



Research Paper

Women Workers in Mining and Quarrying Sector: A study on employment, wage and safety in India

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Abstract:

In India's mining sector, gender discrimination is a serious problem, especially in stone mines. Although the pay and job conditions for men working in the mining and quarrying industry are not ideal, they are significantly worse for women. Even after the Equal Remuneration Pay Act was put into effect in 1976, women who do the same jobs as men still frequently face salary discrimination. It is extremely difficult for women to find jobs in this field. This study tries to find out the real situation of women workers from Mining and Quarrying sector in India regarding employment, wage and safety issues through various Govt. Data. The study looks at issues including gender discrimination, unequal pay, and insufficient safety precautions that women confront in this field. It aims to highlight the disparities that now exist and offer suggestions for how to better the condition of women employees in this crucial industry.

Key Words: Mining and Quarrying sector, Women Laborers, Employment, Wage, Safety Measures

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I. Introduction:

“Women do two thirds of the world’s work, receive ten percent of world’s income and own one percent of the means of production.”- Richard H Robbins (2013)

Like in any other country, women in India face much worse conditions in the job market than men. The two most significant aspects of gender inequality in the workforce are occupational segregation and pay disparities. Most of the time, it is evident that jobs that are frequently picked by women tend to have poor pay rates. However, every economic system has called upon and made use of the labor of women. Their contribution to the new period of socioeconomic change demonstrates development and wealth. Women are the key component and significant contributor to India's national economy, according to an ILO report. They make up half of the overall population and one-third of all workers in our nation (SIA Newspaper, 5th July 2019).

The country's stone crushing industry situation is currently comparable to that of the rest of the world. The stone crushing industry is a significant industrial sector in India, according to the Comprehensive Industrial Document Stone Crusher; By Central Pollution Control Board, India, 2009. The stone crushing industry in India is thought to generate revenues of around Rs. 5000 crore per year. It contributes 18% of the nation's export profits. According to estimates, India has 12,000 stone crushing facilities that directly employ more than 500,000 people across a range of operations, including mining, operating crushing facilities, transporting mined stones and crushed goods, etc. (Patil, 2001). According to “Labour and Women in Mining, 2003-04” women formed 30-40% of the workforce in Mining (Report of Federation of Indian Mineral Industries, op.cit. p.68). But contributions from women miners who constitute a large segment of the workforce are rarely mentioned in documents. So, this study will try to focus on the employment, wage rate and safety issues of women workers engaged in stone crushers.

Objective of the Study:

- To find out the wage trend of Women workers in Mining and Quarrying sector and measure the gender gap in wage distribution.
- To find out the trend of the employment of women workers in Mining and Quarrying sector.

- To find out the accident trend of workers in Mining and Quarrying sector and to study about different kind of measures has been taken for the safety of workers.

Methodology:

This paper is exclusively based on the various secondary data gathered from authentic sources.

Sources of Information:

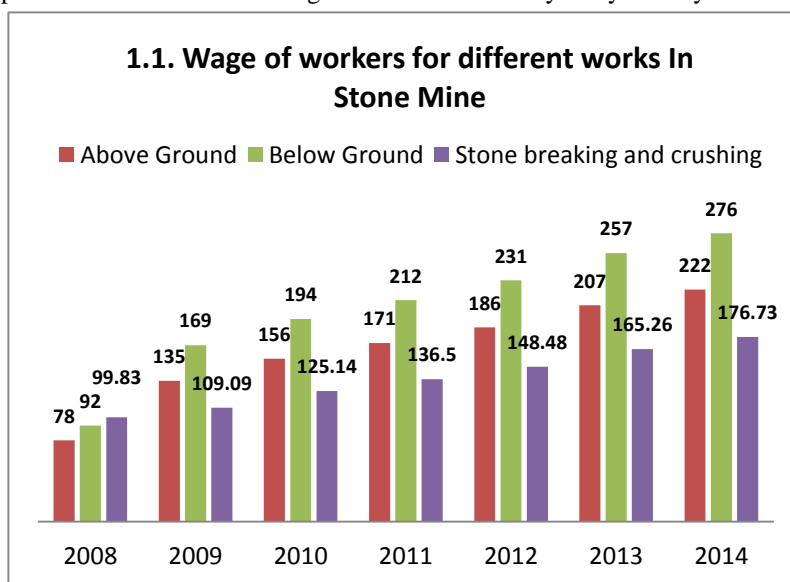
Name of the Report	Year
1.NSSO-Employment and Unemployment Situation in India	2004-05 2007-08 2009-10 2011-12
2.Ministry of Labour and Employment- Annual Report	2010-11 2016-17 2017-18 2018-19 2019-20
3.Report on the working of The Minimum Wages Act, 1948-Ministry of Labour and Employment	2008 2009 2010 2011 2012 2013 2014
4.Ministry of Statistics and Programme Implementation- Annual Report	2013-14 2014-15 2015-16 2017-18
5.Directorate General of Mine Safety: Ministry of Labour and Employment- Annual Report	2007-2014
6.Statistical Profile on Women Labour-Ministry of Labour and Employment	2007-2013
7.Director General of Mine Safety-Ministry of Labour and Employment: Annual Report	2007-2014
8. Periodic Labour Force Survey- Ministry of Statistics and Programme Implementation	2017-2019

