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Gender and Agricultural Employment in Rural India: A Secondary Data Analysis (2015–2025)

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Abstract

Agriculture remains a major source of livelihood in rural India, with women playing a crucial role in farming, livestock management, and household food security. This study examines gender and agricultural employment in rural India using secondary data from 2015–2025 obtained from PLFS, NSS, government reports, FAO, ILO, World Bank publications, and relevant literature.

The findings indicate an increase in female participation in agricultural activities, reflecting the growing feminization of agriculture. However, women continue to face challenges related to wage disparities, limited land ownership, inadequate access to credit and technology, and restricted participation in agricultural decision-making. A significant proportion of women remain engaged as self-employed or unpaid family workers.

The study concludes that greater participation in agriculture does not necessarily translate into gender equality. Strengthening women's access to productive resources, financial services, skills, and institutional support is essential for achieving inclusive agricultural and rural development in India.

Keywords: Gender, Agricultural Employment, Rural India, Women Farmers, Feminization of Agriculture, Rural Development.

1. Introduction

Agriculture remains a vital sector of the Indian economy and a major source of livelihood for the rural population. Despite its declining contribution to GDP, the sector continues to play a crucial role in food security, employment generation, and rural development. Women constitute a significant share of the

agricultural workforce and contribute extensively to crop cultivation, livestock rearing, post-harvest processing, and household welfare. However, their contribution often remains inadequately recognized due to limited access to land, credit, technology, extension services, and market opportunities.

Recent changes in rural labour markets, including urbanization, male out-migration, and economic restructuring, have increased women's participation in agricultural activities, leading to the feminization of agriculture. Although this trend reflects the growing dependence of agriculture on female labour, it has not necessarily resulted in greater economic empowerment. Many women continue to be engaged in low-paid, informal, or unpaid agricultural work with limited ownership rights and decision-making authority.

Against this backdrop, the present study examines gender and agricultural employment in rural India through a secondary data analysis covering the period 2015–2025. The study explores trends in women's participation, gender disparities, and key challenges affecting their economic empowerment in agriculture.

2. Objectives of the Study

The study is guided by the following objectives:

1. To examine the status and trends of women's participation in agricultural employment in rural India.
2. To analyze gender disparities in agricultural employment with respect to workforce participation, wages, and access to productive resources.
3. To assess the major challenges faced by women in agricultural employment and suggest policy measures for promoting gender equity in rural India.

3. Review of Literature

The role of women in agricultural development has been widely recognized in development studies. Boserup (1970) highlighted women's significant contribution to agricultural production and argued that development policies often reinforce gender inequalities. FAO (2011) emphasized that women face lower productivity due to limited access to land, credit, inputs, and extension services, while the World Bank (2012) and Doss (2018) identified resource access and land ownership as key determinants of women's empowerment.

In India, Agarwal (1994), Kelkar (2009), Pattnaik et al. (2018), and Srivastava and Srivastava (2020) reported that women contribute substantially to agriculture but continue to face constraints related to land ownership, credit, technology, and market access. Recent PLFS-based studies further indicate rising female labour force participation and the feminization of agriculture, although women remain concentrated in low-paid, informal, and unpaid agricultural work with limited access to productive resources and institutional support.

3.1. Research Gap

Although substantial literature exists on women's participation in agriculture, most studies have examined labour force participation and gender inequality separately. Moreover, limited research has comprehensively analyzed recent trends in women's agricultural employment using secondary data from the post-2015 period. Therefore, a systematic assessment of women's participation, gender disparities, and employment-related challenges in rural agriculture remains necessary. The present study addresses this gap through a secondary data analysis covering the period 2015–2025.

4. Research Methodology

The study is based on secondary data obtained from PLFS, NSS, Census of India, Ministry of Agriculture and Farmers Welfare, Ministry of Labour and Employment, FAO, ILO, World Bank publications, and relevant academic literature.

A descriptive and analytical research design was adopted to examine labour force participation, employment patterns, wage disparities, land ownership, and access to productive resources. Trend analysis, comparative analysis, and thematic interpretation were employed to assess changes and gender dimensions of agricultural employment in rural India during 2015–2025.

5. Status and Trends of Women's Agricultural Employment in Rural India

Agriculture remains the primary source of employment for women in rural India. Female labour force participation has increased significantly in recent years, reflecting the growing role of women in agricultural production and household livelihoods. The rising feminization of agriculture, driven by male out-migration and limited non-farm employment opportunities, has further strengthened women's involvement in farming activities. However, increased participation has not necessarily translated into economic empowerment, as many women remain engaged in self-employed or unpaid family work with limited access to income, ownership rights, and decision-making authority.

5.1 Female Labour Force Participation Trends

Female Labour Force Participation Rate (FLFPR) is a key indicator of women's economic involvement. In rural India, female labour force participation has changed significantly over the past decade due to evolving livelihood strategies, economic factors, and greater involvement in agriculture and allied activities. Examining these trends helps in understanding the changing role of women in the rural economy.

