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**Participation of the Women Workers in the Construction sector in India: A Review**

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Construction sector plays a crucial role for providing employment for women workers in India. Women, therefore, belong to the secondary labour market sector as their characteristic is poor earning and low level earnings and low level of skills. Since 1971 to till now share of women workers gradually increasing and construction sector absorbing unskilled labour. Women construction workers growth has been large than male construction workers. Mainly women construction workers were involve in secondary (unskilled) work like weight lifter, dust lifter, digging worker and brick handling in public and private sector in India. Public sector provides more employment for women workers than private sector and public sector growth has been large. However, participation of the women workers was based on unskilled and semi-skilled work in the construction sector.

**Key words:** - women, employment, skill/occupation, public & private sector.

**Objective of the paper:-**

To study the participation of the women workers in the construction sector.

**1.1 Introduction**

The participation of women in the construction industry is an exception rather than a rule. In very few countries of the world do women work in the construction industry? India is one of the few countries where women are involved in the actual construction process. The construction industry is considered a predominantly male, "gender working in an industry like this is fascinating. Women from anywhere between 20-40 percent of the workforce in the industry in India

In spite of their large numbers women are seen as secondary workers and are employed to perform jobs that are considered unskilled. There is no upward mobility for these women workers and it is rare to find women in the position of a supervisor or foreman. It is also rare to find women contractor and engineers in the construction sector in India through there are women architects and designers. The fact that women are found only at two opposite ends of the industry – either or unskilled workers or as designers/architects while the men and positions at all levels within the construction industry make it industry for research.

Women construction worker rate of growth has been large than male construction workers. The construction sector observed 3.55 percent of the women workforce in 1971 in class 1 cities. In most of the cities **Guntar, Gaya, Kathar, Bilaspurm Indore, Murwara, Puri, Sambalpur, Cochin, Rourkela, Bharatpur, Bhilwara, Bareli, Farookhabad, Mirzapur-cum-Vindychal and Muzaffarnagar** rate of growth of women construction workforce over the decade 1971-81. This has gone up to 4.04

percent in 1981. The corresponding percentages for male workers are 3.50 and 4.43 respectively. The composed annual growth rate of female construction workers have been 6.33 as opposite to 5.34 percent of males. The female's intensity was 9.098 percent in 1981. The rate of growth in a large number of cities 152 out of 79 but that could have been because of the reason started low from lower in absolute terms in 1971.

In other words there were more women relative to men in the construction sector in 1981 as compared to 1971. **(Source EPW March 11, 1989. Quoted by Arup Mitra Swapnal)**

## 1.2 Women's Employment

When it comes to women employment, however, the trends revealed by statistical analysis are more mixed. The construction sector accounts for a significant share of women's participation in the labour force. In this sector, women can create their own jobs. All over the world, self employment provides some with a means to add to the income their family and helps ease unemployment. It makes it easier for women to combine family responsibilities and unpaid subsistence work with income earning. The nature and character of employment in this sector although manual to some extent, also requires some skill for efficient management. Despite the unpredictability, women are attracted to this sector due to the severe absence of alternative employment **(Murali Manohar Sobha and Jhanaradhana Rao)**. Mostly the women workers are classified as contract labour and casual labour. A large number of women workers are employed in the construction sector.

In construction under the prevailing WTO regime, the essential requirement of global tendering has facilitated the entry of many large companies in the Indian construction scene in a big way. The presence of some these companies is increasingly visible in many infrastructure projects being undertaken under government funding as well as under bilateral / multilateral assistance arrangements with increased mechanisation, there would be massive displacement of labour in nearly all construction operations. Women labour would be completely eliminated from the main operations in which they have been traditionally deployed, namely, soil digging and carrying, carrying inputs in concrete curing and brick carrying. It is estimated that the overall deployment of labour will become 1/50<sup>th</sup> to 1/5<sup>th</sup> of this earlier, and especially the women workers, would be increasingly eliminated from the construction sites.

