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An Empirical Investigation Of Wage Discrimination Among Construction Workers In India

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ABSTRACT

One the most important sector for providing the direct and indirect employment is construction sector. The construction sector has the largest number of unorganised labourers in India next only to agricultural sector and provides employment to about 33 million people. Gender discrimination in our social structure continues to favor males over females, trickling down to various sectors of society, such as the workplace. The gender wage gap is a tangible result of such inequality and is measured as "the difference between male and female earning expressed as a percentage of male earnings" (OECD, 2011). Wage differential refers to differences in wage rates due to the location of working place, hours of work, working conditions, type of project, nature of work site, or other factors. It may be the difference in wages between workers with different skills working in the same industry or workers with similar skills working in different construction industries or regions. In Indian labour market the earning and wages are considerable rises but the problem of wage differentiation is the burning issue prevailing, and this problem is much prevalent in the unorganized market. The present study focuses on the issue of wage differentiation in the similar construction work on working site in Chennai Metropolitan of India. It explores gender wage gaps among construction workers in India, along the entire wage distribution to see "what happens where". The Data required for the study have been collected from both the primary and secondary sources. This paper analyses the issue of gender parity in wages by focusing on the evolution of male-female wage gaps for an emerging economy, India, and decomposes the gaps to understand the patterns of gender-based labour market discrimination.

Key words: Construction industry, Gender equality, Construction workers, Wage Differentials, Gender discrimination.

INTRODUCTION

"A woman, a mother holds the highest position, highest regard in our country. Men often underestimate the female members of their family. Women are two steps ahead of men. We need to recognize their power."

~ Prime Minister Narendra Modi

In India with economic reforms, liberalization and globalization involve in domestic economy. This enhances the potential of investment opportunities and usher into the Indian labor market a substantial increase in the income and earnings of workers of all sectors. The several studies provide ample evidence that despite a modest overall performance of the Indian economy during the past one and a half decades, the extent to which economic progress has been translated into increased labor earnings and, consequently, poverty reduction have been rather disappointing. The country has reportedly closed two thirds of its overall gender gap, with a score of 66.8%, but the report notes with concern that the condition of women in large fringes of Indian society is 'precarious'. Of significant concern is the economic gender gap, with a score of 35.4%, at the 149th place, among 153 countries, indicating only a third of the gap has been bridged. The participation of women in the labour force is also among the lowest in the world, and the female estimated earned income is only one-fifth of male income. The construction industry plays a vital role in the socioeconomic development of the country and the construction industry is one of India's fastest growing sectors. Construction sector is the world's largest industrial employer with seven per cent of total world employment and 28 per cent of industrial employment. It is closely associated with the nation's economy. Construction Industry is recognized as the Unorganized Sector with vast labor intensity and economic activity after Agriculture in India. This Industry generates demand for both skilled and semi-skilled labor force. The construction sector is providing employment to 7% of total world employment. Today Indian construction industry employs about 33 million people. The construction industry plays a major role in combating the high level of unemployment and in absorbing surplus labor from the rural areas. The construction industry as an economic entity has a profound impact on the GDP and overall economy of the Nation. Combining the potential for employment and providing the Infrastructure facilities for practically every economic activity. Therefore, the construction industry plays a decisive role in the development of the Nation. These construction laborers are one of the most vulnerable segments of the unorganized sector as there is no permanent job opportunity for them. However, unlike other industries where they are increasingly employed in semi- skilled and skilled occupations, women are engaged almost exclusively as casual manual laborers in the Indian construction industry. This paper analyses the issue of gender parity in wages by focusing on the evolution of male female wage gaps for an emerging economy, India, and decomposes the gaps to understand patterns of gender-based labor

market discrimination. Construction workers are the backbone of the economy as they create the infrastructure necessary for industrial growth. In a globalizing economy, it is the construction workers who are constructing the new economy. Therefore one can say that the construction workers are literally the builders of modern India. The earning and wages considerably rise but the problem of wage differentiation is the burning issue in the prevailing Indian labour market. The wage differentiation can be seen not only in the different occupation but also in the same occupation and same type of work. This problem is much prevalent in the unorganized market. The present study therefore focuses on the issue of wage differentiation in the similar construction work at working sites in Chennai Metropolitan of India.