Findings:

1. Wage:

1.1. Wage trend in Stone Mines in India

Graph 1.1 Shows that the wage trend is eventually very slowly increasing in India. The calculation of



Compound Annual Growth Rate (CAGR) of wage of the workers who work above the ground in stone mines is **0.194** which is lowest than CAGR of wage of the below ground mine workers **1.384** and CAGR of stone breaking and crushing workers **1.062**. Now from Annual report 2008-09 and 2014-15 of Ministry of Mines, Govt. of India, there is a clear picture about the production of minor minerals, especially building stones production which is increasing steadily. The value of production of minor minerals was estimated at Rs 16694.9 crore in 2008-09 and building

stone had the share of 20.4% in this production and in the year 2014-15 the value of production of minor mineral was estimated 52490 crore and building stone had the share of 21.9% in this production. The estimate of CAGR of the production of minor mineral is **4.74**, which is much higher than CAGR of wage of workers. So it is clear that the increment of wage of the mine workers is not parallel with the increment of the production of minor minerals like building stones.

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1.1 Wage trend in Stone Mine state wise in India							
Name of the State	Wage rate						
	2008	2009	2010	2011	2012	2013	2014
Jharkhand	N.A.	N.A.	N.A.	138.23	150.38	176.17	178.67
Andhra Pradesh	142.00	N.A.	178.00	231.16	213.16	239.15	252.95
Arunachal Pradesh	55.00	80.00	N.A.	80.00	80.00	80.00	150.00
Assam	N.A.	N.A.	100.00	115.60	137.41	147.56	N.A.
Bihar	N.A.	104.00	119.00	125.00	157.00	176.00	186.00
Chhattisgarh	N.A.	N.A.	145.00	164.00	178.69	198.57	213.69
Goa	N.A.	N.A.	150.00	150.00	150.00	150.00	215.00
Gujrat	108.00	140.70	159.50	174.00	190.50	212.30	268.00
Haryana	140.96	151.00	167.23	178.61	191.04	205.44	N.A.
Himachal Pradesh	100.00	100.00	110.00	120.00	150.00	150.00	170.00
Jammu & Kashmir	N.A.	110.00	N.A.	110.00	110.00	150.00	150.00
Karnatak	98.28	N.A.	N.A.	164.16	184.98	263.59	283.20
Kerala	188.14	N.A.	N.A.	308.15	326.00	347.25	361.70
Madhya Pradesh	N.A.	N.A.	N.A.	175.00	212.00	212.00	253.00
Maharashtra	76.88	N.A.	178.36	205.23	208.44	239.13	253.67
Manipur	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Mizoram	N.A.	N.A.	N.A.	170.00	N.A.	N.A.	N.A.
Nagaland	N.A.	N.A.	100.00	100.00	115.00	115.00	115.00
Orissa	70.00	N.A.	N.A.	92.50	150.00	150.00	150.00
Punjab	N.A.	130.00	N.A.	154.40	200.00	240.64	256.52
Rajasthan	102.12	112.42	152.35	166.46	182.62	201.54	211.96
Sikkim	N.A.	N.A.	130.00	130.00	130.00	200.00	220.00
Tamil Nadu	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Tripura	N.A.	N.A.	N.A.	Piece Rated	N.A.	N.A.	Piece Rated
Uttarakhand	110.24	119.16	134.54	145.47	191.54	191.54	220.77
Uttar Pradesh	N.A.	N.A.	N.A.	165.52	179.89	200.00	246.75
West Bengal	N.A.	N.A.	113.92	196.00	196.73	196.73	245.00
Andaman Nicobar	N.A.	156.00	216.00	205.00	220.00	241.00	N.A.
Chandigarh	143.90	157.36	201.46	234.30	259.61	282.76	305.38
Dadra & Nagar Haveli	N.A.	N.A.	N.A.	156.20	174.40	196.20	209.80
Daman & Diu	N.A.	N.A.	132.16	156.20	174.40	196.20	209.80
Delhi	142.00	152.00	203.00	247.00	279.00	311.00	332.00
Lakshadweep	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Meghalaya	70.00	100.00	100.00	N.A.	100.00	100.00	160.00
Telangana	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	271.12

