

Economic Contributions and Social Constraints of Women Agricultural Labourers in India

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ABSTRACT

Women constitute a critical yet under-recognised segment of India's agricultural workforce. Drawing on secondary national data (primarily Periodic Labour Force Survey/PLFS up to 2023–24 and related official sources) and a primary survey of 1,000 women agricultural labourers across ten districts of Uttar Pradesh (as a major agrarian state case), this paper examines their economic contributions and the social constraints that limit realisation of those contributions. By 2023–24, women accounted for roughly 64% of the agricultural workforce and about 77% of rural working women were engaged in agriculture or allied activities; absolute numbers of women in agriculture rose sharply, driven largely by self-employment (including unpaid family labour). Their labour underpins food production, household incomes, and rural livelihoods, yet they face persistent wage gaps (women typically earning substantially less than men for comparable work), restricted access to land, modern inputs, credit, markets and decision-making, health and safety risks, and socio-cultural barriers. Statistical analysis of the UP sample (one-sample proportion tests, chi-square tests of association, and logistic regression) confirms statistically significant gender-based restrictions on resources and decision-making, associations between land ownership and access to modern tools, links between training access and community support, and elevated health/safety risks in certain tasks (harvesting, livestock care). Policy implications centre on enforceable equal pay, expanded land and asset rights, targeted skill and technology access, social protection, and measures to raise women's agency.

Keywords: Women Agricultural Labourers, Economic Contribution, Rural Employment, Gender Inequality, Wage Disparity, Informal Labour, Unpaid Work, Social Constraints, Agricultural Workforce, Women Empowerment, Rural India, Labour Rights.

INTRODUCTION

Agriculture remains central to India's economy and employment structure even as structural transformation proceeds unevenly. Official data through 2023–24 show agriculture still absorbing the largest share of the workforce (around 46%), with a pronounced and rising feminisation of the sector. Rural women's workforce participation rose markedly after 2017–

18, reaching approximately 46.5% among rural females aged 15+ by 2023–24; among rural working women, engagement in agriculture stood near 77%. Women's share of the overall agricultural workforce exceeded 64%. Absolute numbers of women in agriculture increased substantially (estimates indicate tens of millions more women relative to the late 2010s), while male participation in agriculture stagnated or declined in relative terms. Much of the rise is concentrated in self-employment, including unpaid family helpers on household farms—reflecting both distress-driven absorption and the substitution of women's labour as men shift toward non-farm work.

Women perform a wide range of tasks—planting, weeding, harvesting, post-harvest processing, livestock care—and contribute substantially to household food security and income. Yet their economic contributions are systematically undervalued: they operate a disproportionately small share of farmed land (around 12%), face wage gaps (women earning roughly ₹82 for every ₹100 earned by men in agrifood work in recent estimates, with daily agricultural wages for women remaining well below male rates), limited control over income and produce, and restricted access to technology, credit, extension, and markets. Social constraints—patriarchal norms, restricted mobility and decision-making, lower education and training access, health and safety risks, and inadequate social protection—compound these economic disadvantages and trap many in low-productivity, precarious work.

Uttar Pradesh, one of India's largest agrarian states with a high concentration of agricultural labour, provides a useful lens. Primary data collected from 1,000 women agricultural labourers in ten UP districts illuminate the lived realities that national aggregates obscure. This paper synthesises national trends (to 2023–24/early 2024 reference points) with the detailed UP evidence to assess economic contributions and social constraints, and to derive policy implications.

LITERATURE REVIEW

Early work (Mencher & Saradmoni 1982; Dixon 1982; Agarwal 1984) documented women's substantial but often invisible contributions to agricultural production and household income, undercounting in official statistics, and differential impacts of technological change by class and gender. Subsequent studies highlighted wage discrimination, limited bargaining power, and the concentration of women in labour-intensive, lower-paid tasks (Usami 2011; Javeed & Manuhaar 2013; Kundu 2013; Mahajan 2017). Research on socio-economic conditions repeatedly notes low education, landlessness or marginal holdings, health burdens, and restricted agency (Kavita & Kumar; Rani & Rani 2019; Shettar 2020; Bala 2022). Studies specific to or including Uttar Pradesh and comparable states emphasise higher female agricultural participation relative to men in certain metrics, yet poorer outcomes on wages, assets, and decision-making (Vishwakarma 2018). Recent national analyses using PLFS data confirm the post-2017 rise in measured female participation concentrated in agriculture and self-employment, alongside persistent gaps in pay, land, and productive resources (various PLFS-based commentaries and reports through 2024–25). The literature converges on the dual reality of indispensable labour contributions coexisting with structural constraints that limit empowerment and productivity gains.

OBJECTIVES

1. To analyse the economic contributions of women agricultural labourers in India, with particular attention to employment shares, task profiles, and income generation.
2. To examine social and economic constraints (resource access, wages, decision-making, health/safety, social norms, policy reach).
3. To draw practical and policy implications for improving outcomes, using both national trends and primary evidence from Uttar Pradesh.

RESEARCH METHODOLOGY

Secondary data are drawn from World Bank/OECD series, MOSPI PLFS annual and quarterly releases (through 2023–24 and selected later quarters), Labour Bureau agricultural wage series, CSO/MOSPI growth figures, and complementary official and research estimates up to the 2024 reference window.

