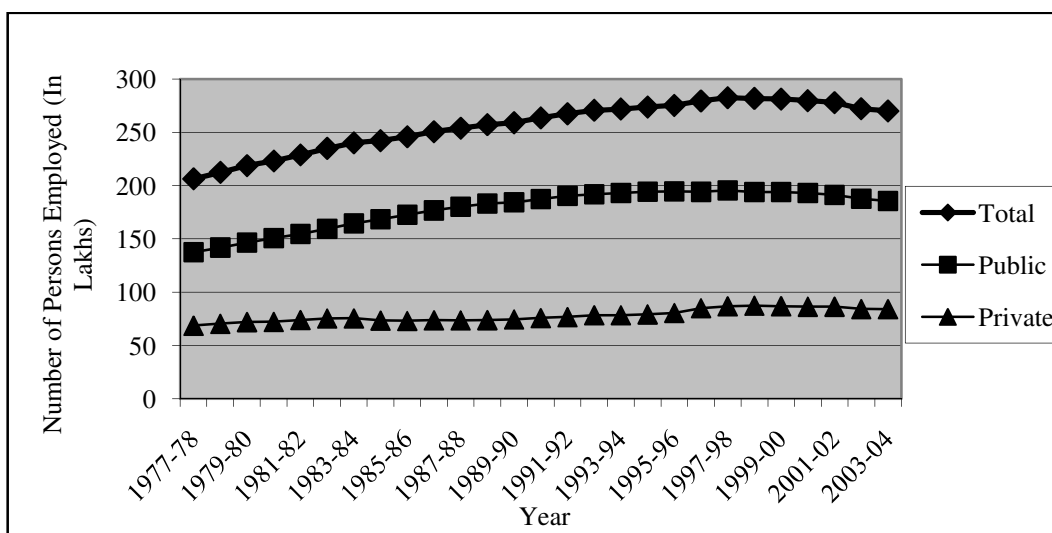

Figure 2: Employment in the Organized Sector

Graphical representation gives a visual idea about the pattern of employment. The Figure indicates the trend of employment in the total organized, public and private sectors of the economy. Pattern of employment in the public and private sectors of the organized labour market has been under constant change during the post-reform period. It is, therefore, important to capture this change in the employment levels graphically for a better understanding of the functioning of the organized labour market.

2.2. Employment of Women
Employment of women constitutes an important component of the organized sector employment in the country. As can be seen from the following graph, the employment of women in the organized sector has been continuously rising over the last few years. It can be noted that, at the end of 31st March 1999, the employment of women constituted 17.1 per cent of the total employment in the organized sector of the economy.
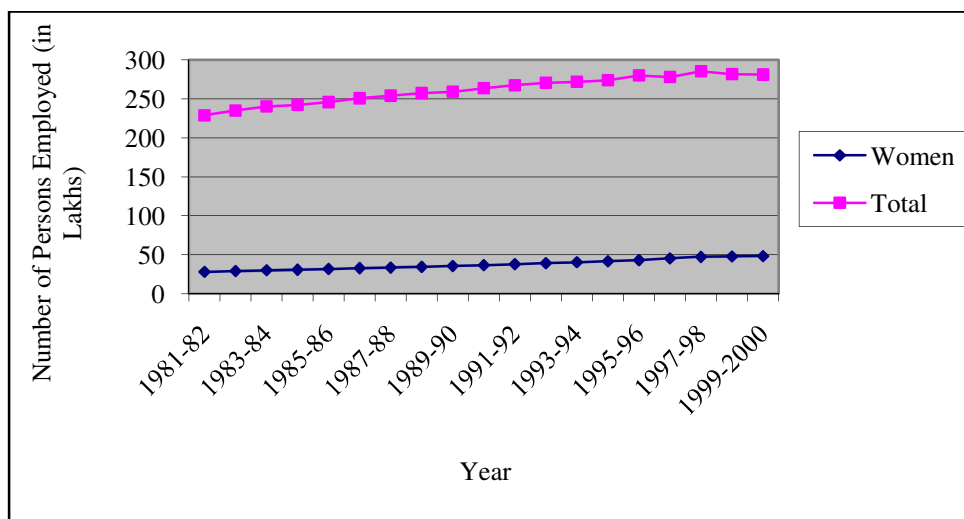
Figure 3: Women in the Organized Sector

It is observed that employment of women in the organized sector went up from 27.93 lakh in 1981 to 48.15 lakh in 1999. The increase in women employment during the year 1999 was of the order 0.7 per cent as compared to 1.4 per cent during the preceding year 1998. However, from the percentage change over previous year it is observed that employment of women in the organized sector has been increasing at a decreasing rate, even though there has been an increase in actual terms.

It is also seen that the share of women's employment to total employment in the organized sector has risen steadily from 12.2 per cent in 1981 to 17.1 per cent in 1999. So it can be noted that female participation in the workforce has been steadily increasing, which is a good indicator for the economic development of the country.