## 2.1 Types of Work of Women Workers in the Construction Sector:-

Most of the women workers in construction sector are employed on a casual basis. They are engaged in unskilled job. Unstable employment earning and shifting of workplace are the basis characteristic of work for construction workers. The nature of work is such that there are no holidays. It is established that women workers do not get minimum wages. Women construction work can truly be described as sweat labour, and violation of laws on minimum wages as well as equal wage unskilled workers have no fixed working hours.

They have to do the work what the foreman asks. The following table gives focus on the type of workers.

**Table: 1****Participation of women workers in skill/occupation**

S.No.	Type of work	% of engaged female workers
1.	Water Feeding	3
2.	Material supply	20
3.	Mall Mixing	2
4.	Brick Handling	38
5.	Stone Shaping	1
6.	Slab Pouring	14
7.	Other	2
<b>Total</b>		<b>100</b>

Source: Personal field investigation

The above table indicates that the maximum numbers of women workers (80%) were doing the job of maternal and brick supplying. Both activities are lightweight as well as unskilled activities. Our observation is that not a single women worker was engaged in skilled job and heavy weight activity.

**Categories of Construction Women Workers according to type of skills****Table: 2**

Worker's Group	Presence of Women Workers
<b>Unskilled Workers</b>	
Weight Lifter	High
Dust Lifter	High
Digging Worker	High
Watchman	Nil
Waterman	High

Source: Personal field investigation

Table: 3

Worker's Group	Presence of Women Workers
<b>Semi- skilled Workers</b>	
Steal / Bender	Nil
Centring workers	Nil
Concrete Mixer	Low
Brick Layer	Low
Glass Fitter	Nil
Scaffolder	Nil

Source: Personal field investigation

Table: 4

Worker's Group	Presence of Women Workers
<b>Skilled Workers</b>	
White Washer	Nil
Carpenter	Nil
Plastering Operator	Nil
Mason	Nil
Tile Fitter	Nil
Painter	Nil
Plumber	Nil
Cement Finisher	Nil
Glazier	Nil
Electrician	Nil
Black – smith	Nil
Pipe - fitter	Nil
Machine Operator	Nil

Source: Personal field investigation

Analyses of these tables that worker's group have been divided different occupations (unskilled, semi-skilled and skilled work) in the construction sector. Table shows that presence of women workers in different skill/occupation like as: Women participation in unskilled occupation work:

weight lifter, dust lifter and digging worker was high, watch man was nil, semi skilled occupation work: steel bender, centring workers, glass-fitter, scaffolder was nil & concrete mixer, brick-layer was low. On the other hand skilled occupation work: white-washer, carpenter, plastering operator, masons, tiles-fitter, painter, plumber, cement finisher, glazier, electrician, black-smith, pipe-fitter and machine operator was nil.

It is being showing that unskilled women participation was high in the construction sector, semi-skilled women participation was low and there were no skilled women workers present in the construction sector. Women are employed in semi-skilled jobs and sometimes in skilled jobs in other industries but in the construction sector women are unemployed mostly as unskilled labourers. Women workers in India are not considered to do skilled work like bricklaying and basic masonry.

On the other hand there would be an increase in factory production as a will as a growth in the need for various skill such masons, tile fitters, painters, plumbers, cement finishers, glaziers electricians etc. Unfortunately, there are practically no women with these skills.

## **2.2 Construction – Providing Casual Work to the Poorly Educated**

A large number of women in rural India are recorded to be working in construction, as mentioned earlier, and this sector has registered in increase over the period to the time of 4.2 million additional women workers. Another 3 lakh women in urban areas were added to the workforce during the period 1999-2010. There is no doubt that this is an outcome of the emphasis on infrastructure development and increasing investments in public programmes such as MGNREGS (Himanshu, 2011; Dutta, et. al., 2012). A bulk of the women workers are involved in small and minor construction works since large construction activities are increasingly becoming capital – and technology-intensive, with the use of pre-fabricated components and mechanisation. Given the predominantly low education levels or the illiterate status of the women works in construction, their employment in such newer activities remains limited.

