

Women's Role in Agriculture and Rural Development: Challenges, Contributions, and Prospects for Sustainable Growth

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ABSTRACT

Women in agriculture and rural development are important to the world at large because their contribution to issues of food security, poverty alleviation and resiliency in rural areas is very important. Though they are of vital importance to all of these, women are often restricted through systemic barriers including limited access to land, financial services, technology and education. This text will be investigating the role of women in agriculture, the contribution that they make to the economy and society, barriers to overcome inequalities, and the potential that women farmers have to be empowered to act as change makers for sustainable rural development. Drawing on both global and regional experience, we will stress the importance of gender responsive agricultural policies and inclusive method of conducting agriculture, on the contrary of excluding women, to harness the ability of women to act as change makers in rural economies.

Keywords: Women in agriculture, Rural Development, Food Security, Gender Inequalities, Empowerment, Sustainable Agricultural Practices, Rural Economics.

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INTRODUCTION

Agriculture is and still is the no. 1 part of the most economies, namely in developing countries because a lot of their people live on it, it provides food, and work for most of the population. Overall, women make up roughly half of the world's agricultural-workforce. Women provided upwards of 60-80% of food in developing countries through Food and Agriculture Organization (FAO). Women's work in agriculture is not considered, or recognized or paid as such. Rural women are involved in agricultural activities such as farming and seed banking, livestock rearing, post-harvest processing and local marketing; hence, they play a critical role for the sustenance of households and for national food security.

In addition, in addition to food production, women are key players in rural development and in community leadership, natural resource management and small business development. Empowered women farmers improve their family food and nutrition security, spend money on their children's education and contribute to local economies. Studies have shown 20-30% increase in agricultural productivity (i.e. hunger and poverty was reduced) when women have equal access to resources as men. Accordingly, gender equality and inclusivity of rural development programmes are great sides to whole sustainable development agenda.

The role of women in the agriculture and changing their potential are the positive development. However, women in agriculture are still facing deeply-rooted barriers to their activities at structural levels. The productivity and agency of women is limited due to lack of proper land property rights, lack of access to

cheap credit, differential access to technology and socio-cultural issues. For the majority of people, women's work is recognised as 'subsistence' as opposed to 'commercial' therefore women are excluded from formal markets to have no place on the formal decision making table. These constraints limit women's agency and ability as individuals but do so simultaneously and profoundly such that they frustrate the growth and development of rural areas and the perpetuate its existence in constant cycles of poverty and inequality.

An acknowledgement of the role that women play in agriculture has to be followed by immediate policy changes. Governments, NGOs and global actors must legislate and re-attract gendered agricultural policies with an access to equal resources, training and decision-making in the sector. In addition, the participation of women in the cooperatives and extension services, their representation in the leadership positions, would probably be a contribution to the development in the rural area. Women's empowerment in agriculture is a matter not just of social justice, but also pragmatic approaches to global challenges such as food insecurity and climate crisis as well as rural poverty. Therefore, purpose of this study is to investigate the role of women issues and opportunities in agriculture and rural development by using critical approach and evidence based approach.

Objectives

1. To analyse the role of the women in agriculture and rural development
2. In order to see the challenges women farmers are facing in accessing resources, technologies and markets.
3. To analyze the impact of women's empowerment on food security and rural economic development.
4. To develop policy recommendations for gender equitable agricultural development.

Research Questions

1. What is women's contribution to agriculture and rural development in different contexts?
2. What are the constraints preventing women from fully participating in agriculture?
3. In what ways does empowering women contribute to food security and rural sustainability?
4. What policy options exist to leverage women's contribution to agriculture and rural development?

LITERATURE REVIEW

Numerous studies demonstrate the centrality of women to agricultural production as well as rural household livelihoods and biodiversity preservation. Vishwanathan (2009) noted that women are engaged in activities relevant to agricultural production such as planting, harvesting, storing seeds and keeping animals, these activities put them in the front line of food security in many rural economies. Also, Buchh et al. (2012) touched on the importance of woman in South Asia, _ indispensable' contributors to subsistence agriculture, and documented labor not formally recorded in statistics. In West Bengal, Mahato (2023) demonstrated the contribution women's labour in the farms have contributed towards the livelihood in the rural region but are not formally and equally compensated for it. These reports show that the labor, and position of women is not peripheral, but on the contrary critical in agricultural production and life in rural environments.