Table 1

Rural Female Labour Force Participation Rate (LFPR) in India

(Age 15 Years and Above)

Year	Rural Female LFPR (%)
2017–18	24.6
2018–19	27.2
2019–20	30.4
2020–21	33.1
2021–22	37.8
2022–23	41.5
2023–24	47.6

Source: Government of India. *Periodic Labour Force Survey (PLFS) Annual Reports, 2017–18 to 2023–24*, Ministry of Statistics and Programme Implementation (MoSPI).

The data show a significant rise in rural female labour force participation, with the rate increasing from 24.6 percent in 2017–

18 to 47.6 percent in 2023–24. This growth reflects the increasing involvement of women in agriculture and household livelihoods. However, much of the increase has occurred in self-employment and unpaid family work rather than regular wage employment. Therefore, higher participation does not necessarily indicate improved income, employment quality, or economic empowerment.

5.2 Sectoral Distribution of Female Employment

The distribution of female employment across different sectors provides important insights into the structure of women's economic participation in India. Although economic diversification has expanded employment opportunities in industry and services, agriculture continues to remain the dominant source of employment for women, particularly in rural areas. An examination of sector-wise employment patterns helps in understanding the extent of women's dependence on agriculture and the pace of structural transformation in female employment.

Table 2

Distribution of Female Workers by Broad Industry Group in India (%)

Sector	Female Workers (%)
Agriculture	64.4
Industry	16.5
Services	19.1

Source: Government of India. *Periodic Labour Force Survey (PLFS) Annual Report 2023–24*, Ministry of Statistics and Programme Implementation (MoSPI).

The data indicate that agriculture remains the largest employer of women in India, accounting for 64.4 percent of total female employment. Despite economic diversification, women's participation in industry and services remains comparatively low, reflecting persistent barriers to formal employment. The Agriculture Census 2015–16 reported that women held 13.96 percent of total operational holdings but managed only 11.72 percent of the operated area, indicating smaller landholdings than men. This gap between labour participation and asset ownership restricts women's access to credit, subsidies, insurance, and extension services, limiting their economic empowerment.

6. Gender Disparities in Agricultural Employment

Although women constitute a substantial proportion of the agricultural workforce in rural India, significant gender disparities continue to characterize agricultural employment. These disparities are evident in access to productive resources, wage earnings, ownership of land, institutional support, and participation in decision-making processes. Consequently, women's contribution to agricultural production remains disproportionately high relative to their economic and social status within the agricultural sector.

6.1 Land Ownership and Access to Productive Resources

Land ownership is an important indicator of economic empowerment and agricultural development, as it enables farmers to access institutional credit, government support programmes, agricultural inputs, and modern technologies. However, despite their significant contribution to agricultural production, women

continue to have limited ownership and control over agricultural land in India, which restricts their economic opportunities, decision-making authority, and access to productive resources. Therefore, examining female operational holdings is essential for understanding the extent of gender disparities in Indian agriculture.

Table 3

Female Operational Holdings in India

Agriculture Census Year	Female Operational Holders (%)	Share in Operated Area (%)
2010–11	12.79	10.36
2015–16	13.96	11.72

Source: Government of India. *Agriculture Census 2015–16 (Phase I & II Results)*.

Land ownership is a key determinant of agricultural empowerment and economic security. Despite their significant contribution to farming, women continue to possess limited ownership rights over agricultural land. According to the Agriculture Census 2015–16, women accounted for only 13.96 percent of total operational holdings, and their holdings were generally smaller than those of men. Limited land ownership restricts access to credit, subsidies, insurance, and extension services, while also reducing women's decision-making power within households and communities. Consequently, unequal ownership of productive assets remains a major barrier to gender equality in agriculture.

6.2 Wage Inequality

Wage disparity remains a persistent form of gender inequality in agricultural labour markets. Despite performing similar agricultural tasks, women often receive lower wages than men due to occupational segregation, social norms, limited bargaining power, and labour market discrimination. Lower earnings increase women's economic vulnerability and restrict their ability to invest in agricultural inputs, education, healthcare, and livelihood diversification, thereby reinforcing existing socio-economic inequalities.

6.3 Access to Credit and Financial Services

Access to institutional credit is essential for agricultural development, yet women farmers often face barriers due to limited land ownership and lack of collateral. Exclusion from formal credit systems forces many women to rely on informal sources of finance, increasing financial risks and costs. This restricts their ability to adopt modern technologies, expand agricultural activities, and improve productivity. Consequently, limited access to credit remains a major factor contributing to gender inequalities in agricultural employment and income generation.

6.4 Access to Agricultural Technology and Extension Services

Technological advancement has significantly improved agricultural productivity through mechanization, improved seed varieties, digital agriculture, and climate-smart technologies. However, women farmers often have limited access to these innovations due to inadequate extension services, lower participation in training programmes, and restricted access to information. The digital divide further limits their ability to benefit from modern technologies, market information, and digital agricultural services, thereby reinforcing existing gender inequalities.

