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Research Article

A Study on Women Labor Force and Gender Wage Disparities In India's Agricultural Economy

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Abstract

Agriculture remains the cornerstone of India, providing livelihoods to a major section of the population. Women constitute nearly 42% of the agricultural workforce, contributing extensively to farming, livestock management, and post-harvest processes. Despite their vital role, a persistent wage gap between female and male laborers in the sector poses a critical challenge. Women typically earn 20–30% less than men for performing similar tasks, perpetuating economic inequality and trapping rural families in poverty cycles. This study examines the root causes of wage disparity in Indian agriculture, emphasizing the influence of cultural norms, informal labor arrangements, limited access to education and skill development, and minimal representation in decision-making roles. By analyzing data from various regions and presenting case studies, key areas have been identified including horticulture and millet farming, where gender-based wage gaps are particularly evident. Furthermore, the study evaluates the role of existing labor laws, government initiatives, and rural development programs in addressing wage inequalities. It offers practical recommendations to promote wage equity, such as empowering women through cooperatives, implementing gender-focused agricultural training, enforcing labor regulations effectively, and fostering private-sector collaboration. This paper conveys that achieving wage parity is not only for social justice but a critical step for enhancing agricultural productivity with sustainable development. Empowering women through equitable wages, India can unlock the full potential of its agricultural sector, thereby fostering inclusive economic growth.

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KEYWORDS: Wage gap, Poverty cycle, Labor laws, Horticulture & Rural development programs.

1. INTRODUCTION

The agriculture sector has significantly advanced with the integration of science and technology. However, despite these advancements, the critical role of women as a key component of this industry remains largely overlooked. In countries like India, agriculture continues to employ a substantial female workforce but often fails to acknowledge them as formal or hired labor. Women account for 38% of the labor force in developing nations, with estimates suggesting that 45.3% of the workforce in agriculture consists of women. Yet an important portion of these women are identified as "invisible workers." Given the persistent gap between women's societal recognition and actual economic contribution, numerous researchers have undertaken gender focused studies to address this invisibility, emphasizing gender roles and analysis in their research. Women have been integral to agriculture for centuries, yet their contributions remain undervalued. In developing nations like India, (two-thirds) a significant portion of the female workforce is employed in the agricultural sector, often as unrecognized family labor alongside household duties. Challenges like illiteracy, underdevelopment, poverty, and unemployment exacerbate their struggles. Despite their significant role in productivity, food security, and family welfare, rural development initiatives often neglect their needs and contributions.

2. OBJECTIVES OF THE STUDY

To examine gender wage disparities in Indian agriculture, focusing on horticulture and millet farming.
working in S.V.B P. Hospital at Meerut.

- 2.1. To examine gender wage disparities in Indian agriculture, focusing on horticulture and millet farming.
- 2.2. To assess government policies and recommend solutions for achieving wage parity and empowering women.

Limitations Of the Study

Data Limitations: Limited availability of comprehensive, crop-specific data on female labor participation and wage disparities.

Geographical Scope: The study primarily focuses on selected states, which may not fully represent nationwide trends

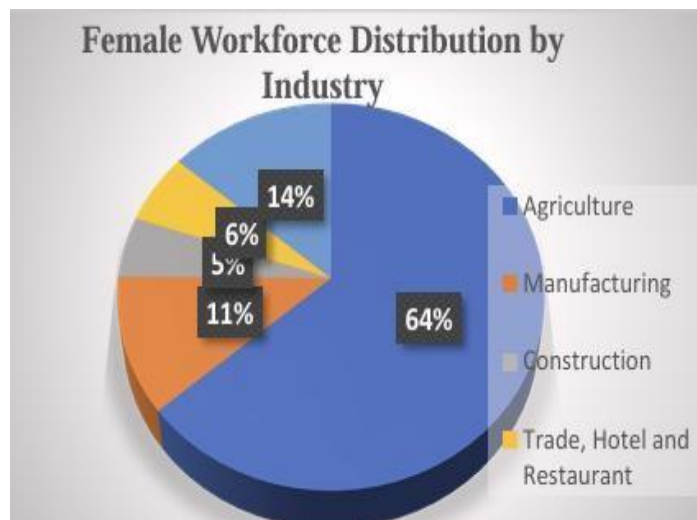
Enforcement Challenges: Labor laws and policies are poorly enforced in rural and informal sectors