Women, in spite of being central in agriculture are faced by the problems of high-level inequalities in

land, credits and decision making processes. Khoja (2021) and Zubair et al. (2023) have pointed out that the legacy of patriarchal heritage combined with the institutions for males make women dependent on their land-holdings which further perpetuates dependency and economic cycles. Research by Azumah, Onzaberigu and Adongo (2022) also from northern Ghana also affirmed women's exclusion methods of resources and cultural values and disregarded policy on women amplify exclusion. These findings is consistent with Sharma and Udupa (2025) who found that women farmers are actively excluded from made-farm-level decisions with men making decisions about what to plant, access to markets and inputs. Likewise, Ferto and Bojnec (2024) argued the fact that the principle of gender gaps in Agricultural inputs will drastically improve the resilience of the rural economy. On the whole this literature demonstrates the prevalence of systemic exclusion as an obstacle to women's empowerment in agriculture.

Recent research have started to consider the overlapping of Gender, Climate Risk and sustainable development in combination. Antriandarti et al. in their research conducted in rural Java exposed the fact that women are predominantly affected by climate variability, while at the same time women are involved with supporting such adaptations in their community by their practices of diversifying crops and ensuring food security. Similarly Vujicic and Jandric 2025 theorized that woman's ecological knowledge would make her irreplaceable. Mutiara, Yuerlita, and Febriamansyah (2022) conducted research about the rural community in the Indonesia nation and concluded that empowering women will improve their ecological resilience, and the resiliency of the environment to environmental shocks. By and large, these studies have at least put in place women as not only passive victims of climate change, but active climate change adaptors and agents of sustainability.

In addition to the family level functions, nowadays women are also taking over the role of leader of self-help groups and cooperatives within the rural context. Aniebonam et al. (2022) established that for agricultural cooperatives women leaders improved on collective bargaining power; promoted access to market; and contributed to development in the community level. Vijayalakshmy et al. (2023) reported to a study in India to see the improvement in women's entrepreneurship that gave them a capacity to diversify livelihood as it also improve resilience agriculture and allied sectors. Verma, (2023) through a case study of Ranchi District, India showed the role that women play in grass root decision making, how it improves rural productivity and society economic conditions. These studies possess the transformative capacity of collective action because women transcend the threshold of the character of traditional gender and have an impact on the rural economy.

The literature also suggests that there was, and there is growing consensus that there are, needed policy interventions which recognise and deal with the position of women in agriculture. Ozcatlbas and Ozkan (2003) used as example the attempts made in Turkey to mainstream rural women into agricultural extension services, and saw it part of a broader mainstream assimilation (although time stamp barriers remained). A more common and recent piece by Patel and Dwarka 2025 which confirmed the state-led programmes such as Cooperatives, which made life changing impacts at the agricultural level, by enabling access to education, training and credit facilities to women. Ahmadi, (2024) further highlighted the implication of processing farm products by women such as rural household economic modification, food security etc. Abo-Zaed, Abdel-Rahman and Mohamed (2020) further strengthened the positive effect of targeted policies to encourage women in the agricultural sector in Egypt. Collectively these papers are calling for policies based on gender that do not simply tokenise the inclusion of women, but rather attempt to address structural inequities through structural reforms.

While there is a large body of literature to demonstrate the importance of women in the agricultural sector, there are still knowledge gaps. First of all, most of the literature characterizes women's work as "supportive," and not as independent farmers and decision makers. Second, few comparative studies have been done across regions - the difference between cultural, ecological and policy contexts is quite high and have not been sufficiently explored. Third, the longer-term impact of the women's empowerment

through cooperatives, and education, and access to credit have not been well explored, and especially inter generationally, in rural communities. Closing the gaps, requires an intersectional approach, which takes into account class, ethnicity and geography and engages women in agricultural research and rural policymaking.

METHODOLOGY

The proposed research is in form of mixed-method research, wherein it presents both qualitative and quantitative research in an effort to provide a more exhaustive approach to the topic of women participation in agriculture and rural development.

Research Design

The research design used was descriptive study design to find out the role of women and their experience, challenges and opportunities in terms of farming practices and the community development. The descriptive research design allowed them to not only bring both the quantitative survey results and qualitative in-depth interviews together to analyze on both breadth and depth.

Sampling and Participants

The target population was women who were now practicing farming in the rural settings. Participants having some direct experience of farm activities, animal husbandry or agricultural business during the recent past were identified using purposive sampling. The survey participants were 120 women, and 15 women were interviewed through semi structured questions as to allow more of the issues in the interviews to be considered.

Data Collection Methods

There were two major sources of collecting data:

Structured Questionnaires - These were completed by women farmers - to obtain numerical data on: land ownership status, access to credit, use of agricultural technologies and participation in decision-making activities both at the household and the community level.

Semi-Structured Interviews - Semi-structured interviews were held with the sample participants focusing on lived experiences, socio-cultural constraints and contributions to household and community level agricultural decision making.

