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Entrepreneurial orientation among farm women and institutional support: A narrative review

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Abstract

Women constitute a critical yet under-recognised workforce in global agriculture, yet farm women across the Global South and North continue to encounter systemic barriers-including limited access to extension services, financial capital, and decision-making authority within patriarchal agricultural systems that constrain their entrepreneurial potential. This narrative review examines the relationship between entrepreneurial orientation (EO) among farm women and the institutional support systems that enable or constrain their agripreneurial development, synthesising literature from 2015 to 2025, with particular focus on India and comparative global contexts.

The review draws upon peer-reviewed literature from Scopus, Web of Science, CAB Abstracts, and Google Scholar. Thematic analysis was employed to organise findings across six domains: human capital and entrepreneurial competencies; financial and economic support; institutional support systems; social and cultural factors; technological and digital support; and entrepreneurial orientation outcomes.

The analysis reveals that gender-sensitive agricultural extension, Self-Help Groups (SHGs), microfinance, and digital platforms significantly enhance entrepreneurial orientation among farm women. A critical gap is identified: while numerous studies document barriers, relatively few examine solution-oriented interventions or the institutional mechanisms that successfully translate EO into sustainable enterprise development. Findings underscore the necessity of holistic, multi-level institutional interventions that engage men, transform gender norms, and restructure extension systems. Policy implications include earmarked budgets for gender-inclusive agricultural development, quotas for female extension agents, and tailored credit schemes.

Keywords: Entrepreneurial orientation, farm women, institutional support, empowerment, gender-sensitive extension

1. Introduction

Agriculture remains the backbone of rural economies across the developing world. Women constitute approximately 36% of the global agrifood systems workforce and up to 71% in southern Asia (FAO, 2023) ^[25]. In India, women participate in agriculture at rates exceeding 60%, engaging in sowing, weeding, harvesting, post-harvest processing, and livestock management (Pattanaik and Lahiri-Dutt, 2021) ^[46]. Despite this substantial contribution, women's roles are frequently rendered invisible in agricultural statistics, policy frameworks, and extension systems increased female agricultural labour has not translated into commensurate gains in women's rights over land, resources, or decision-making authority (Agarwal, 2020) ^[1].

Entrepreneurial orientation, originally conceptualised by Miller (1983) ^[35] and operationalised by Lumpkin and Dess (1996) ^[32], refers to the processes, practices, and decision-making activities that lead to new entry and enterprise development. For farm women, it encompasses the capacity to innovate within constrained resource environments, take calculated risks in volatile agricultural markets, proactively identify opportunities for value addition, exercise leadership within male-dominated domains, make autonomous decisions regarding resource allocation, and maintain achievement motivation despite structural adversity (Muindi and Masurel, 2022) ^[39]. These dimensions are profoundly

shaped by institutional support systems that either cultivate or constrain women's entrepreneurial agency.

In India, government initiatives such as the National Rural Livelihood Mission (NRLM), the Mahila Kisan Sashaktikaran Pariyojana (MKSP), and various state-level schemes have sought to channel institutional resources toward women farmers (Ghosh *et al.*, 2023) ^[27]. Globally, the FAO, IFAD, and World Bank have emphasised gender-responsive extension and financial inclusion as critical enablers of rural women's economic empowerment (FAO, IFAD and World Bank, 2023) ^[24]. Yet significant gaps persist between policy rhetoric and on-ground transformation.

This narrative review is motivated by several interconnected imperatives. First, the specific intersection of entrepreneurial orientation and institutional support among farm women remains under-theorised and empirically fragmented. Second, existing studies document barriers more comprehensively than solutions, limiting actionable knowledge for practitioners and policymakers (Nyberg *et al.*, 2025) ^[45]. Third, the rapid digitalisation of agricultural extension and proliferation of SHG networks have created new institutional configurations whose effects on women's entrepreneurial orientation require systematic examination. The justification for this review also rests on the recognition that achieving SDG 2, SDG 5, and SDG 8 depends

fundamentally upon unlocking women's entrepreneurial potential in rural and agricultural settings.

2. Theoretical Perspectives

2.1 Entrepreneurial Orientation Theory

Entrepreneurial orientation theory posits that firms and individuals characterised by innovativeness, risk-taking, and proactiveness achieve superior performance (Miller, 1983; Covin and Slevin, 1989) ^[35,18]. Lumpkin and Dess (1996) ^[32] expanded this to include competitive aggressiveness and autonomy. For farm women in resource-constrained and patriarchal environments, the framework requires adaptation to account for leadership ability, decision-making autonomy, and achievement motivation sustained despite systemic marginalisation (Muindi and Masurel, 2022) ^[40].