As mentioned earlier, women in rural India are recorded as working in the construction sector, which has registered as increase of 4.2 million additional women workers over the period under review. Another 3 lakh women in urban areas were added to the workforce during the period 1999-2010. There is no doubt that this is an outcome of the emphasis on infrastructure development and increasing investments in public programmes such as; MGNREGS (Himanshu, 2011; Dutta,et., 3012). The bulk of women workers are however, involved in small and minor construction works since large construction activities are increasingly becoming capital- and technology-intensive with the use of pre- fabricated components and mechanisation. Given the predominantly low education levels or illiterate status of the women works in construction, their employment potential in such never an activity remains limited.

The overall share of women workers in the construction sector is, however, low. In rural area, there has been an increase in the share of women to 17 percent while in urban areas where the larger construction activities are prominent, the share of women workers has been declining and was 9 percent in 2009-10. The entry of a larger magnitude of male workers into the construction sector in urban areas as compared to that of female workers explains the decline in the share of women, though the number of women workers in the sector has increased over the same period.

### 3.1 Women employment in public and private sector

In a mixed economy like India, public sector is envisaged to play a leading role in the matter of, inter alia, employment. It is true in the case of India that public sector has a larger share in employment in the formal sector irrespective of sex. Employment of women in private sector has been quantitatively less than public sector. Another significant difference between public and private sector in the matter of women employment is that former has more women in its tertiary sector while the latter in the primary and secondary sectors.

Following is situation of women construction employment in public and private sector of Indian economy:

**Table: 4**

**Public and Private Sector Employment of Women in Construction Sector(In thousands)**

Public Sector		Private Sector	
Year	Percentage	Year	Percentage
1981	4.8	1981	9.5
1991	55.3	1991	6.0
1996	61.4	1996	4.0
2000	63.2	2000	4.0
2009	61.2	2009	5.2
2010	68.5	2010	6.3
2011	65.4	2011	7.1

**Source:** Ministry of labour, Employment review, government of India.

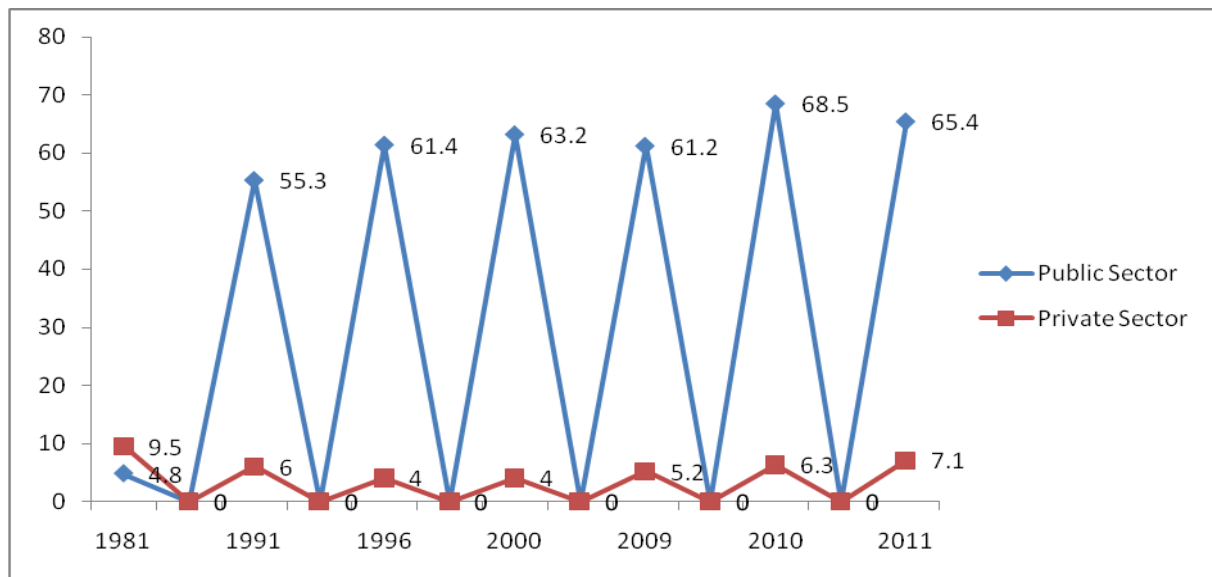
Analysis of the public and private sector has been found that women employment is increasing in both sectors. But employment growth has been large in public sector compare to private sector.