3. Objectives of the Study

3.1. To Highlight the Extent of Women Employment in India and Karnataka from 2000 to 2011

The Total Employment in the case of India and Karnataka has been rising except for 2003-04. It is observed that there was no dilution in the employment levels during the recession period 2008-10 as - the same confirms to organized sector, which in simple words reflects job security: which is the highlight of organized sector employment. Whereas this is not the case of unorganized sector employment.
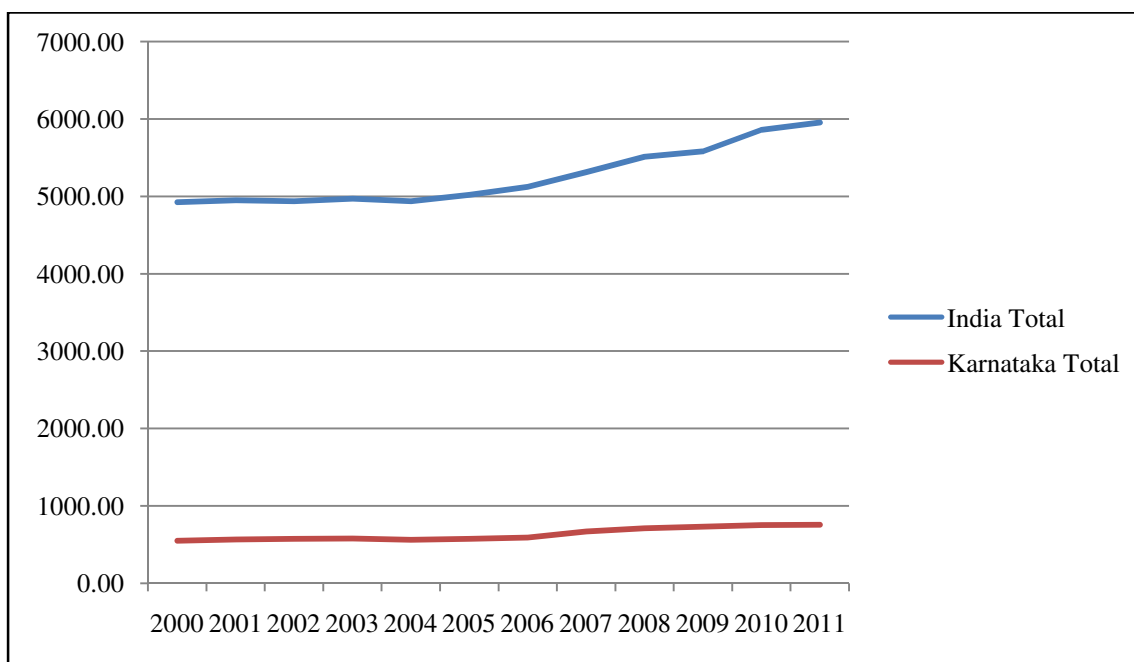

Figure 4: Total Women Employment in India and Karnataka (2000 – 2011)

From the Figure it can be observed that the state and the country's employment in organized sector is on a gradual rise (except for 2004). This is an added proof to say that in spite, of the economy moving towards market-driven/capitalist economic system, the role of Government is substantial and strategic in many of the aforesaid areas like atomic energy, defense, coal, oil, iron & steel, public utilities etc.

Running correlation between the extent of women employment of India with that of Karnataka

	Column 1	Column 2
Column 1	1	
Column 2	**0.9785**	1

Table 1: Summary Table – Correlation
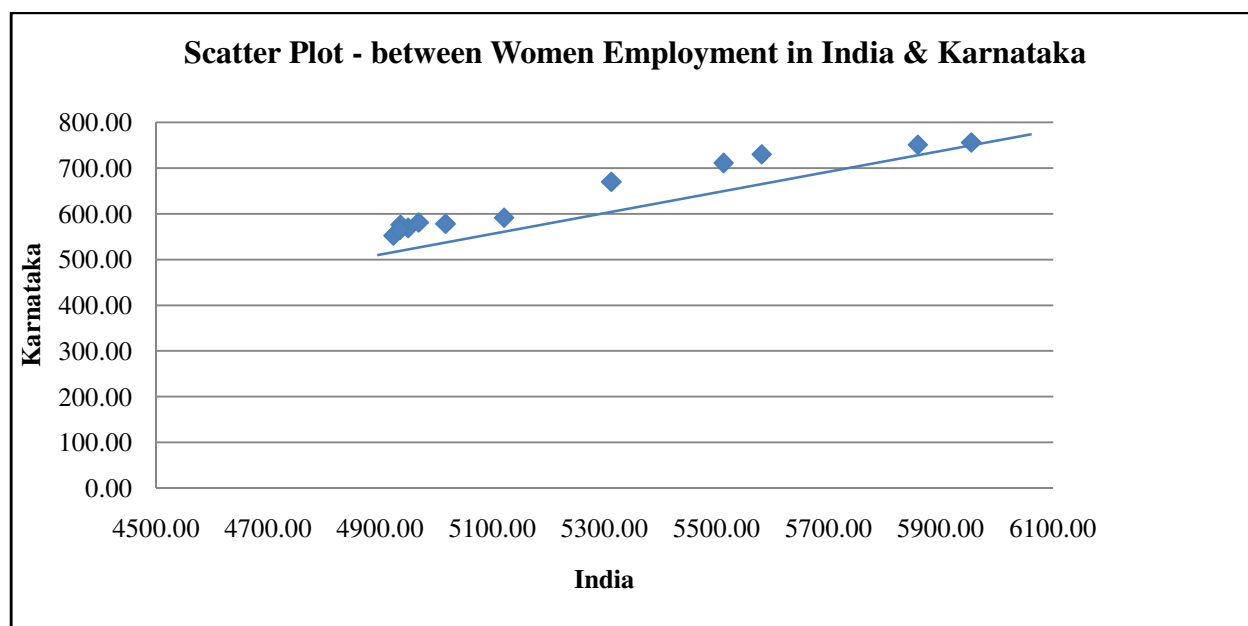
Figure 5: Scatter Plot – Women Employment in India and Karnataka

Running a simple correlation between the above two stated variables, it is found that the same correlates up to 0.97, meaning high degree of positive correlation.