Source: Report on the working of The Minimum Wages Act, 1948-Ministry of Labour and Employment

Table 1.1 shows that the wage of the workers gradually increasing in every states over the years. In 2014, Kerala reached highest wage rate for the workers in stone mines where as in Tripura, piece rated system existed in the year 2014. Jharkhand, West Bengal and Orissa (Rajmahal mine belt) are very much popular for mine activities; there is huge number of small and medium sized stone mines in Rajmahal belt region with many men and women workers but in 2014, all three states showing lowest wage rate in India.

1.2. Average wage earnings per day by "casual labours" in mining and quarrying sector (2009 to 2012) in India				
Age Group	Male		Female	
	2009-2010	2011-2012	2009-2010	2011-2012
5-14 yrs.	-	41.83	-	25.15
15-59 yrs.	148.97	105.76	98.29	89.81
60 yrs. and above	92.71	121.64	-	70.83

Source: NSSO-Employment and Unemployment Situation in India

Table 1.3 shows that the average wage earning per day by women casual labours in mining and quarrying sector in India is much lower than male casual labours. So, it suggests clear gender discrimination in stone mining and crushing sector of Indian Society. Table also suggests that the workers of 15-59 age group is the highest paid group irrespective of men and women as they are considered as most hard working group.

1.3 Average wage earnings per day by “regular” wage employees of age 15-59 in mining and quarrying sector (urban + rural) in India					
Male			Female		
2007-2008	2009-2010	2011-2012	2007-2008	2009-2010	2011-2012
361.21	388.22	852.99	202.63	403.19	374.68

Source: NSSO-Employment and Unemployment Situation in India

Table 1.3 shows the same gender discrimination in wage pattern of regular wage employee where male regular wage employee get more wage than female wage employee for same kind of work. But above data also indicate that in the year 2009-10 wage of all women employee including illiterate was increased than male wage employee which surprisingly breaks the pattern. Again wage of women regular employee was sharply decreasing from 2009-10 to 2011-12. CAGR of wage of male regular employee is **2.82** where as CAGR of wage of women employee is **1.79** which is much lower than male.

2. Employment

2.1 Percentage of distribution of workers in mining and quarrying sector (employment trend) in India

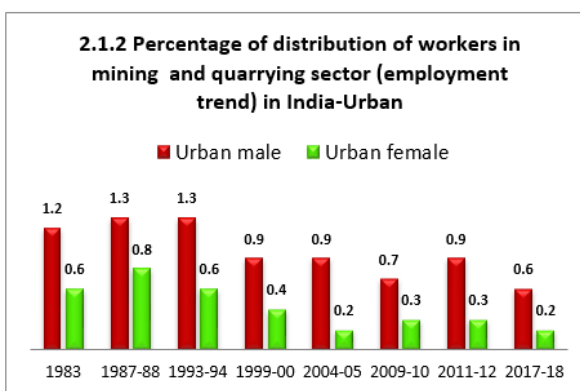
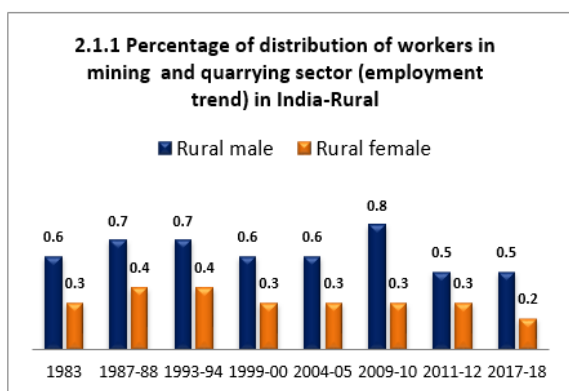


Fig 2.1.1. & Fig. 2.1.2 Source: Ministry of Statistics and Programme Implementation- Annual Report

2.2 Average daily employment in mining and quarrying sector in India



Source: Ministry of Statistics and Programme Implementation- Annual Report

Both 2.1.1 and 2.1.2 Charts are showing percentage of distribution of workers in mining and quarrying sector are very low as well as fluctuating and mostly decreasing. It also shows that the percentage of workers from urban area is higher than rural areas. Percentage of distribution of Women workers from both urban and rural is lower than male workers and the gap is more or less same over the years.