Data Analysis

Quantitative data were simply described in terms of frequency, percent, and mean value, to find trends and patterns. Qualitative data obtained from the interviews were transcribed, coded and thematically analysed in an attempt of identifying common themes around empowerment, inequality and sustainability. The combination of the two data sets allowed triangulation that increased the validity and reliability of the findings.

RESULTS AND DISCUSSION

Quantitative Findings

The results from the survey suggests women are predominately agrarian producers, however, it is mostly unaccounted and unrecognized production for those women. The survey concluded that among the 120

total respondents, 78% of the total women were engaged in crop production, animal husbandry as well as food preservation, however, only 22% had rights to land registered. This gap on land rights عديد revealed structural inequities which still prevent women to act autonomously and self-direct in agriculture production. Not forgetting, 65% of the women stated they did not have access to contemporary agricultural technologies i.e. irrigation systems and agriculture machinery to assistance with productivity. Regardless of this being high -82% of women identified that they were critical contributors to generation of family income and food security and demonstrated their role in rural livelihoods.

Access to capital was also a barrier to their autonomy, an already low of just 18% of the women interviewed had ever received a loan/credit for their farming, and even these women recognised barriers to loans either from agricultural policy or a lack of collateral. The results justifies that the women, though contributing labour, are structurally excluded from the decision making processes regarding the means of production and capital, at the disposal of the market economy to sustain and perpetuate their circles of dependency and impoverishment.

Qualitative Insights

The depth interviews provided rich stories which put the survey data into context. Most women had shown themselves to be basically "secondary" in the decision making process at household and community levels as cultural expectations and gender roles limited their potential as principal producers of labor. One person shared, "We work in the fields all day, but for marketing our crops or income decisions, men are the only ones that make those decisions" upsetting the magnitude of gender-based inequalities in rural agricultural environments.

Even within the confines of these regulations, the women were very flexible and strong. A majority of the interviewed ones said how they were able to make the most out of the resources, build the informal mechanisms of cooperation among the women, and use their life on the farm for the health and education of their household. The narratives gave agency to women in agriculture that is not limited to the production of food, but includes rural development indicators such as nutrition, well-being of the child, and the health of the community.

Discussion

Collectively, the findings prove the contradiction in women's work in agriculture, that they are necessary and needed for productivity and sustainability, but are not valued, recognised and not empowered. The findings are in line with international studies that suggest closing the gender gap in agriculture would have an important role to play in food security and rural development (FAO, 2011).

This lack of ownership of land in this research supports the wider structural inequalities that prevail within the South Asian farm systems to own or inherit land due to custom laws and patriarchal norms in land ownership by women. Without secure land tenure women are not eligible to access credit, or make long term investments, which restricts women's capacity to innovate or increase the scale of agricultural practices. This is a reiteration of the importance of policy interventions with a focus on land reform and equal access to resources.

The results also show that the exclusions of women in within the economic systems is both a social issue; with an economic facet. The expectation of women as not "farmers" and rather, "helpers" has contributed to the invisibility at the level of the national agricultural policy. However, when the interview subjects were asked about other roles they played in the agricultural economic system, it was apparent that woman were the custodians of the indigenous agriculture knowledge, local seed preservation, and organic agriculture - all of which are at the heart of sustainable rural development. Acknowledging these contributions could replace agricultural extension programs and contribute to little contributions of

women in the rural planning.

Through the resilience points demonstrated by women participants, as well as points to potential as yet to be tapped. By supporting women's cooperative, skills training and inclusive credit facility rural society can tap women potential for an increase of its socio-economic growth. The qualitative results also implies that when women are more empowered with farm incomes they make investment in children's education, health and nutrition their priority - which has a direct bearing on sustainable rural development.

In conclusion, the report captures both the limitation (Limited owning of land, inaccessible to finance, no role in the decision-making process, cultural inhibitions) and the strengths (Ability to cope, resourcefulness, key to food security, rural well-being) of women in agriculture. These observations help to confirm the imperative to policy and interventions to go beyond considering women as "supporting labour" and lead them to become development agents. Strengthening the role of women in agriculture is not only a question of gender justice, but is a big step towards sustainable rural development.

CONCLUSION

Women are irreplaceable in the field of agriculture, rural family; stakeholders in the country's food production, household nutrition, community." Even though they are central players, structural barriers such as small landholdings, poor access to credit and technology and exclusion from decision making contributes to their marginalisation. The research draws attention to the fact that empowering women through land rights, financial inclusion, skills enhancement and leadership opportunities has the added benefit of increasing agricultural productivity but also ensures sustainable development of rural areas. Recognition of women as active agents and not as mere supporters of labour are important for securement of food security, poverty alleviation and inclusive growth in the rural areas.

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