REVIEW OF LITERATURE

The overall literature on wage discrimination in India is vast, and covers a very broad array of disciplines and methodologies. Since our study is empirical and focuses on the Rural Employment, we refer to the relevant literature here.

Dr. I. Pandi Devi (2018) Shows her survey are women workers have to perform duel role of both outside employment with or without violent working conditions and also manage their homes. Lack of education and low income of the family is the compelling factor for the women folk to opt for seeking jobs in unorganised sectors to augment the family earning to sustain lively hood. Most women workers do not have any social security or access to health care benefits.

S. Rasheedha Banu (2017) Studied in the article point out 36 respondents from Mannachanallur Taluk, Trichirappalli District in Tamilnadu that the problems of women construction worker in the workplace are one of the major issues in the contemporary social problems. Majority of the women construction workers are facing lots of difficulties like absence of social security, low wages, sexual harassment, gender discrimination, etc Main things ignorance and illiteracy, small and scattered size of establishment. They are working under unsecured environment or work culture.

Sarika Patel and Rameshwari Pandya (2017) Study has shown that the economic and social condition of women is dismal. These women workers suffered from recurrent periodic spells of unemployment, contributing to high degree vulnerability, further impending the prospects of economic and social mobility. The work available to these women is almost always poorly paid, mentally and physically unhealthy, demeaning and insecure. Women workers lives and works under many constrains. They faces a crushing work burden of work for income, work for subsistence and work for the household and care and work for children and the aged.

Dr. Sandhya et. al (2015) There is a definite gender bias and sexual harassment at work of women workers in the construction industry in Bengaluru. There are many health hazards, social and cultural implications and lesser opportunities for these women workers due to many interventions.

Kumar B. Ravi (2013) had made an effort to identify gender discrimination among construction workers and identify the means of empowering women construction workers with special reference to Vijaywada, Andhra Pradesh in India. The author had collected data through filled-up questionnaires from 440 women construction workers who were selected through stratified sampling technique. This study concluded that many women construction workers are illiterate, widows, the only earning member of the family, from depressed class and from low income families when compared to male construction workers. Women construction workers were discriminated against in wages and promotion. The findings of the study also show that the important reasons why women are not promoted as masons is the gender bias which men and women have, and women construction workers are not given an opportunity to be trained informally like men in the construction Industry. The findings also show that women construction workers are competent enough to be trained to become masons and they could be first formally trained and then informally trained to become masons in the construction industry in India.

Jeyanthy (2006) conducted a study on socio economic conditions of women construction workers in Tiruchirappalli. She studied the socio-economic conditions, working conditions, nature of benefits and facilities in the workplace, contribution of income to household and the problems faced by women construction workers in Edamalaiputhur area in Tiruchirappalli.

R.Rajarathinam (2001) of Tirunelveli District in Tamilnadu, South India has made a study about Dalit unorganized workers living in Rural areas of Tirunelveli District. In his study he focused on the reasons for illiteracy, poor living and working conditions

Kaveri (1995) notes that in Tamil Nadu women and children on worksites are called chithals, literally small people. Male workers on the other hand are periyal or big people. On large construction sites, periyals act as watchmen. They often have the responsibility for curing operations at night that require watering freshly laid cement at intervals so that it sets without cracking. The periyal's wife is expected to help him with this job but it is he who gets paid for it. Women construction workers in Tamil Nadu are employed only on a temporary and casual daily basis as unskilled workers (lifting earth loads, cutting soil, mixing cement, breaking stones) and not as masons. There is also considerable hostility from the contractors and male workers to women masons.