Applying entrepreneurial orientation theory to farm women requires recognising that entrepreneurial behaviour in rural agricultural contexts is embedded within institutional arrangements. De Rosa and McElwee (2020) ^[20] demonstrate that entrepreneurial orientation manifests differently depending upon the institutional thickness of the rural environment. In developing country contexts where institutional thickness is often thin and gender-biased, women's entrepreneurial orientation may be expressed through collective rather than individual risk-taking and through negotiated rather than autonomous decision-making (Mudege *et al.*, 2015) ^[37].

2.2 Institutional Theory

Institutional theory provides a critical lens for understanding how formal and informal rules, norms, and structures shape entrepreneurial behaviour (North, 1990; Scott, 2014) ^[44,57]. Formal institutions include laws, policies, extension services, credit systems, and government schemes. Informal institutions encompass cultural norms, gendered expectations, and social networks. The interplay between these is particularly consequential for farm women: progressive policies may be undermined by patriarchal norms, while innovative informal arrangements such as women's SHGs may compensate for formal institutional deficits (Al-Kubati and Selvaratnam, 2023) ^[5].

DiMaggio and Powell's (1983) ^[23] concept of institutional isomorphism helps explain why extension systems reproduce male-biased practices even when policies mandate gender equality. Studies indicate that a significant proportion of women growers (66.67%) reported medium levels of institutional security, underscoring the need to bolster institutional support for improved livelihood security and resource access (Manikanta and Satpathy, 2023) ^[33]. Conversely, institutional entrepreneurship theory (Battilana *et al.*, 2009) ^[11] illuminates how farm women may challenge and transform institutional arrangements, creating new forms such as women-led Farmer Producer Organisations (FPOs) or digital marketing collectives.

2.3 Social Capital Theory

Bourdieu's (1986) ^[15] conceptualisation of social capital as resources linked to a durable network of relationships provides essential grounding for understanding women's entrepreneurial networks. Bonding social capital within family and kinship networks, bridging capital across SHGs, and linking capital connecting women to external

institutions together illuminate the layered nature of women's network resources (Behera *et al.*, 2025) ^[13]. While these networks provide essential support, they may also limit women's access to diverse information, distant markets, and high-status institutional connections.

2.4 Sustainable Livelihoods Framework

The Sustainable Livelihoods Framework (Ashley and Carney, 1999) ^[8] offers a holistic structure for understanding how farm women assemble and deploy assets across human, natural, financial, physical, and social capital. The framework emphasises that livelihood outcomes are shaped by the vulnerability context, institutional processes, and policy environment. Institutional support may simultaneously enhance multiple capital forms—extension services build human capital, microfinance increases financial capital, SHG membership expands social capital, and land tenure reform strengthens natural capital (Manikanta and Satpathy, 2023) ^[33].

2.5 Women Empowerment Concepts

The Women's Empowerment in Agriculture Index (WEAI), developed by Alkire *et al.* (2013) ^[4], measures empowerment across five domains: decisions over agricultural production, access to productive resources, control over income, community leadership, and time allocation. Kabeer's (1999) ^[30] distinction between resources, agency, and achievements provides further analytical clarity. Institutional support may enhance women's resources such as access to credit, training, and inputs, but the critical insight is that institutional support must address all three dimensions: providing resources, cultivating agency, and enabling achievement.

2.6 Critical Dimensions of Entrepreneurial Orientation for Farm Women

Innovativeness for farm women often manifests in adaptation rather than invention—modifying existing practices to suit household labour constraints, experimenting with value-added processing, or adopting climate-smart techniques. Access to information-based technology remains essential, particularly for rural sectors (J Satpathy and B Satpathy, 2023) ^[56].

Risk-taking is profoundly shaped by structural vulnerability. Limited land ownership, constrained mobility, and responsibility for household reproductive labour mean that failed experiments carry disproportionate consequences (Badstue *et al.*, 2020) ^[9]. Proactiveness is often expressed through diversification strategies—adding poultry, dairy, or agro-processing to crop production, or leveraging social media for direct marketing (Shahbaz *et al.*, 2023) ^[59].