6.5 Decision-Making and Institutional Participation

Despite their significant contribution to agriculture, women have limited participation in decision-making related to crop selection, resource allocation, marketing, and income utilization. Their representation in farmer producer organizations (FPOs), cooperatives, and local governance institutions also remains low. These disparities reflect persistent socio-cultural norms that restrict women's influence in agricultural and institutional processes, resulting in inadequate recognition of their economic contributions.

7. Challenges Faced by Women Agricultural Workers

Despite their growing participation in agricultural production, women continue to face multiple structural challenges that limit their economic empowerment and social advancement.

7.1 Unpaid Family Labour

A significant proportion of rural women work as unpaid family labourers, contributing substantially to agricultural production without direct monetary compensation. This limits their economic independence and reduces access to social security benefits, financial services, and labour protections.

7.2 Double Burden of Work

Rural women perform both agricultural and household responsibilities, including childcare, elder care, cooking, and resource collection. This double burden creates time poverty, limiting opportunities for education, skill development, and economic advancement.

7.3 Limited Market Access

Women often face mobility constraints, inadequate market information, and socio-cultural barriers that restrict their direct participation in agricultural marketing. Consequently, dependence on intermediaries or male household members reduces their bargaining power and income opportunities.

7.4 Climate Change and Environmental Vulnerability

Climate change has increased agricultural risks through irregular rainfall, droughts, floods, and extreme weather events. Women farmers are particularly vulnerable due to limited access to resources, technology, and adaptive capacities.

7.5 Social and Cultural Constraints

Traditional gender norms and patriarchal structures continue to restrict women's access to education, property rights, employment opportunities, decision-making, and institutional support. These constraints remain major barriers to women's empowerment and gender equality in agriculture.

8. Findings and Discussion

The study reveals that women continue to play a crucial role in sustaining agricultural production and rural livelihoods in India. Agriculture remains the dominant source of employment for rural women, and the rise in female labour force participation during 2015–2025 highlights their growing contribution to household income and agricultural activities.

A major trend observed during the study period is the feminization of agriculture, driven largely by male migration to urban and non-

agricultural sectors. However, increased participation has not necessarily resulted in greater economic empowerment, as women continue to have limited ownership of productive resources and restricted access to land, credit, technology, and extension services.

The findings further indicate that a substantial proportion of women remain engaged in self-employment and unpaid family labour, limiting their income security and economic independence. Persistent gender inequalities are reinforced by socio-cultural barriers that restrict women's access to education, property rights, markets, and decision-making processes.

The study also highlights the growing vulnerability of women farmers to climate change due to limited access to resources and adaptive technologies. Overall, the findings suggest that women's contribution to agriculture exceeds their access to economic opportunities and productive assets. Therefore, achieving inclusive agricultural development requires recognizing women not only as agricultural workers but also as farmers, entrepreneurs, and key stakeholders in rural development.

9. Findings of the Study

1. Agriculture continues to be the principal source of employment for women in rural India, and female labour force participation has increased significantly during the study period.
2. The feminization of agriculture has emerged as a prominent feature of rural labour markets, largely driven by male migration and changing employment patterns.
3. Despite increased participation, a substantial proportion of women remain concentrated in self-employment and unpaid family labour, limiting their income security and economic empowerment.
4. Women continue to face significant disadvantages in land ownership, access to institutional credit, agricultural technology, extension services, and market opportunities.
5. Gender inequalities persist in the form of wage disparities, unequal decision-making power, and limited participation in agricultural governance and institutional processes.
6. Climate change and environmental uncertainty disproportionately affect women farmers because of their restricted access to productive resources and adaptive technologies.
7. Increased participation in agricultural employment has not been accompanied by corresponding improvements in ownership rights, resource access, or overall economic empowerment.

10. Policy Implications and Recommendations

1. Women's land ownership should be strengthened through legal reforms, improved inheritance practices, and joint land titling arrangements to enhance their access to credit, government schemes, and agricultural support services.
2. Gender-sensitive agricultural extension and financial inclusion programmes should be expanded to provide

women farmers with training, technical guidance, collateral-free credit, and dedicated agricultural financing opportunities.

3. Greater investment in women-friendly agricultural technologies, mechanization, and climate-resilient farming practices is essential to improve productivity, reduce drudgery, and enhance adaptive capacity.
4. Women's participation in Farmer Producer Organizations (FPOs), cooperatives, self-help groups, and local governance institutions should be actively promoted to strengthen their role in agricultural decision-making.
5. Improved market access through rural infrastructure, digital platforms, and women-led agricultural enterprises can enhance income-generating opportunities and economic independence.
6. Social protection measures, including insurance, pension schemes, maternity benefits, and healthcare services, should be extended to women engaged in informal agricultural employment. Overall, policy interventions should focus not only on increasing women's participation in agriculture but also on improving employment quality, ownership rights, and economic empowerment.

11. Conclusion

The study concludes that women play a vital role in rural agricultural development, with their participation increasing significantly during 2015–2025. However, persistent inequalities in land ownership, credit access, technology, and decision-making continue to limit their empowerment. Achieving inclusive agricultural development requires gender-responsive policies that strengthen women's access to resources, institutional support, and economic opportunities.

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