Harilal K.N. (1989) had focused on issue of gender wage discrimination in India. The gender wages gaps are analysed for regular wage workers in India using the 66th round of NSSO Employment – Unemployment Schedule (2009-2010). The author had examined the wage gaps across different quantiles of wage distribution. He had also estimated the standard OLS wage equation for men and women. The main finding is that of a sticky floor effect, that is, the phenomenon of declining gender log wage gaps across the quantiles.

STATEMENT OF THE PROBLEM

The general problem is that women tend to be paid less than men for the same job in spite of the Equal Pay Act governing and ensuring gender equitability in workforce management. In the construction industry around one third of the workers are women and children. Women workers are illiterate and therefore face serious work-related problems, namely wages and gender discrimination, sexual harassment, unsafe working environment etc. Despite all these, the construction industry mainly attracts women workers. Women workers skills are almost at the same level but they are not considered as such and asked to help their male co-workers. Husbands of some woman workers consume alcohol and beat them. Some woman workers develop relations with co-workers and get trapped. Women are not able to strengthen their skills and economic position due to family and work related problems. Employment of women in the construction industry is very high, although they only work as helpers or unskilled workers.

LIMITATIONS OF THE STUDY

The present study is based upon the results of a survey conducted on 120 construction workers in Chennai Metropolitan of India. It is also assumed that the respondents are true and honest in expressing their views. The study is applicable only to construction industries in Chennai Metropolitan of India, and not to any other similar areas. The results of the study are subject to the limitations of sample size, regional territory, psychological, financial and emotional characteristics of surveyed population.

OBJECTIVES OF THE STUDY

The following are the objectives of the Paper

1. To derive the basic characteristics of construction workers.
2. To examine the wage differential between the male and female workers
3. To analyse the wage differential between workers of the organized and the unorganized sectors.
4. To study the wage differential between Permanent Workers and informal Workers.
5. To find out the probable reasons for this wage differences.

HYPOTHESES TESTED

From the above objectives the following hypotheses are framed and empirically tested,

$H_{1:}$ There is no significant difference in the total rank of wage rate among the male and female construction workers.

H_2: There is no significant difference in the total rank of wage rate between informal and permanent construction workers.

H_3: There is no significant difference in the total rank of wage rate between Organized and Unorganized sector construction workers.

METHODOLOGY OF THE STUDY

The Data required for the study has been collected from both the primary and secondary sources.

- **Primary data:** schedules and questionnaires from the construction workers in Chennai Metropolitan of India.
- **Secondary data:** The secondary data have been collected through various government publications, magazines, books, journals, news papers, reports and websites.
- **Sampling design:** We have selected 120 unskilled construction workers by stratified random sampling technique from unorganized and organized sectors. The questionnaires were filled up through personal interviews at the construction working sites. It was conceded that there is a huge differentiation exists between the male and female workers, informal and permanent workers and workers in the construction works of the organized and the unorganized sectors.
- **Sample Size:** 120 unskilled construction workers of Chennai Metropolitan of India were interviewed by the scheduled method through convenience sampling method.
- **Tools and Techniques of Data Analysis:** The collected primary data have been analyzed by using SPPS (Statistical Package for Social Science) software. The statistical values like averages, standard deviation (SD) and correlation coefficients were calculated. For measuring the wage differentiation between different sections **t-**test has been used.

DATA ANALYSIS AND INTERPRETATION

RESULTS AND DISCUSSION

Table No – 1 Socio Economic Status of Sample Workers

Characteristics	Particulars	Frequency	Percentage
Age	23-30	64	53.34

	30-40	31	25.83
	Above 40	25	20.83
Educational Qualification	Illiterates	42	35.00
	Primary and Below	34	28.34
	Middle	28	23.33
	Secondary, Higher Sec.	16	13.33
Community	SC/ST	84	70.00
	BC	14	11.67
	MBC	22	18.33
Religion	Hindu	82	73.34
	Muslim	10	8.33
	Christian	22	18.33
Marital status	Married	22	18.33
	Unmarried	28	23.33
	Divorced	26	21.67
	Widow/ Widower	44	36.67
Status of Work	Permanent workers	101	84.17
	Informal workers	19	15.83
Working Hours	4 to 8 hours	20	16.67
	8 to 10 hours	85	70.83
	More than 10 hours	15	12.50

Source: Primary data from the field survey.