Primary data consist of a structured questionnaire (37 items covering demographics, labour involvement, resource access, income/control, labour conditions, decision-making, services, social factors, empowerment, government support, insurance, markets, healthcare, training, experiences, and aspirations) administered to 1,000 women agricultural labourers via stratified random sampling in ten Uttar Pradesh districts (Sitapur, Barabanki, Raebareli, Gonda, Bahraich, Unnao, Hardoi, Sultanpur, Kheri, Ayodhya), with 100 respondents per district.

Analytical tools include descriptive proportions and cross-tabulations; one-sample proportion z-tests (equal wages, gender-based resource restrictions, decision-making constraints); chi-square tests of independence (land ownership $\times$ access to modern equipment; training access $\times$ family/community views); and binary logistic regression (health/safety challenges as function of agricultural task type). Visualisations (tables, proportions) support interpretation. The UP sample is treated as a detailed case illuminating mechanisms that national data suggest are widespread.

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

1 National Context (to 2023–24/2024)

Female labour-force participation rose sharply after 2017–18, reaching approximately 41.7% overall and higher in rural areas. Agriculture absorbed the bulk of the increase: roughly three-quarters of rural working women and over 60% of the female agricultural workforce. Absolute female employment in agriculture expanded by tens of millions, while the male agricultural workforce grew far more slowly. Self-employment (including unpaid family labour) dominates female agricultural work. Wage data continue to show a gender gap; average daily earnings for female casual agricultural labour remain lower than for males, with state and task variation. Land operated by women remains a small fraction of total farmed area. These patterns indicate rising quantitative contributions accompanied by qualitative constraints on returns and agency.

2 PRIMARY EVIDENCE FROM UTTAR PRADESH

Demographics of the 1,000 respondents show concentration in younger-to-middle adult ages (peak 33–38), majority married, limited formal education (primary or less for most; higher

education rare), and heavy involvement in core field tasks (planting and harvesting most frequent, followed by weeding; livestock care smaller share).

Access and control are constrained: a majority lack modern equipment; nearly 80% report gender-related restrictions on resources; only about one-quarter report equal wages with men for comparable work; fewer than half control the income they generate; and a clear majority face gender-based constraints on agricultural decision-making and lack autonomy over sales/income management. Family/community views are mixed (supportive for a plurality, but substantial neutral or unsupportive shares). Training/education access is incomplete; insurance coverage is limited; market access is hindered by distance/transport, information gaps, price volatility, and restricted market days. Health/safety challenges are widespread (limited healthcare access most cited, followed by inadequate labour protection, reproductive health issues, gender-based violence/discrimination, and physical hazards). Empowerment perceptions are positive for a majority, yet many still report limited agency. Government programme reach is partial.

STATISTICAL RESULTS

- One-sample proportion tests reject nulls of equal (or better) outcomes at conventional significance levels: the share reporting equal wages is significantly different from (and below) a 50% benchmark in the direction of disparity; shares facing resource restrictions and decision-making constraints significantly exceed 70% benchmarks. These confirm pervasive gender-based economic and agency disadvantages.
- Chi-square tests show statistically significant association between land ownership/lease status and access to modern equipment (owners far more likely to have access) and between training access and supportive family/community views. Contingency patterns indicate positive links between ownership and technology access, and between education/training and social support.
- Logistic regression of health/safety challenges on task type finds elevated odds associated with harvesting and livestock care (statistically significant), while planting and weeding are not significant predictors after controls. Model fit and classification metrics support overall significance, though explanatory power is modest (as expected with a single categorical predictor).

Taken together, the descriptive and inferential results portray women as indispensable to agricultural production and household economies yet systematically constrained in the returns they capture and the agency they exercise—patterns consistent with national aggregates.

CONCLUSION AND POLICY IMPLICATIONS

Women agricultural labourers make large and growing economic contributions to India's food system, rural employment, and household welfare. The post-2017 rise in measured participation, the high share of rural women in agriculture, and the detailed UP evidence of intensive task involvement all underscore their centrality. At the same time, social and institutional constraints—wage discrimination, unequal resource and land access, limited decision-making power, health and safety risks, incomplete training and social protection, and

restrictive norms—prevent full translation of labour into improved living standards or empowerment.

Policy priorities include: (1) rigorous enforcement of equal pay for equal work and transparent wage-setting mechanisms; (2) acceleration of women's land and asset rights (joint titling, inheritance reforms, preferential allocation); (3) expanded, gender-responsive access to modern tools, credit, extension, insurance, and markets, with special attention to land-leasing women and high-risk tasks; (4) scaled skill and leadership training linked to community mobilisation so that education translates into greater social support and agency; (5) strengthened health, safety, and social-protection coverage (including MGNREGA complementarity, maternity and occupational health measures); and (6) better measurement and recognition of women's work (including unpaid family labour) in official statistics and scheme design. Programmes such as MKSP, NRLM, PMFBY, KCC, and related initiatives provide platforms that can be deepened and better targeted. Closing the gaps would raise agricultural productivity, household resilience, and gender equity simultaneously.

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