The above scatter plot also signifies positive trend of the two variables and the close association between the

Figure 6: Forecast of Total Women Employment in India

The above Figure indicates the trend and pattern of women employment in the organized sector of the country. 2015 to 2020 indicates rising increases, which is encouraging.

3.2. Objective

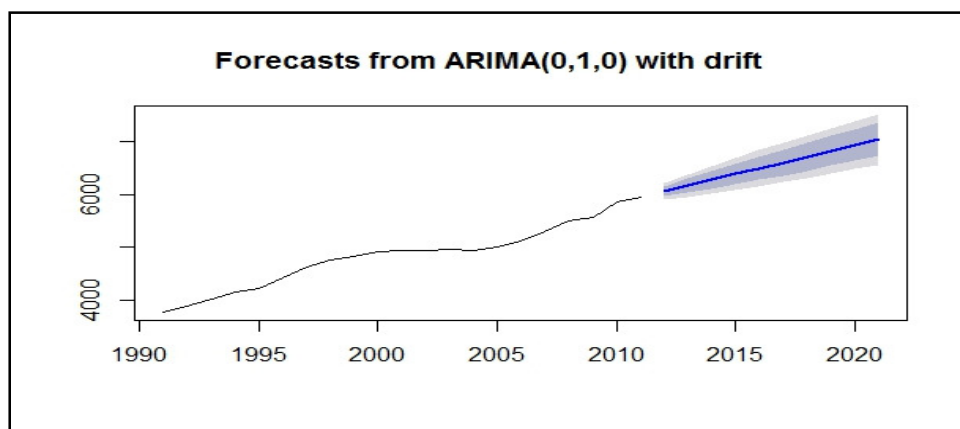| Zone	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Northern	607 (12.2)	612.1 (12.4)	614.8 (12.3)	619.6 (12.5)	626.8 (12.4)	661.5 (12.9)	675.7 (12.7)	698.04 (12.6)	711.9 (12.7)	738.3 (12.6)
Central	433.3 (8.7)	435 (8.8)	433 (8.7)	434.8 (8.8)	440.3 (8.7)	450 (8.7)	454.4 (8.5)	464.7 (8.4)	469.5 (8.4)	487.8 (8.3)
North East	443.4 (8.9)	416.3 (8.4)	407.6 (8.2)	422.7 (8.5)	456.6 (9.1)	478.2 (9.3)	481.4 (9.06)	502.7 (9.1)	454.9 (8.1)	460.5 (7.8)
East	459.3 (9.2)	450.2 (9.1)	450.9 (9.07)	423.1 (8.5)	435.7 (8.6)	475.1 (9.2)	474.9 (8.9)	481.05 (8.7)	490.9 (8.7)	500.2 (8.5)
West	797.7 (16.1)	774.7 (15.6)	792.1 (15.9)	790 (16.0)	831.5 (16.5)	867.3 (16.9)	906.8 (17.07)	927.8 (16.8)	997.1 (17.8)	1184.2 (20.2)
South	2206.2 (44.5)	2241.3 (45.4)	2264.2 (45.5)	2238.4 (45.3)	2219.4 (44.2)	2181.9 (42.8)	2311.8 (43.5)	2430.6 (44.0)	2447.5 (43.8)	2479.5 (42.3)
Andaman & Nicobar	5.5 (0.1)	5.7 (0.1)	5.8 (0.1)	5.9 (0.1)	5.9 (0.1)	6.6 (0.1)	6.6 (0.1)	7.13 (0.1)	7.8 (0.1)	7.7 (0.1)
Total	4949.3	4935.4	4968.4	4934.4	5016.2	5120.5	5311.9	5512.2	5579.9	5858.6

Table 2: Zone-wise Women Employment - Organized Sector - India (in '000 s)
Source: Statistical Profile - 2010