A large number of women workers are employed in the construction industry. According to the 1981 census out of a total of 36 lakh (3.6 million) construction workers which 10 percent of female and remain male worker. And 1991 that there were 5534 thousand (5.5million) employed in the construction Industry of which 5122 thousand were males and 412 thousand females.

According to the national sample survey organisation of India (NSSO), in 1993-94, the construction sector in India provided employment to 6 percent (5.9 million) of all employed women in comparison to 10.3 percent (23.1 million) all employed men. Thus women constituted about 20 percent of the total workforce in the construction industry. According to NSSO survey (1993-94) 4.17 percent of all women workers were engaged in construction activity. Among women construction workers more than 98 percent are casual workers, whereas the proportion of casual workers among women workers in all industries together is far less, about 75 percent.

### CONSTRUCTION WOMEN EMPLOYMENT TREND IN PUBLIC AND PRIVATE SECTOR (SINCE 1981 TILL 2011)

Figure: 1



Source: NSSO Various round

Figure is showing that since 1981 to till 2011 women employment is gradually and yearly increasing in both public and private sectors. The highest growth of the employment was 68.5 (in thousands) in public sector and 7.1 (in thousands) in private sector. The employment trend is very high in the public sector and public sector providing more employment for women workers in the construction sector.

#### Post liberalisation changes in the work pattern of Urban women in construction sector:-

Percentage of all- India urban workers employed in the construction sector and GDP

Table: 4

Year	Percentage employed in the construction sector (UPS)		Sectoral Construction GDP
	UM	UF	
1983	5.1	3.7	5.8
1987-88	5.8	4.3	5.9
1993-94	7.0	4.9	5.8
1999-00	8.8	5.5	5.7
2004-05	9.3	4.5	6.9

Source: NSSO various round

Women workforce constitutes an integral part of total workforce in India. On 31<sup>st</sup> march 2004, women constituted 19 percent of the total workforce. The participation of women in the labour force has always been lower than that of men, in the rural as well as urban areas. The work participation of women was only 19.67 percent which increased up to 22.73 percent in 1991 and 26.68 percent in 2001. In the women workforce, women from rural areas are greater in number as compared to the urban women. Amongst rural women workers a majority is employed in agriculture and some are employed in cottage industries. In the urban areas, women workers are primarily employed in the unorganised sector.

As an 31<sup>st</sup> march, 2005 a total number of 50.16 lacs women employees were engaged in the organised sector, out of which 29.21 lacs (58 percent) in the public sector and 29.95 lacs (42 percent) in the private sector.

Employment of women in public sector increased by 1.1 percent and by 2.5 percent in the private sector during 2004-2005. The zone wise showed an increase of 8 percent in north-eastern zone, followed by western zone (5.3 per cent). Eastern zone (3 percent) and central zone (1.3 percent) and Northern zone (1.2 per cent). Only southern zone registered a married dip of 0.8 percent.

**Table:6**  
**Distribution (Per 1000) of workers according to usual status (ps+ss) by construction industry**  
**Rural and Urban India (Male and Female)**

State/UT	M And F		State/UT	M And F		State/UT	M And F	
	Urban	Rural		Urban	Rural		Urban	Rural
Andhra P.	12.14	6.67	Karnataka	9.65	4.33	Tamil N.	8.33	15.51
Arunachal P	12.45	4.21	Kerala	13.98	18.45	Tripura	16.07	43.80
Assam	7.95	6.57	Madhya P.	11.89	12.91	U. Khand	11.91	12.29
Bihar	8.36	10.35	Maharashtra	8.06	5.16	U.P.	9.85	13.37
Chhattisgarh	18.76	3.84	Manipur	9.67	22.57	W Bengal	6.16	8.43
Delhi	4.4	7.0	Meghalaya	10.97	6.23	A&N	16.22	17.16
Goa	6.05	8.78	Mizoram	7.79	8.29	Chandigarh	8.24	1.21
Gujarat	5.63	4.32	Nagaland	5.13	2.98	D&N	5.27	8.60
Haryana	10.74	14.30	Odisha	10.01	12.31	D&V	3.84	6.6
Himachal P.	5.83	15.33	Punjab	7.34	16.19	L. Deep	13.43	25.12
J&K	14.16	20.25	Rajasthan	14.41	20.29	P.Chery	15.67	14.91
Jharkhand	14.26	18.20	Sikkim	6.47	6.53	All India	9.32	11.05