• Of the total respondents, more than half of the respondents (53.34 percent) belonged to the age group of 23 years to 30 years, about one fourth of the respondents (25.83 percent) belonged to the age group of 30 years to 40 years and one fifth of the respondents (20.83 percent) belonged to the age group above 40 years.

• With regard to the educational qualification, more than one third of the respondents are (35percent) Illiterates, more than one fourth of the respondents (28.34 percent) completed Primary and below, and more than one fifth of the respondents (23.33percent) completed middle class and 13.33 percent completed Secondary and higher secondary.

• Of the total construction workers, more than half of the respondents (70 percent) belonged to Scheduled cast, while one fifth of the respondents (18.33 percent) were from most back ward community and 11.67 percent were backward community.

• With regard to the Religion, more than half of the respondents (73.34 percent) belonged to Hindu, while one fifth of the respondents (18.33 percent) were from Christian and 8.33 percent were Muslim.

• Of the total respondents, more than a third of the respondents (36.67 percent) were widows, less than one fifth of the respondents (23.33 percent) were unmarried, about one fifth of the respondents (261.67 percent) were divorced and one fifth of the respondents (18.33 percent) were married.

• With regard to the occupation, more than three fourths of the respondents (84.17 percent) were permanent workers and less than one fifth of the respondents (15.83percent) were informal workers.

• Of the total respondents, more than half of the respondents (70.83 percent) spend on an average 8 to 10 hours at the working site, about 16.67% and 12.5% workers work for an average of 4 to 8 hours and more than 10 hours daily, respectively.

There is certain uncertainty regarding getting the work daily, especially for the informal workers, because these workers get the work from the junction, place where usually they wait for work.

It was found that only 24.0% workers got work daily. Other workers could not get the work daily. About 41.5% workers could not get work on an average of 1 to 5 days in month. 28.5% and 6.0% of workers said that in a month, they could not get work for 6 to 15 days and more than 15 days respectively.

WAGE DIFFERENTIATION

he present study seeks to explore whether wage differentiation prevails between different groups of labourers grouped according to different criteria. For examining the wage differentiation in the construction sector, the data on wage rate have been classified according to the gender, sector and types of labour. The researcher also tried to examine the wage differentiation by using the independent sample t-test. For applying the t-test on the data of wage rate, it is necessary that the data should not violate the assumption of this test. The most important assumption of independent sample t-test is that the data should be normally distributed. Therefore first of all an attempt to check the normality of data on wage rate was made by using the Kolmogorov-smirnov test and Shapiro-Wilk test. The assumption of this test is that the data are not normally distributed. If the significance value of this test is more than 0.05, we can say that the data are normally distributed. Then we can proceed further for independent sample t-test for compared means. But this test suggests that the data are not normally distributed and there should be other non-parametric test for comparing the means. The most popular test for this is the Mann Whitney U test. The following

table shows the results of Kolmogorov-Smirnov test and Shapiro-Wilk test for normality.

Table No – 2 Test of Normality for Data on Daily Wages

Sl.no.	Variables		Means	Kolmogorov-smirnov test	Shapiro-Wilk test
1	Gender	Male	553.20	0.000	0.000
		Female	427.20	0.000	0.000
2	Type of Workers	Permanent	434.55	0.000	0.000
		Informal	569.09	0.000	0.000
3	Sectors	Organized	435.30	0.000	0.000
		Unorganized	545.20	0.000	0.000

Source: Computed.

Inference:

The results of Kolmogorov-Smirnov test and Shapiro-Wilk test for normality show that the data on wage rates of construction workers according to sectors, gender and type of workers are not normally distributed because the values of significance level are less than 0.05, so here we do not reject the null hypothesis that the data are not normally distributed. Therefore for comparing the means wage rate of workers according to the gender, sector and type of workers we have used Mann Whitney U test.