3.2.1. Figures in Parenthesis Reflects the Respective Percentages
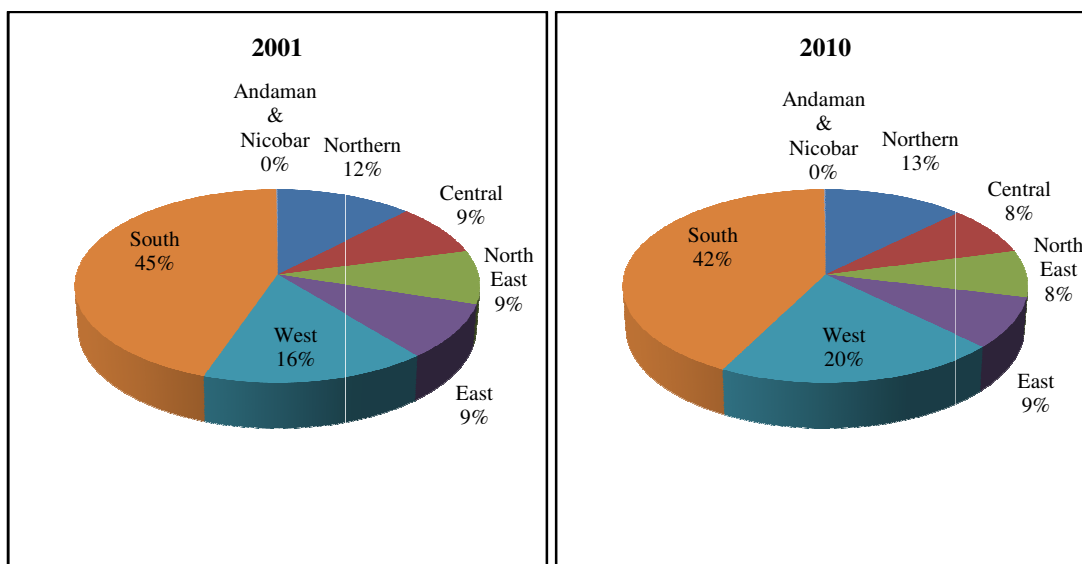

Figure 7: Zone-wise Women Employment in India – as on 2001 and 2010

The above table and Figure depicts zone-wise employment with respect to organized sector women employment in the country.
The following are the observations from the above table and graph-
→ South zone ensures 42 to 47% of the women employment in the country, almost 50% of the women pertain to south zone. Kerala having cent percent female literacy and most of the south states are less conservative are the reasons that can be attributed to south zone having maximum employment of women.
→ Next in the order is the west zone contributing to women employment from 15 to 21%, Gujarat and Maharashtra being forward states with respect to industrialization.
→ North and Central zones contributes around 12% and 8% respectively and it has been the same throughout (stagnant)
→ East zone has shown a negligible 8 to 9% rise in women employment
→ North East has shown a considerable rise from 7 to 10% (showing considerable improvement)
Observing the pie charts, (i.e.) 2001 and 2010 – the changes that can be seen are –
→ South zone has reduced from 45 to 42%
→ West zone has risen from 16 to 20%
→ North zone has increased from 12 to 13%
→ Central and North East zones have reduced from 9 to 8%

→   And East zone had remained stagnant at 9%

In spite of the above changes, yet south zone is the maximum contributor, followed by West and North Zones. Central, North East and East zones almost experience similar logistics as far as their women employment scenario is concerned.

3.3. Objective III

3.3.1. To Highlight the Major Industry-wise Women Employment in India (in '000's)

Industry	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture	466.5 (9.3)	458.7 (9.2)	484.1 (9.6)	498 (9.7)	490.6 (9.3)	510.2 (9.3)	468.4 (8.4)	476.8 (8.1)
Mining & Quarrying	60.9 (1.2)	73.3 (1.4)	77.4 (1.5)	85.5 (1.6)	83.7 (1.5)	84.1 (1.5)	82.7 (1.4)	110.5 (1.8)
Manufacturing	1009.8 (20.3)	949.3 (19.2)	939.3 (18.7)	893 (17.4)	944.7 (17.9)	1010.4 (18.5)	989.6 (17.9)	1030.1 (17.6)
Electricity, Gas	47.7 (0.96)	52.1 (1.05)	53 (1.05)	53.7 (1.04)	53.2 (1.01)	49.4 (0.90)	54.1 (0.97)	61.01 (1.04)
Construction	64.1 (1.2)	66 (1.3)	67 (1.3)	67.4 (1.3)	65.4 (1.2)	64.8 (1.1)	66.3 (1.1)	74.8 (1.2)
Wholesale & Retail	44.5 (0.89)	46 (0.98)	49.6 (0.98)	48.6 (0.94)	51.6 (0.98)	63.2 (1.16)	67.7 (1.2)	73.4 (1.2)
Transport	189 (3.8)	189.4 (3.8)	191.6 (3.8)	192 (3.7)	194.9 (3.7)	199.7 (3.6)	207.1 (3.7)	214.7 (3.6)
Finance & Insurance	274.3 (5.5)	287.3 (5.8)	302.2 (6.02)	331.5 (6.4)	412.4 (7.8)	476.6 (8.7)	541.7 (9.8)	597.8 (10.2)
Comm, Social & Personal	2811.6 (56.5)	2812.3 (57.01)	2852.1 (56.8)	2950.8 (57.6)	2960.9 (56.3)	2979.7 (54.7)	3049.3 (55.1)	3200.9 (54.8)
Total	4968	4934.4	5016.2	5120.5	5257.7	5438.9	5527.2	5840.2

Table 3: Industry-wise Women Employment in India (2003 to 2010)
Source: Labour Bureau Statistics