Women's leadership in agriculture is frequently exercised informally through peer training, collective bargaining within SHGs, or household negotiation rather than through formal positions in farmer organisations (Carnegie *et al.*, 2020) ^[16]. Decision-making autonomy remains constrained by male household heads who control land, labour, and output markets even when women possess technical knowledge and entrepreneurial skills (Theis *et al.*, 2018) ^[61]. Achievement motivation among farm women is often intertwined with familial obligations—women entrepreneurs are frequently motivated by the desire to improve children's

nutrition, education, and prospects (Rola-Rubzen *et al.*, 2020) ^[52].

3. Objectives of the Review

3.1 General Objective

To synthesise and critically analyse the scholarly literature on entrepreneurial orientation among farm women and the institutional support systems that enable or constrain their agripreneurial development, with particular attention to India and comparative global settings from 2015 to 2025.

3.2 Specific Objectives

To scope published literature on farm women's entrepreneurial orientation and institutional support.

To examine the dimensions of entrepreneurial orientation as manifested among farm women and the factors that shape these dimensions.

To analyse the role of institutional support systems in enhancing or constraining farm women's entrepreneurial orientation.

To identify enabling and disabling factors at multiple levels that influence the relationship between institutional support and entrepreneurial outcomes.

To develop a conceptual framework integrating institutional support, entrepreneurial orientation, and empowerment outcomes for farm women.

To identify research gaps and propose future directions for gender-sensitive agricultural entrepreneurship.

4. Methodology of the Narrative Review

4.1 Sources of Literature

This narrative review draws upon peer-reviewed academic literature, institutional reports, and selected grey literature published between 2015 and 2025. It prioritises scholarly articles while incorporating relevant reports from international organisations including the FAO, IFAD, and the World Bank, as well as national government publications.

4.2 Databases and Search Strategy

Literature was identified through systematic searching of Scopus (social sciences, economics, and agricultural sciences), Web of Science Core Collection (interdisciplinary with strong citation analysis), CAB Abstracts (agricultural and rural development), and Google Scholar (broad coverage including grey literature). Keyword combinations captured the intersection of entrepreneurial orientation, farm women, and institutional support-including terms such as agripreneurship, women farmers, SHG, microfinance, gender equality, digital agriculture, and ICT.

4.3 Literature Selection Process

Inclusion criteria specified English-language publications focused on women in agricultural or rural entrepreneurial contexts, with explicit engagement with institutional support and publication between 2015 and 2025. The initial search yielded approximately 2,800 records. After removing duplicates and screening titles and abstracts, approximately 340 articles were retained for full-text review, of which 187 were selected for detailed extraction and thematic analysis. The review employs critical narrative synthesis, moving beyond descriptive summary to compare, contrast, and

integrate findings across studies.

5. Thematic Reviews

5.1 Human Capital and Entrepreneurial Competencies

5.1.1 Education and Literacy

Educational attainment shapes women's capacity for entrepreneurial orientation. Farm women with higher levels of formal education exhibit greater innovativeness, more proactive market engagement, and enhanced decision-making autonomy (Desai *et al.*, 2024) ^[21]. Rural women engaged in agriculture often possess limited schooling, constraining their ability to engage with written extension materials, financial documentation, and digital interfaces (Alvi *et al.*, 2021) ^[6]. However, education-focused interventions alone are insufficient if broader structural constraints remain unaddressed; skills training must be accompanied by efforts to transform gendered power dynamics (Nyberg *et al.*, 2025) ^[45]. Even when women possess technical knowledge, their ability to implement it depends upon intra-household negotiation and male partner support (Theis *et al.*, 2018) ^[61].

5.1.2 Skills and Technical Training

In India, KVKs and state agricultural universities conduct training programs covering improved cultivation, food processing, vermicomposting, and organic certification (Saidulu, 2025) ^[55]. Farmer Field Schools and participatory technology development approaches have shown promise in building women's technical capacity while enhancing social capital and collective agency. Greater participation in organisations like Jeevika and SHGs positively shapes farm women's perceptions and capabilities (Rubina and Satpathy, 2023) ^[51]. Muindi and Masurel (2022) ^[40] identify business management training as particularly critical-women who received training in business planning, record-keeping, and market analysis demonstrated significantly higher entrepreneurial performance, suggesting that technical training must be complemented with entrepreneurial skills development.

5.1.3 Leadership Development

SHG membership significantly enhances women's confidence in public speaking, meeting participation, and collective decision-making (Ghosh *et al.*, 2023) ^[27]. Women who initially join groups for savings and credit often assume leadership roles within the group and subsequently in broader community institutions. However, leadership development faces substantial cultural and structural barriers.

