

A Study on Women's Work Participation and Entrepreneurship in the Industrial Sector

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Abstract:

This research aims to explore and analyze women's work participation across various sectors, assess gender disparities in the rural workforce, evaluate the presence of women entrepreneurs in small-scale industries, and investigate gender dynamics within the small-scale industry sector. Additionally, this study delves into understanding literacy levels and their correlation with workforce engagement. The research hypotheses encompass examining the association between gender and work participation in specific industry sectors, comparing work participation between women and men in rural areas, analyzing the prevalence of women entrepreneurs in small-scale industries, and highlighting the prominence of the female labor force compared to male entrepreneurs in the small-scale industry sector. Through comprehensive data analysis and interpretation, this study sheds light on critical gender-related aspects in the realm of workforce engagement and entrepreneurship.

Key Term: Status of Women in Industrial Sector, Participation of Women, Presence of Women and Industrial Development.

Introduction:

The development of an economy is a very complex process because it is the result of the interrelationships and interactions of a variety of physical and human factors. For the development of any country, it is necessary to have three important resources. Man, goods, machine. Labor is an important means of production as well as an active factor. Labor participation rate refers to the proportion of the working population in the total population of the country in the Indian census. On this basis, the ratio of male and female population in agriculture sector (primary sector), industrial sector (secondary sector) and service sector (tertiary sector) is. At present, the economic activities of women have increased. The participation rate of women in industrial sectors is relatively high in Europe and other developed countries. The share of women in the Gross

Domestic Product (G.D.P.) is forty (40) percent in developed countries. Even in underdeveloped countries, women's labor is not far behind compared to men.

It is well known that women constitute almost half of the total population of our country. The contribution of women has been accepted in every sphere of life, because women and men are the two wheels of the vehicle of life and development. Women also have equal importance in various aspects of the development of the nation as much as men do. For the economic development of any country, the development of the country's infrastructure is also necessary. It is a challenging task for a vast country like India. From the point of view of economic development, there is a need for all-round development of India's geographical and environmental area, so that economic development can be accelerated on the basis of regional characteristics.

Review of literature:

The dissertation incorporates a thorough review of literature to enhance its clarity and logical structure, delving into the economic outlook, ideologies, and scholarly works of numerous researchers and institutions focusing on industrial development and the economic circumstances of women. This extensive review offers a comprehensive understanding of the subject matter, setting the stage for the research to follow.

Among the notable contributions discussed in the literature review are those of the [Planning Commission \(1951\)](#), whose seminal research in that period laid a foundational understanding of economic planning and development, with implications for subsequent studies regarding industrial growth and its effects on women. Furthermore, scholars like [Gadgil D.R. \(1951\)](#), [Ojha Punyadeo \(1956\)](#), and [Mishra O.P., Sahay, S.K. who. Pandey U. K. \(1957\)](#) likely provided early perspectives on industrialization and its impact on gender dynamics within the workforce.

In later years, researchers like [Bhagwandas Reddy V. \(1988\)](#), [Singh Vidyasagar \(1988\)](#), and [Mayati Pradeep & Rao Kavita \(1995\)](#) have likely explored the evolving landscape of women's participation in industrial sectors and policy implications for enhancing their engagement. Additionally, the works of [Sarathi and Neeru Acharya \(1995\)](#), [Mohan Rao J.S. \(1996\)](#), and [Chaturvedi Ravendra Kumar \(2001\)](#) likely shed light on societal and cultural factors influencing women's role and status within industries. The studies collectively highlight the multifaceted factors influencing women's participation and pave the way for a deeper investigation into gender dynamics within the industrial domain.

Study Objectives:

1. To Analyze Women's Work Participation in Various Sectors
2. To Examine Gender Disparities in Rural Workforce
3. To Evaluate Women's Entrepreneurship in Small-Scale Industries
4. To Investigate Gender Dynamics in Small-Scale Industries
5. To Study Literacy Levels and Workforce Engagement

Research Hypotheses:

H1: There is a significant association between gender and work participation in the specified industry sectors

H2: Work participation of women in rural areas is higher than that of men.

H3: The number of women entrepreneurs in small-scale industries is found to be more than male entrepreneurs.

H4: The female labor force is more prominent than male entrepreneurs in small-scale industries.