3.3.2. Figures in Parenthesis Reflects the Respective Percentages

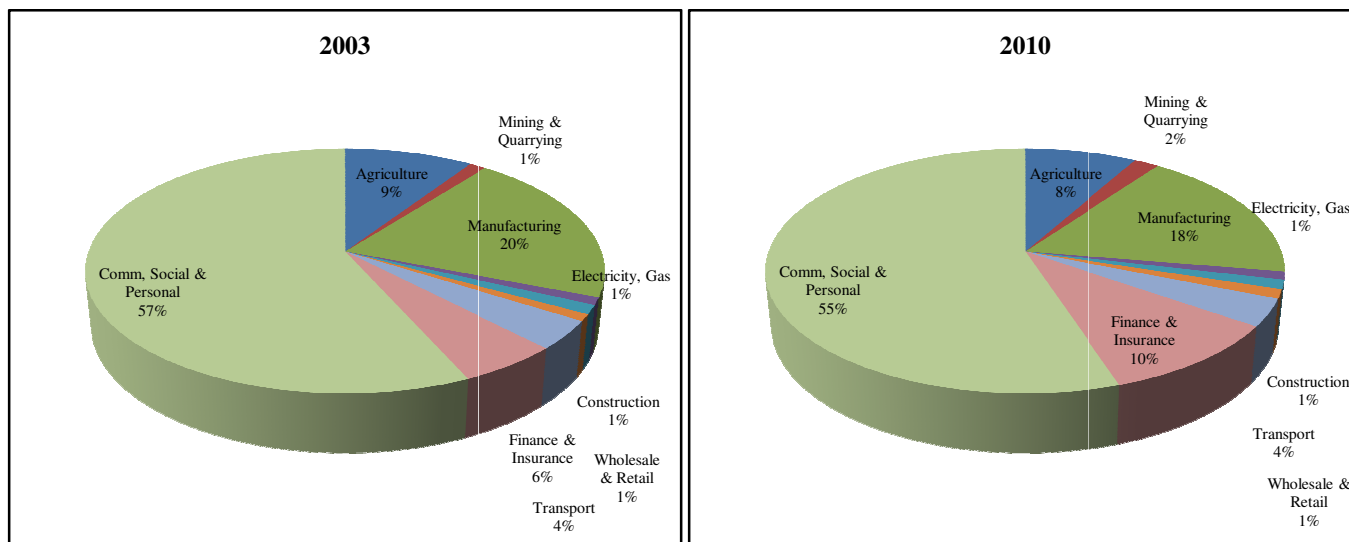*Figure 8: Industry-wise Distribution of Women Employment in India – as on 2003 and 2010 (in %)*

The above table and graphs reveals the following –
-   Community, Social and Personal Services employs women to more than 50% (54 to 58%)
-   Manufacturing sector engages 17 to 21%
-   Agriculture engages 8 to 10% of the women
-   Finance and Insurance employs 5 to 10% of women
-   Transport sector generates 3 to 4 % of women

-    Construction, Mining, Quarrying, Wholesale & Retail is hardly around 1%

As we all know, Services sector and Manufacturing suits women employees and apt for women workers. In spite of some minor changes in terms of women employees industry-wise, yet the above explanation holds good in terms of employment pattern in terms of industry category.

3.4. Objective IV to Reflect on the Distribution of Organized Sector Work Force in India from 1992 to 2008
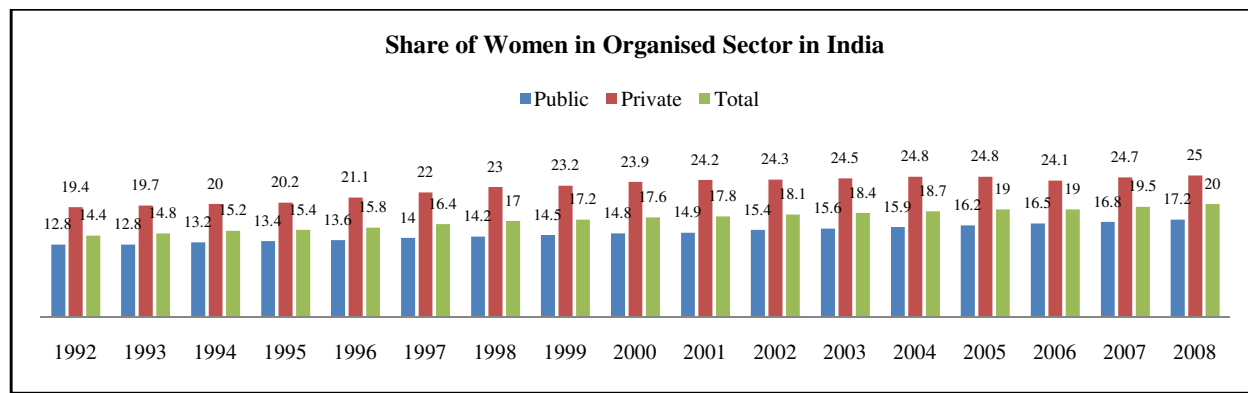

Figure 9

The above table and Figure depicts the share of Women Employment to Total Employment in the Organized Sector in the case ofIndia from 1992 to 2008.

The green bars reflect the Total Women Employment to Total Combined Employment under Organized Sector in India, it has been experiencing gradual increase from 14.4% to 20%, with no decreases at any point of time frame.

The blue bars indicate the caseof Women Total Employment under Public sector, which has been experiencing crawling increase from 12.8% to 17.2%.

The red bars portrays the situation under share of Women out of the Total in the case of Private sector, which has risen from 19.4% to 25% except for 2005-06 where there was a slight dip from 24.8% to 24.1% and also remained stagnant at 24.8% from 2004 to 2005.

Looking at the overall scenario it can be found that, share of Women in the case of Private Sector is much more pronounced and has had a steep rise when compared to the Share of Women under Public sector. This trend confirms the fact that Private sector is more buoyant under the Liberalized context, which has the potential to generate more employment.