3. METHODOLOGY

This study uses a qualitative research design based on secondary data and a review of 10 relevant literature sources. Data was collected from government reports, academic journals, and reliable publications, focusing on wage disparities faced by female laborers in agriculture.

Industry Division	Female Workers (%)
Agriculture	62.9
Manufacturing	11.2
Construction	5.0
Trade, Hotel, and Restaurants	5.9
Other services	13.6

4. Women As Pillars of India's Agricultural Workforce



The involvement of women in the agricultural workforce differs across various crops. While comprehensive, crop-specific data on female labor participation is limited, available statistics highlight the significant roles women play in various agricultural sectors.

The table presents the estimated percentage distribution of female workers across broad industry divisions with a focus on agriculture:

This data highlights that the majority of female workers in India are employed in the agricultural sector. Within the agricultural sector, women's participation is notably significant in the following areas:

5.1 Tea Plantations: Approximately 47% of the workforce comprises women, primarily engaged in tasks such as plucking tea leaves.

5.2 Cotton Cultivation: Women constitute about 46.84% of the labor force, involved in activities ranging from sowing to harvesting.

5.3 Oilseed Production: Women's participation stands at 45.43%, contributing significantly to various stages of cultivation and processing.

5.4 Vegetable Production: Women account for 39.13% of the workforce, engaging in planting, tending, and harvesting of vegetable crops. These statistics highlight the vital role women play in India's agricultural sector, especially in labor-intensive crops and activities. However, despite their significant contributions, women often face challenges such as wage inequality, limited access to resources, and a lack of recognition within the agricultural workforce.

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Sector	Daily Pay Rate (Women)	Daily Pay Rate (Men)	Wage Gap (%)	Key Crops/Activities	Regions Affected
Field Crop Production	₹201	₹323	37.8%	Paddy, Wheat, Sugarcane	Uttar Pradesh, Bihar, Odisha, West Bengal
Horticulture	₹250	₹350	28.6%	Vegetables, Fruits, Floriculture	Tamil Nadu, Karnataka, Maharashtra
Plantation Crops	₹190	₹250	24.0%	Tea, Coffee, Rubber	Kerala, Assam, West Bengal
Millet Farming	₹220	₹300	26.7%	Finger Millet, Pearl Millet	Karnataka, Tamil Nadu, Odisha
Cash Crops	₹180	₹280	35.7%	Cotton, Tobacco, Jute	Maharashtra, Gujarat, Andhra Pradesh

Source: Labor Bureau

5. Data on Wage Disparity in Agricultural Sectors

6.1 Field Crop Production: Women working in paddy and wheat cultivation face the highest wage disparity (up to 37.8%). For instance, in states like Uttar Pradesh and Bihar, women are paid significantly less despite handling labor-intensive tasks like transplanting and manual harvesting.

6.2 Horticulture and Cash Crops: While the disparity is slightly lower in horticulture (28.6%), women still face challenges due to informal contracts and lack of access to markets. In cash crops like cotton and jute, disparities arise from high dependency on male-dominated tasks, such as transportation and market sales.

6. Impacts Of Wage Disparity:

Labor migration to urban areas due to wage disparity causes rural labor shortages and reduces women's participation in sustainable farming practices. Women's limited economic power excludes

them from decision-making and entrepreneurship opportunities, hindering sectoral growth.