Table 1: Number of Units in Different Industry Subcategories

Industry Type	Subcategory	Number of Units
Small Scale Industry	Dal Mill Industry	68
Small Scale Industry	Papad and Pickle	52
Cottage Industry	Beedi Industry	57
Cottage Industry	Bamboo Bucket	46
Large Scale Industry	Cement Industry	32

Total selected units: 255

Methodology:

The methodology of the presented research paper is original and practical industrial in this plant. The status and presence of women in the area/units has been studied. In the study, units selected by area sampling method have been selected for the study of different districts of Chhattisgarh. In the whole of the study women workers working in small, cottage and large-scale industries have been kept in the center. Description of selected industries Following are the number of industry respondents related to the research area

H1: There is a significant association between gender and work participation in the specified industry sectors

Table:2 Observed and Expected Workers in Various Industry Subcategories

Subcategory	Women Workers (O)	Men Workers (O)	Total Workers	Women Workers (E)	Men Workers (E)	(O - E) ² / E
Dal Mill Industry	40	28	68	31.06	36.94	.6768
Papad and Pickle	30	22	52	24.04	27.96	.5862
Beedi Industry	30	27	57	27.44	29.56	.1367
Bamboo Bucket	25	21	46	21.36	24.64	.4437
Cement Industry	15	17	32	13.10	18.90	1.5952

$$\chi^2 = \sum (E(O-E)^2) / 2$$

$$\chi^2 \approx 3.0381$$

Table: 3 Sample Mean and Standard Deviation of Workforce (Women and Men) in Rural Areas

Sample Mean for Women Workforce: 322.0

Sample Standard Deviation for Women Workforce: 48.78436694121531

Sample Mean for Men Workforce: 198.0

Sample Standard Deviation for Men Workforce: 29.89983277545213

Table No: 4 To study changes in the economic status of women entrepreneurs.

Industry	Woman Entrepreneur	Annual Income (in Rupee)	Education Level	Years of Experience	Number of Employees
Dal Mill	8	10,000	High School	5	10
Dal Mill	6	30000	Master's	8	8
Dal Mill	5	35,000	Bachelor's	8	12
Papad and Pickle	6	40,000	High School	5	16
Papad and Pickle	7	48,000	High School	4	13
Papad and Pickle	9	38000	High School	4	7
Beedi	3	30,000	High School	6	17
Beedi	3	35000		3	18
Bamboo Bucket	4	33000	High School	6	9
Bamboo Bucket	6	34000	High School	7	15
Cement	7	32000	Bachelor's	8	16
Cement	5	31000	Bachelor's	9	20
Cement	3	34000	Bachelor's	7	24

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Annual_Income	33	10000.00	48000.00	30393.9394	9106.79483
Number_of_Employees	33	2.00	28.00	13.0909	6.38535
Valid N (listwise)	33				

Correlations			
		Annual_Income	Number_of_Employees
Annual_Income	Pearson Correlation	1	-.487**
	Sig. (2-tailed)		.004
	N	33	33
Number_of_Employees	Pearson Correlation	-.487**	1
	Sig. (2-tailed)	.004	
	N	33	33

**. Correlation is significant at the 0.01 level (2-tailed).

Chi-squared statistic: 0.2415812064786432

P-value: 0.9912464585222902

Interpretation:

The chi-squared statistic is approximately 0.242, and the p-value is approximately 0.991. Since the p-value is greater than the typical significance level of 0.05, we fail to reject the null hypothesis.

Conclusion:

There is no significant association between gender and the number of entrepreneurs in small-scale industries based on this dataset. The number of women entrepreneurs is not significantly different from the number of men entrepreneurs in these small-scale industries according to the chi-squared test.

Table 5. WPR by level of education.

Variable	Main Worker			Marginal Worker		
	Person	Male	Female	Person	Male	Female
Total	30.43	45.13	14.68	28.51	14.52	74.62
Illiterate	24.35	35.27	16.50	43.02	17.58	82.11
Literate	35.51	50.85	12.46	20.20	13.29	62.57
Literate but below matric/secondary	29.84	43.78	10.75	25.15	15.90	76.72
Matric/secondary but below graduate	43.44	60.95	11.26	14.69	10.93	52.10
Technical diploma or certificate not equal to degree	60.87	64.59	46.80	6.84	6.95	6.26
Graduate and above other than technical degree	57.02	73.43	23.52	6.84	6.05	11.88
Technical degree or diploma equal to degree or Post-graduate degree	65.57	72.17	48.56	3.51	3.26	4.47
Rural						
Total	30.87	44.31	16.65	35.24	17.59	84.93
Illiterate	25.89	36.87	18.09	46.55	18.44	87.23
Literate	36.10	49.58	14.32	26.71	17.14	80.26
Literate but below matric/secondary	31.53	44.31	12.86	29.70	18.39	86.61
Matric/secondary but below graduate	46.92	60.94	14.79	21.09	15.38	74.96
Technical diploma or certificate not equal to degree	58.33	60.73	49.17	11.49	11.87	9.69
Graduate and above other than technical degree	59.59	69.58	23.75	13.82	12.02	32.76
Technical degree or diploma equal to degree or Post-graduate degree	68.12	72.48	52.24	7.17	6.71	9.47
Urban						
Total	29.29	47.19	9.42	10.09	7.22	26.08
Illiterate	17.63	28.58	9.35	20.41	12.90	37.74
Literate	34.42	53.38	9.46	7.77	6.21	19.41
Literate but below matric/secondary	25.69	42.36	6.19	11.48	8.88	32.29
Matric/secondary but below graduate	39.51	60.97	8.28	6.12	5.03	17.72
Technical diploma or certificate not equal to degree	62.84	67.58	44.99	3.49	3.51	3.39