3.5. Objective V: To Analyze the Impact of Select Variables Pertaining to Karnataka on Total Employment

Year	Karnataka				Women Employment (in 000s)
	LR	NSDP	Birth Rate Combined	Death Rate Combined	in Organized Sector in India
1991	44.00	5889.00	26.9	9	3781.00
1992	56.86	6321.00	26.2	8.5	3889.80
1993	56.86	7838.00	25.5	8	4026.30
1994	56.86	8960.00	25	8.3	4153.90
1995	56.86	10217.00	24.1	7.6	4227.90
1996	56.86	11670.00	23	7.6	4426.40
1997	56.86	12832.00	22.7	7.6	4637.00
1998	56.86	15396.00	22	7.9	4773.60
1999	56.86	17502.00	22.3	7.7	4829.20
2000	56.86	18344.00	22	7.8	4922.80
2001	56.86	18547.00	22.2	7.6	4949.30
2002	68.08	19621.00	22.1	7.2	4935.40
2003	68.08	20901.00	21.8	7.2	4968.40
2004	68.08	26881.81	20.9	6.9	4934.40
2005	68.08	31238.61	20.6	7.1	5016.23
2006	68.08	35980.58	20.1	7.1	5120.51
2007	68.08	42419.26	19.9	7.3	5311.92
2008	68.08	48083.65	19.8	7.4	5512.00
2009	68.08	51364.16	19.5	7.3	5580.00
2010	68.08	62250.87	19.2	7.1	5858.58
2011	68.08	68053.07	18.8	7.1	5954.00

Table 4
Source: Karnataka Human Development Report, 2005

Women Employment in India = fn (LR, NSDP, BR and DR pertaining to Karnataka)
Running the MLR model for the above stated variables.
  ➢ H0: There is no significant impact of the IV's on the DV (at alpha = 0.05% significance level)
  ➢ H1: There is a significant impact of the IV's on the DV

Regression Statistics	
Multiple R	0.984896
R Square	0.97002
Adjusted R Square	0.962525
Standard Error	117.839
Observations	21

ANOVA					
	df	SS	MS	F	Significance F
Regression	4	7188575	1797144	129.4209	5.72E-12
Residual	16	222176.6	13886.04		
Total	20	7410752			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	8935.783	1317.386	6.782964	4.4E-06	6143.049	11728.52	6143.049	11728.52
LR	-4.96265	9.592539	-0.51735	**0.611994**	-25.2979	15.37262	-25.2979	15.37262
NSDP	**0.010672**	**0.003589**	**2.973685**	**0.008958**	**0.003064**	**0.01828**	**0.003064**	**0.01828**
BR	-199.436	40.477	-4.92713	**0.000152**	-285.243	-113.628	-285.243	-113.628
DR	46.8769	155.2821	0.301882	**0.76663**	-282.306	376.0602	-282.306	376.0602

Table 5

Explanation
The model explains 97% variation in the DV by the IV's namely, meaning Women Employment in India is influenced by Literacy Rate, NSDP, BR and DR to the extent of 97% and the remaining 3% is influenced by residual factors - i.e., Government policy, willingness of the women to work etc.
Looking into the p-values of all the Independent variables from the Co-efficient Table - NSDP and BR values are 0.008 and 0.0001 respectively - which is < 0.05. Hence null hypothesis w.r.t. NSDP and BR is rejected and the alternate is accepted, meaning that NSDP and BR have a significant impact on Women Employment.
The p-value of Literacy Rate and Death Rate is > than 0.05, hence the null hypothesis is accepted in the case of the stated variables on Women Employment, therefore concluding that they do not affect Women Employment for the data set 2000 to 2011.

3.6. Objective VI
To determine the influence of BR, DR, NSDP, Literacy Rate, Mean Age of Females pertaining to Karnataka on the Employment to Population Ratio of India (15 + females)

Year	Karnataka					Employment to population ratio - 15+ - female (%) in India
	Birth Rate	Death Rate	PER CAPITA NET SDP AT FC	Mean Age of Female in Karnataka	Literacy Rate	
	Combined	Combined				
2000	22	7.8	**18344.00**	19.6	56.86	33
2001	22.2	7.6	18547.00	19.6	56.86	33.5
2002	22.1	7.2	**19621.00**	19.7	68.08	34
2003	21.8	7.2	20901.00	19.8	68.08	34.5
2004	20.9	6.9	**26881.81**	20	68.08	35
2005	20.6	7.1	31238.61	19.8	68.08	35.1
2006	20.1	7.1	**35980.58**	20.1	68.08	33.9
2007	19.9	7.3	42419.26	20.3	68.08	32.1

2008	19.8	7.4	**48083.65**	20.4	68.08	30.8
2009	19.5	7.3	51364.16	20.6	68.08	29.7
2010	19.2	7.1	**62250.87**	21.1	68.08	27.8
2011	18.8	7.1	68053.07	21	68.08	27.7

Table 6: Data pertaining to Dependent and Independent Variables – to apply Multiple Linear Regression
Source: India & Karnataka Human Development Report

➢ H0: There is no significant impact of the Independent Variables on the Dependent Variable
➢ H1: There is a significant impact of the Independent Variables on the Dependent Variable

Regression Statistics	
Multiple R	0.996817513
R Square	*0.993645155*
Adjusted R Square	0.988349451
Standard Error	0.28703603
Observations	12

ANOVA					
	df	**SS**	**MS**	**F**	**Significance F**
Regression	5	77.29482857	15.45896571	187.6323011	1.67214E-06
Residual	6	0.494338095	0.082389682		
Total	11	77.78916667			