5.1.4 Decision-Making Capacity

Women's participation in agricultural decision-making remains limited despite decades of development interventions (Quisumbing *et al.*, 2021) ^[49]. The negative coefficients of social cohesiveness among women may reflect landlessness, insufficient assets, and limited credit access, which diminish solidarity among community members (Rubina and Satpathy, 2023) ^[51]. Group membership and collective action provide women with external legitimacy that strengthens their intra-household bargaining position (Agarwal, 2020) ^[2].

5.2 Financial and Economic Support

5.2.1 Credit Access and Financial Capital

Access to credit is one of the most frequently cited yet most persistent challenges for women's agricultural entrepreneurship. Women face systematic discrimination in formal credit markets due to a lack of collateral, limited financial documentation, gender-biased attitudes among loan officers, and restrictive eligibility criteria (Rola-Rubzen *et al.*, 2020) ^[52]. Entrepreneurial orientation mediates the relationship between financial literacy and economic empowerment among rural women entrepreneurs (Desai *et al.*, 2024) ^[21].

5.2.2 Self-Help Groups

SHGs have emerged as a transformative institutional innovation for women's financial inclusion. India today has over 8.5 million SHGs, forming the largest women-based network of its kind in the world (Al-Kubati and Selvaratnam, 2021; Basak and Chowdhury, 2024) ^[5,10]. SHG membership improves women's access to agricultural information, enhances decision-making participation, and promotes adoption of improved agricultural practices (Raghunathan *et al.*, 2019) ^[50]. However, the quality of SHG functioning varies considerably.

5.2.3 Subsidies and Government Support Programs

Government schemes for women farmers in India include the MKSP, National Food Security Mission components, state-level schemes providing subsidised inputs and training, and initiatives supporting women-led FPOs (Deshmukh *et al.*, 2024) ^[22]. According to FAO (2023) ^[25], while 75% of government agricultural policies from 68 developing countries recognised gender inequalities, only 19% included gender equality as an explicit policy objective, highlighting the persistent gap between policy rhetoric and substantive commitment.

5.2.4 Microfinance and Financial Literacy

Microfinance institutions have played a significant role in extending financial services to rural women, though their impact on entrepreneurial orientation remains debated. Proponents argue that microcredit enables women to invest in productive assets and diversify income sources (Tasso and Nayak, 2024) ^[60]. Critics point to high interest rates, aggressive repayment pressures, and limited evidence of sustained enterprise development (Lohani and Ram, 2024) ^[31].

5.3 Institutional Support Systems

5.3.1 Agricultural Extension Services

Agricultural extension has historically been profoundly gender-biased. Extension systems across the Global South are characterised by male-dominated agent workforces, scheduling that conflicts with women's domestic responsibilities, and approaches that assume male household heads are the sole decision-makers (Witinok-Huber *et al.*, 2021; Nyberg *et al.*, 2025) ^[64,45]. Nyberg *et al.* (2025) ^[45] systematic review of 111 articles reveals that tailored extension was the most frequently mentioned enabling factor (44 articles), while gender norms was the most common disabling factor (50 articles). In India, structural challenges persist: female extension agents face mobility

constraints, may be concentrated in home science rather than core agriculture, and often lack the authority and resources of their male counterparts (Agashe *et al.*, 2025) ^[3].

5.3.2 Krishi Vigyan Kendras

KVKs, established under ICAR, serve as crucial institutional nodes connecting research, extension, and farmers. With mandates for technology assessment, refinement, and dissemination, KVKs conduct on-farm testing, frontline demonstrations, and training programs, offering women farmers access to cutting-edge agricultural knowledge and innovative practices (Saidulu, 2025) ^[55].

5.3.3 Non-Governmental Organisations

NGOs have been instrumental in pioneering gender-sensitive approaches to agricultural development. Organisations such as PRADAN and BAIF have developed methodologies that combine technical training with gender-transformative programming, explicitly addressing intra-household power dynamics (Behl *et al.*, 2023) ^[14]. The limitation of NGO-led interventions is frequently one of scale-intensive programs may reach small numbers of women, raising questions about scalability and sustainability beyond project funding cycles.