Graduate and above other than technical degree	55.76	75.83	23.45	3.19	2.65	5.99
Technical degree or diploma equal to degree or Post-graduate degree	64.55	72.03	47.53	1.97	1.70	2.93

Source: Census of India (2001).

Research limitations

1. Facing problem in getting information related to the details of income and expenditure of the business
2. Problems are faced in getting correct information about men and women. Some industries, after being registered in the name of women, are operated by the men of their families. As a result of this, the correct data could not be obtained from the information provided by the respondents. This is a serious problem.
3. Also in knowing the family relations of the entrepreneurs complexity has to be faced.
4. Entrepreneurs face problems in getting information related to business, and income-expenditure details.

Table 6: Total Workers in Different Industry Subcategories

Industry Type	Subcategory	Women Workers (Observed)	Women Workers (Expected)	Men Workers (Observed)	Men Workers (Expected)	Chi-Square for Women	Chi-Square for Men
Small Scale Industry	Dal Mill Industry	40	29.08	28	38.92	1.150	0.456
Small Scale Industry	Papad and Pickle	30	22.30	22	29.70	1.020	0.405

Cottage	Beedi	30	24.63	27	32.37	0.462	0.184
Industry	Industry						
y							
Cottage	Bamboo	25	19.84	21	26.16	0.472	0.188
Industry	Bucket						
y							
Large	Cement	15	13.15	17	18.85	0.546	0.217
Scale	Industry						
Industry							
y							

$$\chi^2 \text{ women} = 1.150 + 1.020 + 0.462 + 0.472 + 0.546 = 3.650$$

$$\chi^2 \text{ men} = 0.456 + 0.405 + 0.184 + 0.188 + 0.217 = 1.450$$

DF = (Number of Rows - 1) × (Number of Columns - 1) = (5 - 1) × (2 - 1) = 4, an appropriate significance level (e.g., 0.05), we find the critical chi-square value, $\alpha = 0.05$, the critical chi-square value is approximately 9.488. $\chi^2 \text{ total} = 5.100$ is less than the critical chi-square value (9.488), we fail to reject the null hypothesis. There is no significant relationship between the variables.

Suggestions:

- **Promoting Rural Women's Employment:** Efforts should be made to enhance employment opportunities for women in rural areas. This could be achieved through skill development programs, promoting entrepreneurship, and creating a supportive environment for women to participate in various economic activities.
- **Skill Development and Training:** Implementing skill development and training programs specifically tailored for women in industrial sectors will equip them with the necessary skills and knowledge required for these roles. Encouraging women to pursue education and training in fields traditionally dominated by men can diversify the workforce.
- **Promoting Gender Equality:** Encouraging equal participation and treatment of women in the workforce is essential. This involves combating gender biases, ensuring equal pay for equal work, and fostering a workplace environment that is conducive to both men and women.

- **Government Policies and Support:** Governments should formulate and enforce policies that incentivize and support women's entrepreneurship and workforce participation. Tax incentives, grants, and subsidies can be provided to encourage women to start and sustain their own businesses.
- **Awareness and Education:** Creating awareness about the importance of women's participation in the industrial sector is crucial. Education campaigns highlighting the benefits of women's involvement and the economic contributions they can make will challenge stereotypes and create a more inclusive society.
- The summary of the presented research method is that for the development of the economy, there is a need to develop the country's economy to the world level, that is, modernization is the progressive demand of the modern era, the high standard of living of the countrymen can be achieved only by the development of the industrial sector. Modernization is essential for any country to strengthen its strength on the international stage. The name of that situation in the economic sector is industrialization in which it is necessary to develop big factories in place of small industries. Due to industrialization, urbanization is encouraged and the social and economic condition of human beings improves. Greater participation of women in the development of the economy should be ensured. Along with the increasing percentage of labor participation of women, the growth of the economy will definitely accelerate.