	Coefficients	**Standard Error**	**t Stat**	**P-value**	**Lower 95%**	**Upper 95%**	**Lower 95.0%**	**Upper 95.0%**
Intercept	171.694925	19.41795	8.8421	0.00012	124.180903	219.209	124.181	219.209
Birth Rate	-1.74085497	0.332408	-5.2371	0.00194	-2.5542271	-0.9275	-2.5542	-0.9275
Death Rate	-3.0752033	0.687718	-4.4716	0.00423	-4.7579882	-1.3924	-4.758	-1.3924
Per Capita Net SDP	-0.00015835	4.14E-05	-3.8275	0.00868	-0.0002596	-6E-05	-0.0003	-6E-05
Mean Age of Female	-3.76249649	0.949837	-3.9612	0.00744	-6.0866647	-1.4383	-6.0867	-1.4383
Literacy Rate	0.00655583	0.040881	0.1604	0.87786	-0.0934768	0.10659	-0.0935	0.10659

Table 7

Explanation
Running a Multiple Regression Model on the above stated variables.
Employment to population ratio - 15+ - female (%) in India = fn (Birth Rate, Death Rate, Per capita NET SDP at fc, Mean Age, Literacy Rate of Karnataka)
R square value is 99.3%, which explains the fact that the IV's influence the DV up to 99.3% and the remaining 0.7% is explained by other residual factors.
Observing the p-value, one can infer that BR, DR, NSDP and Mean Age of Female of Karnataka influence the Employment to Population Ratio of India, as the p-value in the case of above stated variables are < 0.05. Literacy Rate of Karnataka does not influence the Employment to population ratio of India as its p-value is > 0.05 (0.87); for the study period. Probably literacy rates of other strong states like Kerala have more impact on the country's employment to population ratio.

3.7. Objective VII to determine the factors that influence Women Employment of Karnataka – using Multiple Linear Regression

Year	LR	Birth Rate Combined	Death Rate Combined	PER CAPITA NET SDP AT FC	Women Employment in Organized Sector in Karnataka(in 000s)
2000	56.86	22	7.8	18344.00	552.30
2001	56.86	22.2	7.6	18547.00	568.70
2002	68.08	22.1	7.2	19621.00	576.00
2003	68.08	21.8	7.2	20901.00	581.00
2004	68.08	20.9	6.9	26881.81	564.40
2005	68.08	20.6	7.1	31238.61	578.25
2006	68.08	20.1	7.1	35980.58	591.30
2007	68.08	19.9	7.3	42419.26	669.90
2008	68.08	19.8	7.4	48083.65	710.60
2009	68.08	19.5	7.3	51364.16	729.65
2010	68.08	19.2	7.1	62250.87	750.89
2011	68.08	18.8	7.1	68053.07	755.69

Table 8
Source: Ministry of Labour & Employment

Women Employment under Organized Sector in Karnataka = fn (LR, BR, DR, Per capita nsdp_fc)
Running MLR in the case of the above stated variables
- HO: There is no significant impact the IV's on the DV
- H1: There is a significant impact of the IV's on the DV

3.7.1. Summary Output

Regression Statistics	
Regression Statistics	
Multiple R	0.987397
R Square	0.974952
Adjusted R Square	0.960639
Standard Error	16.00964
Observations	12

ANOVA					
	df	SS	MS	F	Significance F
Regression	4	69834.72	17458.68	68.11588	1.1E-05
Residual	7	1794.16	256.3085		
Total	11	71628.87			

	Coefficients	Standard Error	t Stat	**P-value**	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-1654.18	558.6368	-2.96109	**0.02**	-2975.14	-333.209	-2975.14	-333.209
LR	6.304809	2.277104	2.768784	**0.02**	0.920314	11.6893	0.920314	11.6893
BR	38.6756	16.71124	2.314347	**0.05**	-0.8402	78.19141	-0.8402	78.19141
DR	113.8293	36.19339	3.145029	**0.01**	28.24551	199.413	28.24551	199.413
NSDP	0.006775	0.001082	6.261249	**0.00**	0.004216	0.009334	0.004216	0.009334

Table 9

The Model Summary suggests that the IV's influence the DV upto 97.4% (R square value). Remaining 2.6% is explained by the remaining factors.
Observing the p-values, it can be seen that the p-values of LR, BR, DR and NSDP are < 0.05. This suggests that the model is significant at 0.05 level of significance.

3.8. Objective VIII: To analyze the impact of LR, BR, DR, Mean Age of Females and GSDP on Female LFPR in the case of Karnataka

	Karnataka					
Year	Literacy Rate	Birth Rate	Death Rate	Mean Age of Female	GSDP (in 000s)	Female LFPR in Karnataka 15+
		Combined	Combined			
2000	56.86	22	7.8	19.6	1083617000	34.3
2001	56.86	22.2	7.6	19.6	1128465000	34.8
2002	68.08	22.1	7.2	19.7	1208887600	35.4
2003	68.08	21.8	7.2	19.8	1309897400	35.9
2004	68.08	20.9	6.9	20	1667471262	36.4
2005	68.08	20.6	7.1	19.8	1959040705	37
2006	68.08	20.1	7.1	20.1	2272370579	35.8
2007	68.08	19.9	7.3	20.3	2706287892	33.6
2008	68.08	19.8	7.4	20.4	3103123288	32
2009	68.08	19.5	7.3	20.6	3375585018	30.5
2010	68.08	19.2	7.1	21.1	4107031600	29
2011	68.08	18.8	7.1	21	4606071200	28.8