Source: NSS 68<sup>th</sup> Round, 2011-2012

The table shows that activity status determined on the basis of the reference period of one year is known the usual activity status. And distribution of workers (Per 10000) according to usual status (ps+ss) male and female both are different in states rural and urban areas. There are four highest



states of distributions of workers (Male and Female) in India like: J & K, Jharkhand, Karala and Madhya Pradesh. On the other hand lowest states distribution of workers like as: Sikkim, Nagaland, Mizoram and Chhattisgarh. It's showing that women participation exists in these states and contribution of women workers in the construction sector is increasing both rural and urban areas.

### 3.2 Participation of the women workers for carry heavy loads:-

**ILOs** maximum weight convention, 1967 provides that the maximum weight for the load to be carried by women employers shall substantially less than permitted for male workers. In this way, the ILO convention protects of women employers against the risk arising from lifting of heavy loads. **Lingam (1998)** also reported that women were mostly restricted to head-loader positions while men had opportunities to move up to the position of helper, mason, supervisor, labour agent, or contractor.

Building and other construction workers (Regulation of employment and condition of service) central rules, 1998 lays down that an employer shall ensure at a construction site of a building or other construction work that no building workers lifts by hand or carries shoulders any material, article tool or appliance exceeding in weight the maximum limits set out in the central rules:-

**Table: 5**

#### Maximum weight to be lifted by a construction worker

Person	Maximum weight load
Adult Man	55 k.g
Adult women	30 k.g
Adolescent female	20k.g
Adolescent women	30k.g

Source: The building and construction workers 'central rules' 1998.

<sup>1</sup>There have been some attempts of measures the intensity of work done by women in construction work. For instance:

- In concerting, it was found that in 15 minutes, about 55 bundles each weighing 7.8 k.g, passed through the hands of women. In an 8- hour shifts, therefore, an incredible 32,000 K.g. would have passed through a women worker's hands.
- For masonry work, women carried 9-12 bricks (each weighing 25 k.g) on their head and moved with grace and skill along the scaffolding.
- While doing earth women carried on their head and moved with grace and skill along the scaffolding.

<sup>11</sup> Extracted from Girja R. And Geetha R. Et al. "Socio- Economic condition of construction workers in Tamil Nadu.

- While doing earth work women carried on their head 15 k.g mud and walked 30 feet to deposit the mud and return. In an hour this was repeated 180 times. In an 8 hour this was 180 times in 8 hour shift a woman on average would have walked about 13 kms carrying about 21000 k.g of mud.
- While using a crowbar to dig into the earth, women would do this 15 times a minute, matching the efficiency of able bodied men.
- In curing, women were found carrying water in posts each weighing 8 k.g. 15 times per hour, to pour our concrete structures.
- In breakings jalls, women used on iron hammer 52 times per minute and this for a 9 hour shift with a one hour break in between.

### Conclusion

Thus the present studies find some interesting facts and suggest that women participation in labour forced has increased after 1971. But women workers large forces were involve in unskilled work (water feeding, material supply, mall mixing and digging worker) in this sector. The numbers of actual women workers are high in urban areas, in comparison to rural areas. Since 1981 to till 2011 women workforce gradually increasing in public and private sector but employment growth is high in public sector compare to private sector. Women workers contributions increasing in this sector on the other hand participation of the women workers were high in some states like J&K, Jharkhand, Karala and Madya Pradesh. Result is showing that women contribution highly correlated among unskilled and semi-skilled work and there was no correlation of women skilled work in the construction industry.

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