Conclusion:

The participation of women in gaining employment in rural areas is relatively low. According to Census 161 data, the total working population in India amounts to 50.4 million, signifying that the rate of labor participation among women stands at 31.5 percent. However, employment opportunities for women are more prevalent in the service sector. Various factors contribute to this disparity, including entrenched social customs, inadequate resources, and a lack of technical training and knowledge among women. To address this issue and enhance women's workforce engagement, concerted efforts are

needed at both the national and international levels. Strengthening the International Labor Organization is vital to provide economic opportunities for women. International cooperation is essential to advocate for fair wages for women and to foster their active participation in the economic sector as a whole. The research sheds light on critical aspects of women's work participation and entrepreneurship in various sectors, gender disparities in the rural workforce, and gender dynamics within small-scale industries. Through a comprehensive analysis, it is evident that while progress has been made, challenges and disparities still exist.

The study emphasizes the need for inclusive policies and initiatives to enhance women's participation in the workforce, particularly in rural and industrial sectors. Empowering women through skill development, education, and awareness can lead to a more balanced and thriving economy. Achieving gender equality in the workforce is not only a matter of social justice but a significant driver of economic growth and sustainable development.

Reference :

- [1] Kamal Nath "Women in the working Force in India" Economics and Political Weekly, 1968:3(31):1205.
- [2] Meher MR "Problem of Women employment" Indian Journal of Social Work, 1971, 32(2).
- [3] Leela Gulaty "Female Work Participation-A Study of Inter State Differences" Economic and Political Weekly,1975:10(182):35.
- [4] Shree Lekha Bask (1979)- "Role of Women In Rural. Economic- Development" Yojana, 1979. 5. Narasimha Reddy D. "Female Work Participation-A Study of Inter State Differences" Economic and Political Weekly, 1975: 10: 185.
- [5] (With reference to Tata Iron and Steel Co. Ltd. and Steel Authority of India Ltd.) - Year 2001 8. Ranjan Navneet 2011 "Extension of facilities like cities in villages Year 2011 Page-20-25 1
- [6] Verma Dharmesh Kumar in the brick kiln industry of Mathura district Cost-Benefit Critical Study" Year 2002
- [7] Yadav Shambhunath "Agriculture and Farmers Friendly Market Year 2011 Page-20-25 10- Ritu Menon" Hardworking Women National Book Trust India Year 2007 Page-11-12

- [8] Banerjee N (1989). Trends in Women's Employment, 1971-81: Some Macro-Level Observations. *Econ. Polit. Weekly*, 24(17): WS10-WS22 Bose A (2004). Towards Gender-Sensitive Population Census:
- [9] Census of India (2001). Primary Census Abstract. Office of The Registrar General and Census Commissioner, India, New Delhi.
- [10] Dev SM (2004). Female Work Participation and Child Labour: Occupational Data from NFHS, *Econ. Polit. Weekly*, 39(7): 736-744 Gulati L (1975). Female Work Participation: A Study of Inter-State
- [11] Nath K (1968a). Women in the Working Force in India, *Econ. Polit. Weekly*, 3(3): 1 1205-1213
- [12] Dr. Sumona Bhattacharaya, Sushma Tiwari, (2023). "Analyzing the effects of Demonetization and RERA on the Indian real estate business". *Juni Khyat*, ISSN: 2278-4632, Vol-13, Issue-04, http://junikhyatjournal.in/no_1_Online_23/47_apr.pdf.
- [13] Sushma Tiwari *, Gaurav Sahu(2023)." STUDY OF THE IMPACT OF DIGITAL INDIA PROGRAM ON COMMON PEOPLE (WITH SPECIAL REFERENCE TO CHHATTISGARH STATE)". *Industrial Engineering Journal* ISSN: 0970-2555 Volume : 52, Issue 4, April : 2023 http://www.journal-iiie-india.com/1_apr_23.html
- [14] Gaurav Sahu, Manharan Anant, Sushma Tiwari*, (2023)." Information and Communication Technology (ICT) in the context of Rural Women Empowerment". *Journal of Contemporary Issues in Business and Government* Vol. 29, No. 03, 2023 P-ISSN: 2204-1990; E-ISSN: 1323-6903 DOI: 10.47750/cibg.2023.29.03.023
- [15] Gaurav Sahu1, Manharan Anant, Sushma Tiwari*."The Impact of Social Media on the Positive Development of Teenagers in the Contemporary age" *BioGecko* Vol 12 Issue 02 2023 ISSN NO: 2230-5807 <http://biogecko.co.nz/current-issue.php>.