Table 10

Female LFPR in Karnataka = fn (Literacy Rate, BR, DR, Mean Age, GSDP)
Running MLR for the above stated variables.
- ➢ H0: There is no significant impact of the IV's on the DV
- ➢ H1: There is a significant impact of the IV's on the DV

3.8.1. Summary Output

Regression Statistic	
Multiple R	0.993753
R Square	***0.987546***
Adjusted R Square	0.977168
Standard Error	0.43476
Observations	12

ANOVA					
	df	SS	MS	F	Significance F
Regression	5	89.9284	17.98568	95.15429	1.25E-05
Residual	6	1.134096	0.189016		
Total	11	91.0625			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	205.457	29.13923	7.050875	0.000407	134.1559	276.7582	134.1559	276.7582
LR	-0.01459	0.061957	-0.23542	0.821712	-0.16619	0.137018	-0.16619	0.137018
BR	-1.85522	0.436315	-4.25203	**0.005368**	-2.92285	-0.7876	-2.92285	-0.7876
DR	-4.00659	1.01454	-3.94917	**0.007545**	-6.48908	-1.5241	-6.48908	-1.5241
MA	-4.89556	1.351455	-3.62243	**0.011065**	-8.20245	-1.58866	-8.20245	-1.58866
SDP	-2.1E-09	7.81E-10		**0.03889**	-4E-09	-1.5E-10	-4E-09	-1.5E-10

Table 11

R square value reflects 98.7% , indicating that the model explains influence of the IV's on the DV to the extent of 98.7% and the remaining 1.3% is due to other factors like women population, labour policy framework etc.
Observing the p-values: BR, DR, MA & SDP have a significant impact on the DV since their respective p-values are < 0.05. Therefore H0 is rejected in the case of the above variables and thus accepting H1 that BR, DR, MA and SDP have a significant impact on

Female LFPR in Karnataka. In the case of Literacy Rate – the same does not have a significant impact as its respective p-value is > 0.05; i.e. 0.82.

3.9. Summary of Findings

> With regard to the Total Employment of Women in the Organized sector, it can be observed that the state and the country's employment is on a gradual rise (except for 2004).
> Running a simple correlation between the above two stated variables, it is found that the same correlates up to 0.97, meaning high degree of positive correlation.
> Enquiring into the zone-wise scenario of women employment - south zone is the maximum contributor, followed by West and North Zones. Central, North East and East zones almost experience similar logistics.
> As we all know, Services sector and Manufacturing suits women employees and apt for women workers, therefore majority of the women employment is drawn from the above stated industries.
> Sector-wise women employment in India reveals that Women engaged in Private Sector is much more pronounced and has had a steep rise when compared to public sector. Thus private sector reflecting more buoyancy under the Liberalized regime.
> ………………………………

Running Multiple Linear Regression functions, the following observations were made:

→ Women Employment in India = fn (LR, NSDP, BR and DR pertaining to Karnataka)
Wherein; NSDP and BR of Karnataka have a significant impact on India's total Women Employment.
→ Employment to population ratio - 15+ - female (%) in India = fn (Birth Rate, Death Rate, Per capita NET SDP at fc, Mean Age, Literacy Rate of Karnataka)

Observing the p-value, one can infer that BR, DR, NSDP and Mean Age of Female of Karnataka influence the Employment to Population Ratio of India, as their p-values wereless than 0.05

→ Women Employment under Organized Sector in Karnataka = fn (LR, BR, DR, Per capita nsdp_fc)
It can be seen that the p-values of LR, BR, DR and NSDP are < 0.05. This suggests that the model is significant at 5% LOS.
→ Female LFPR in Karnataka = fn (Literacy Rate, BR, DR, Mean Age, GSDP)
It is found that BR, DR, MA & SDP have a significant impact on the Female Labour Force Participation Rate of Karnataka as their respective p-values are < 0.05.

3.10. Conclusion

Programmes for Women Development in Karnataka

The issue of empowerment of women and engendering the development objective, moved the centre stage, with the global paradigm shift, from growth related to a human development approach. In recent years, the empowerment of women has been recognized as the central issue in determining the status of women.

- Stree Shakti - to empower women economically and socially by organizing them in self-help groups
- Santhwana - assistance to victims of domestic violence, rape, sexual abuse and dowry harassment
- Karnataka Mahila Abhivyudhi Yojane (KMAY) - to ensure gender equality and to integrate women in the mainstream of development
- Working Women's Hostels - provision of safe and affordable accommodation to working women
- Financial Assistance to Women Law Graduates
- Special Cell For Eradication of Social Evils
- Implementation of Protection Of Women from Domestic Violence Act,2005
- Legal Literacy
- Swadhar – A scheme for women in difficult circumstances
- Udyogini Scheme – wherein women are assisted in gaining self-reliance through self-employment – especially in trade and services sector. Under this, they are provided with loans and subsidies.

3.11. Limitations of the Study

→ covers only the organized sector employment. It does not cover employment in agricultural and allied establishments.
→ data does not cover- Sikkim, Dadra & Nagar Haveli and Lakshadweep.
→ frame of establishments maintained by employment exchanges is not comprehensive in certain cases due to non-inclusion of new and emerging establishments.
→ Covers only three occupational categories, that is, professional, technical and related workers; administrative, executive and related workers; and production and related workers, transport equipment operators and labourers

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