WAGE DIFFERENTIATION BETWEEN MALE AND FEMALE WORKERS

The gender wage discrimination is not a new phenomenon. In this study we found that the wage rates are different for different workers. Wage differentiation also exists at the same work place. Out of total female workers, about 43% got the wages of less than Rs. 400 daily. This figure was just 19% for male workers. On the other hand, 34% of the male workers and only 45 % of the female workers belonged to the category of wage rate from Rs. 401 to Rs. 450. So it can be said that male workers got higher daily wages than female workers in construction sector. This conclusion is also strengthened by using a statistical test. The statistical difference of wage rate between male and female construction workers had been examined by using Mann Whitney U test.

Table No – 3 Classification of Daily Wages by Gender

Wage Rate (in Rs.)	Gender of respondents				Total
	Male		Female		
	Frequency	Percentage	Frequency	Percentage	

Less than 450	11	18.33	26	43.34	37
451 to 500	27	45.00	27	45.00	54
501 to 550	20	33.34	7	11.66	27
551 to 600	2	3.33	0	0.00	2
Total	60	100.00	60	100.00	120

Source: Primary data from the field survey.

Table No – 4 Mann Whitney U test for wage differentiation according to gender

Gender	Mean Ranks	Mann Whitney U test Value	Sign.Value
Male	118.52	3198.0	0.000
Female	82.48		

Source: Computed.

Inference:

On the basis of above table, the mean rank of wage rates is higher for male workers than female workers. The mean rank of wage rates is 118.52 for male workers and 82.48 for female workers. The Value of Mann Whitney U test is found to be 3198.0 and its significant value is 0.000, which is less than 0.05. Therefore, we do reject the null hypothesis, and conclude that significance differences exist in the wage rates of the male and female workers.

WAGE DIFFERENTIATION BETWEEN PERMANENT AND INFORMAL WORKERS:

The status of work has been classified into two categories. The first is Permanent workers and second is Informal workers. The workers who are working under the contractor on wages have been classified as permanent worker and those workers who are doing work on the basis of completing a specific work are called Informal workers. In this study, out of the 120 selected workers, 84 % workers are permanent workers and 16 % workers are Informal workers. The wage rate of the permanent workers and Informal workers had been found to be varying. Out of the total permanent workers, majority of workers (46.53 %) got the daily wage from Rs. 451 to Rs. 500 followed by less than Rs. 450 (33.66 %). However in the case of Informal Workers, about 47.37 % workers got daily wage of Rs. 501 to Rs. 550 followed by the Rs. 451- Rs. 500 (36.84 %). Hence, the wage rates of Informal workers seemed to be higher than permanent workers in this study. The statistical differences of wage rate between Permanent and Informal construction workers had been examined by using Mann Whitney U test.

Table No – 5 Classification of Daily Wages by Type of Workers

Wage Rate (in Rs.)	Type of Workers				Total
	Permanent workers		Informal workers		
	Frequency	Percentage	Frequency	Percentage	
Less than 450	34	33.66	2	10.53	36
451 to 500	47	46.53	7	36.84	54
501 to 550	20	19.81	9	47.37	29
551 to 600	0	0.00	1	5.26	1
Total	101	100.00	19	100.00	120

Source: Primary data from the field survey.

Table No – 6 Mann Whitney U test for wage differentiation according to Type of Workers

Type of Workers	Mean Ranks	Mann Whitney U test Value	Sign.Value
Permanent workers	92.99	1501.0	0.000
Informal workers	138.52		

Source: Computed.

Inference:

The results of Mann-Whitney U test show that the mean rank of wages of permanent Workers is 138.52 which is higher than wages of Informal workers' mean rank of 92.99. This difference is found to be statistically significant because the value of Mann-Whitney U test is reported to 1501.0 and its significance value is 0.000, which is less than 0.05. Therefore, we do reject the null hypothesis, and conclude that there is significance difference between the wages of Permanent and Informal workers. The Permanent workers got the higher wages than Informal workers.