7. Impacts Of Wage Disparity

Social Impacts	Economic Impacts
➤ Perpetuates Poverty	➤ Reduced Productivity
➤ Reinforces Gender Equity	➤ Economic Potential Lost
➤ Limits Education	➤ Lower Household Income
➤ Psychological Stress	➤ Wider Inequality

7.1 Sectoral and Gender-Specific Impacts: Labor migration to urban areas due to wage disparity causes rural labor shortages and reduces women's participation in sustainable farming practices. Women limited economic power excludes them from decision-making and entrepreneurship opportunities, hindering sectoral growth.

Impact Area	Key Statistic
Women's Contribution to Agriculture	Women account for 42% of agricultural labor in India
Wage Gap	Women earn 20-30% less than men for the same agricultural work
Poverty Impact	Households led by women agricultural workers are 25% more likely to fall under the poverty threshold
Migration	15-20% of women laborers from rural areas migrate to urban centers due to wage disparities

7.2. Economic and Developmental Consequences

Reduced earnings limit women's investment potential, slowing agricultural sector growth and weakening food security.

7.3. Impact on Broader Development Goals

Wage disparity undermines the economic empowerment of women, stunting rural development and hindering progress on Sustainable Development Goals.

7.4 Examples of Wage Disparity's Impact

7.4.1. Case of Paddy Farming in Uttar Pradesh: Women are paid ₹201/day compared to ₹323/day for men. This discourages women from participating in intensive farming activities, leading to lower productivity.

7.4.2. Millet Farming in Karnataka: Women earn 30% less than men, limiting their ability to invest in better-quality seeds or organic fertilizers. Wage disparity in Indian agriculture has profound social, economic, and sectoral impacts. It perpetuates poverty, gender inequality, and reduced productivity, hindering rural development and the overall growth of the agricultural sector. Addressing these disparities through effective wage policies, skill development programs, and gender-sensitive reforms is crucial for empowering women, enhancing agricultural sustainability, and promoting inclusive economic growth in India.

8. Introduction To Women Labor Workforce in Horticulture and Millet Farming in India

Sector	Women's Share (%)	Wage Gap	Key States
Horticulture	50-60%	20-30%	Tamil Nadu, Maharashtra, Karnataka
Millet Farming	70-80%	25-35%	Karnataka, Tanil Nadu, Odisha
General Agriculture	42%	28% (as per NSSO 2022 report)	Across India

Source: Labor Bureau

8.1. Examples

8.1.1. Horticulture: In floriculture, women laborers in Tamil Nadu earn ₹250-₹300 per day, while men earn ₹350-₹400 for similar work.

8.1.2. Millets: In Karnataka, women involved in millet farming earn approximately ₹180-₹220 per day, compared to men who earn ₹300.

Horticulture and millet farming are critical sectors of Indian agriculture, providing food security and employment opportunities. Women form a significant proportion of the workforce in these sectors, performing labor-intensive activities such as sowing, removing weeds, gathering crops, and post-harvest processing.

9. Reasons For Wage Gap in Horticulture and Millet Farming

Women in horticulture and millet farming in India earn 20-30% less than their male counterparts. The wage gap arises from several socio-economic, cultural, and structural factors:

9.1. Nature of Employment: Casual and informal work: Women are predominantly employed as casual laborers, with limited or no access to formal employment contracts, leaving them vulnerable to exploitation. Seasonal nature of work: Both horticulture and millet farming are seasonal, and women are often hired during peak seasons (e.g., planting and harvesting) at lower daily wages.

9.2. Cultural and Social Norms: Traditional roles: Women's work is often undervalued due to cultural norms that consider their contribution secondary to men's. Limited negotiation power: Women typically lack bargaining power in wage negotiations due to illiteracy, lack of financial independence, or patriarchal systems.

9.3. Task Segregation: Gendered labor division: Women are assigned repetitive, manual tasks (e.g., weeding, transplanting, and post-harvest processing), which are perceived as "low skilled," while men are given more technical and machinery-related tasks that command higher wages. Lack of skill training: Women are often excluded from training programs for higher paying roles, like operating equipment.

9.4. Access to Resources: Land ownership: Less than 13% of rural women own land in India, restricting their involvement in making decisions and limiting their access to resources like credit, subsidies etc. Technology gap: Lack of access for women to modern farming tools and technologies further marginalizes their role in agricultural value chains.