Chart 2.2 shows average daily employment in mining and quarrying sector in India, which also showing a decreasing rate over the years. In 2002 and 2006 data is showing highest average daily employment of male workers whereas in 2006 and 2007 data is showing highest average daily employment of women

workers. But the gap between male and female average daily employment is huge in every years which indicate the gender gap in employment in mining and quarrying sector and also lack of information about women employment in quarrying and mining sector in government data.

2.3 Share of women employment in stone mines in India

Year	Total employment	Women employment	Percentage share
2005	19288	168	0.87
2006	13932	150	1.08
2007	19211	180	0.95
2008	23574	211	0.90
2009	24895	219	0.88
2010	29251	201	0.69



Source: Ministry of Statistics and Programme Implementation- Annual Report

Table 2.3 showing total employment in stone mines which is fluctuating through years. But comparison to total employment women employment in stone mines is very low which indicate huge gender gap in employment. Chart 2.3 shows that percentage of share of women employment was highest in 2006, more than 1% but after the year 2006, the share continuously decreasing every year and in the year 2010 it shows lowest share of women employment in stone mines.

2.4. Average daily employment in stone mines in different states in India in 2010					
States	Open cast	Above ground	Male	Female	Total
Andhra Pradesh	74	4	78	-	78
Bihar	67	28	95	-	95
Goa	263	44	295	12	307
Gujrat	98	130	210	18	228
Haryana	2097	206	2303	-	2303
Jharkhand	113	1114	2036	209	2245
Karnatak	17	2	18	1	19
Maharashtra	313	90	381	22	403
Orissa	37	5	42	-	42
Rajasthan	115	100	215	-	215
Tamil Nadu	386	89	387	88	475
West Bengal	395	374	743	26	769
Total	4993	2186	6803	376	7179

Source: Ministry of Statistics and Programme Implementation- Annual Report

Table 2.4 shows average daily employment in stone mines in different states in India. It shows workers are mostly involved with open cast works rather than above ground works in stone mines. It also shows a huge employment gap between male and female workers in every state. The percentage of women workers is 5.23% on total employment. Government data shows that in many states, there are no women workers in stone mine which is quite impossible which also indicate the lack of information mentioned about women workers in Government data.

3. Accident trend

3.1 Accident trend of labourers in stone mines in India					
Year	Below ground	Open cast	Above ground	Total	Injury rate per 1000 employees (BG+OC+AG)
2007	0	1	0	1	.11
2008	0	0	20	20	2.85
2009	0	3	0	3	0.41
2010	0	2	0	2	0.28
2011	0	3	1	4	0.57
2012	0	4	0	4	0.56

2013	0	4	0	4	0.53
2014	0	4	0	4	0.53

The table 3.1 shows that the injury rate per 1000 employees are more or less same in stone mines in India over the years except in 2008 when a large number, 20 casualties of workers happened while working in above ground. Below ground and accidents or casualties were not recorded in any documents of government whereas many news articles are giving different kind Source: Director General of Mine Safety-Ministry of Labour and Employment: Annual Report of opinion. In 5th October, 2017 The Hindu newspaper reported two quarry workers were killed and three others were injured as they were preparing to plant explosives for blasting rocks inside a 150 foot deep pit in the quarry in Karunkulam district of Tamil Nadu. There are several casualties reported while working in deep pit of quarries as workers were not taking any pre cautions during work. But in The Mines Act, 1952 revised in 2017 clearly stated all the measures and precautions for the workers as mandatory actions. But still the owners are not proactive about this which leads to more accidents and casualties.

One of the evils of the modern society is the sexual harassment of women especially the female workers as they are harassed not only by the family members but also by the male colleagues in the work place. Does not matter whether they are skilled or unskilled laborers or works in the organized or unorganized sector, a large number of women are harassed sexually at the workplace. In unorganized sector, so many rape cases are hidden under the societal pressure on women. In unorganized sector working atmosphere is not favorable to women. In many industrial sectors, like Brick kiln industry, Bidi industry, women have no facility for proper sanitation, which become a source of exploitation.

II. Conclusion:

Overall study shows that gender discrimination is biggest issue in Mines in India, especially Stone Mines. Though the wage and employment situation of male workers in mining and quarrying sector is not good enough, but the situation of women workers is much worse. After Equal Remuneration Pay Act, 1976 wage discrimination is clearly visible for same work. In case of employment it also shows poor situation for women. Government and further studies need to find out the reason behind poor employment of women workers in this sector whereas in many states mining and quarrying is indicated as major source of income. Physical and Sexual safety in workplace should be one of most important concern for the mine owners and also Government where all workers can get a proper work environment. Now for the further development of this industry Govt. should take more initiatives with the help of mine owners and workers by providing information and equipment.

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