WAGE DIFFERENTIATION BETWEEN ORGANIZED AND UNORGANIZED SECTOR'S WORKERS:

In this study we had selected equal proportion of workers from construction sites of organized and unorganized sectors. So it will be interesting to know whether there is any discrimination between the wages of organized and unorganized construction workers. The classification of collected data shows that the workers who are working on the site of organized sector got the lower wage rate than unorganized sector. But this difference is not much. Out of total construction workers, 37 workers got the daily wages of less than Rs.450; out of them 26.67 % workers were working in unorganized sector. The percentages of workers who got the daily wage rate of Rs. 451 to 500 and Rs. 501 to 550 were found to be higher in unorganized sector. So we can say that on the

construction sites of organized sector the wages are relatively lower than that of the workers who are working at construction sites of unorganized sectors.

The statistical differences of wage rate between male and female construction workers had been examined by using Mann Whitney U test.

Table No – 7 Classification of Daily Wages by Sector

Wage Rate (in Rs.)	Sector				Total
	Unorganised Sector		Organised Sector		
	Frequency	Percentage	Frequency	Percentage	
Less than 450	16	26.67	21	35.00	37
451 to 500	29	48.33	25	41.67	54
501 to 550	15	25.00	13	21.67	28
551 to 600	0	0.00	1	1.66	1
Total	60	100.00	60	100.00	120

Source: Primary data from the field survey.

Table No – 8 Mann Whitney U test for wage differentiation by Sector

Sector	Mean Ranks	Mann Whitney U test Value	Sign.Value
Unorganised Sector	108.43	4207.0	0.047
Organised Sector	92.57		

Source: Computed.

Inference:

In the case of daily wage rate of organized and unorganized sector's construction workers, the mean rank of organized sector is found to be lower than that of unorganized sector. However the difference of mean rank is not very large. The value of Mann-Whitney U test is found to be 4207.0, with significance value of 0.047 which is less than 0.05. Hence, the null hypothesis is rejected here. Therefore we can say that the differences of wages of construction workers of unorganized and organized sectors are statistically significant.

CONCLUDING COMMENTS

The present study concluded that the young labour force is more engaged. In the construction works the majorities of workers follow the Hindu religion and belong to the scheduled caste category. The cross-tabulation of wage rates with gender clearly shows that there is a wage differentiation between the male and female workers, Informal workers and permanent workers and workers in the organized and

unorganized construction sectors. The average daily wages of these group workers were reported to be Rs. 550 and Rs. 450 for male and female workers, Rs. 600 and 500 for Informal workers and permanent workers respectively. Whether wage differentiations between the gender and type of workers are statistically significant or not is an important task from the point of view of policy implementation. Therefore, first of all we tried to use the t-test to compare the means of wages, but it was found that the data on wages were not normally distributed. Hence we applied the Mann-Whitney U test for comparing the mean rank of wages. According to the results of this test, the wage differentiation is statistically significant in all the cases.

The gender discrimination is clearly reflected from the wage discrimination. In the case of Informal workers and permanent workers, it is found that the permanent workers enjoyed certain level of work security as they work under the contractor during the specific construction work. Going beyond averages, decomposing the wage gaps along the entire wage distribution, we find that gaps are higher at the lower end of the distribution than the upper end, i.e. women in India face a "sticky floor", not a glass ceiling. There are several laws in the practice like Regulation and Abolition Act-1970 for contract labour, Equal Remuneration Act-1976 for equal wages for equal work, Unorganized Workers Social Security Act-2008 etc… But the effective implementation of these laws will be possible by collective efforts of the government and non-government organizations. As a part of corporate social responsibility, the contractors and the builders should also provide better quality of living to the women workers. For this it is necessary to take steps to remove wage discrimination in the construction sector.

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