9.5. Wage Fixation Policies: Informal sector bias: Minimum wages in agriculture are often not enforced, and employers exploit women by paying them less than their male counterparts.

9.6. Regional disparities: States with lower enforcement of labor laws, such as Bihar and Uttar Pradesh, report higher gender wage gaps compared to Kerala or Tamil Nadu. The wage gap in horticulture and millet farming reflects systemic gender inequities that persist across India's agricultural sector. Addressing this issue requires targeted policy interventions, such as enforcing equal wage laws, enhancing access to resources and skill development, while acknowledging their efforts through

property ownership and leadership opportunities. Empowering women in these sectors will not only bridge the wage gap but also enhance productivity and ensure equitable development in agriculture.

10. Government Policies to Address Women's Wage Disparity in Indian Agriculture

Several policies and initiatives aim to address gender wage disparities and enhance women's participation in agriculture. The Equal Remuneration Act (1976) mandates equal pay for equal work, prohibiting gender-based wage discrimination across all sectors, including agriculture. However, weak enforcement in rural and informal agricultural sectors allows wage inequality to persist. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) – 2005 provides guaranteed wage employment to rural households while promoting gender equality. It ensures women receive equal wages and reserves 33% of job opportunities for them, offering steady income through public works, including agriculture-related activities. The Women's Empowerment in Agriculture Index (WEAI) measures factors such as decision-making, resource access, and income control, serving as a framework for crafting targeted policies. Despite its potential, its implementation in India remains limited, restricting its impact on bridging the gender wage gap.

Financial inclusion initiatives like the Pradhan Mantri Jan Dhan Yojana (PMJDY) provide women with access to bank accounts, credit, and insurance, enabling them to invest in agriculture, acquire assets, and strengthen economic independence. This financial access indirectly helps women demand fair wages and secure stable employment. Similarly, the National Policy for Farmers (2007) recognizes women's critical role in agriculture and emphasizes their access to credit, technology, and markets while advocating for gender-sensitive agricultural programs. However, its impact on reducing wage disparities has been limited. The Women's Component Plan (WCP) allocates government funds to support women's skill development, technology access, and credit facilities in agriculture. While it has increased women's involvement, its effect on wage disparities remains evolving and requires expanded outreach. Several schemes protect women's rights in agriculture by improving access to subsidies, loans, and insurance. Programs like PM-KISAN offer income support to women farmers, while Kisan Credit Cards (KCC) make credit more accessible. However, cultural barriers, limited awareness, and restricted land ownership prevent women from fully benefiting, perpetuating wage gaps. The National Skill Development Mission (NSDM) trains women in modern farming methods, food processing, and agribusiness, enhancing their technical skills and employability. These initiatives help women secure higher-paying roles and improve their negotiating power. While promising, their success depends on systemic changes and broader participation to ensure long-term gender wage parity in agriculture.

11. CONCLUSION

This study underscores the critical role of women in India's agricultural sector, particularly in horticulture and millet farming, where gender-based wage disparities are prevalent. Despite their significant contributions, women continue to face economic inequality, primarily due to cultural norms, informal labor arrangements, limited access to resources, and lack of representation in decision-making. While government initiatives such as the Equal Remuneration Act, MGNREGA, and various empowerment schemes show promise, weak enforcement and regional disparities hinder their full impact. Closing the wage gap is crucial not only for promoting social equity but also for boosting agricultural productivity and ensuring sustainable development.

12. Suggestion

To bridge the wage disparity, it is crucial to enforce existing labor laws more effectively and extend their coverage to informal sectors where most women work. Implementing gender-sensitive agricultural training programs, offering skill development opportunities, and enhancing women's access to land and financial resources will empower women and improve their economic standing. Strengthening the implementation of government schemes like PMJDY and MGNREGA, along with increasing women's representation in agricultural decision-making, will promote gender equity and enhance the productivity of India's agricultural economy.

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