5.3.4 Cooperatives and Farmer Producer Organisations

Cooperatives and FPOs enable collective entrepreneurship, helping smallholders achieve economies of scale in input purchase, processing, and marketing. For women, collective enterprise offers shared risk, pooled resources, mutual learning, and enhanced bargaining power (Arunkumar *et al.*, 2025) ^[7]. Women's participation in cooperatives is frequently constrained by male dominance in leadership, cultural norms discouraging women's public engagement, and time demands conflicting with domestic responsibilities. Women-only cooperatives may provide more supportive environments, while mixed-gender cooperatives may offer superior market access (Seuneke and Bock, 2015) ^[58].

5.3.5 Government Programmes and Policy Frameworks

In India, flagship programmes include the NRLM, Pradhan Mantri Mudra Yojana, Startup India's rural and women-focused components, and state-level schemes for women-led agro-processing units (Nema, 2025) ^[43]. Globally, the FAO's Gender Equality Policy and World Bank's Gender Strategy represent multilateral commitments. However, formal policy commitments frequently fail to translate into implementation due to inadequate budgets, weak institutional capacity, and resistance from male-dominated bureaucracies (Tsige *et al.*, 2020) ^[63].

5.4 Social and Cultural Factors

5.4.1 Gender Norms and Patriarchal Structures

Gender norms constitute the most pervasive and persistent disabling factor for women's agricultural entrepreneurship-cited across 50 of 111 reviewed articles (Nyberg *et al.*, 2025) ^[45]. These norms constrain women's risk-taking, proactiveness, and neighbourhood circles; undermine leadership by penalising women; and compromise decision-making by reserving key choices for male household heads (Badstue *et al.*, 2020; Carnegie *et al.*, 2020) ^[9,16].

5.4.2 Family Support and Intra-Household Dynamics

Women with supportive spouses enjoy greater mobility, decision-making autonomy, and access to family resources for enterprise investment (Po and Hickey, 2020) ^[47]. The dynamics are complex: in some contexts husbands support women's income-generating activities while retaining control over expenditure, creating partial empowerment without transforming gender relations (Theis *et al.*, 2018) ^[61]. In other cases, women's economic success may trigger male insecurity and domestic conflict (Mudege *et al.*, 2015) ^[37].

5.4.3 Social Capital and Collective Action

Women's social capital-encompassing networks, relationships, and trust-represents a crucial resource for entrepreneurial development. SHGs, women's cooperatives, and informal savings circles build bonding social capital, while linkage programs develop bridging and linking capital connecting women to external opportunities (Behera *et al.*, 2025; Rola-Rubzen *et al.*, 2020) ^[13,52]. Effective institutional support builds upon women's existing social capital while strategically expanding network diversity and reach (Mozumdar *et al.*, 2022) ^[36].

5.5 Technological and Digital Support

5.5.1 Information and Communication Technologies

Digital technologies offer transformative pathways to information, markets, and financial services that circumvent traditional gender barriers. Mobile phones have penetrated rural areas at remarkable rates, enabling women to access weather information, market prices, extension advice, and mobile banking (Coggins *et al.*, 2022) ^[17]. Platforms such as Digital Green, mKrishi, and various government initiatives have experimented with women-targeted content delivered through accessible channels (Saha *et al.*, 2024) ^[54]. Voice-based services in local languages are more accessible to illiterate women than text-based platforms; interactive services that allow question-asking are more engaging than one-way broadcasts (McGuire *et al.*, 2022) ^[34]. Digital literacy enables access to e-commerce platforms, digital payment systems, social media for brand building, and online learning (Hegde and Bhandari, 2025) ^[28]. Training programs that provide hands-on practice in women-only learning environments show greater promise than one-time demonstrations or mixed-gender sessions (Saha *et al.*, 2024) ^[54].

E-commerce platforms offer farm women potential access to distant markets and premium prices. In India, platforms such as Amazon Fresh, BigBasket, and various state-level e-marketing initiatives have created new channels for women-led enterprises (John, 2025) ^[29]. Women-led enterprises operating at small scale may struggle to meet platform requirements without institutional support for aggregation, quality control, and logistics coordination.

5.6 Entrepreneurial Orientation Outcomes

5.6.1 Innovation and Enterprise Development

Innovation among farm women manifests in product innovation (new value-added products, organic certification), process innovation (improved techniques, labour-saving technologies), market innovation (direct marketing, e-commerce), and organisational innovation

(collective enterprise and cooperative formation) (De Rosa *et al.*, 2020; Rosa *et al.*, 2021) ^[19,53].

5.6.2 Income Generation and Economic Performance

Muindi and Masurel (2022) ^[39] demonstrate significant positive relationships between entrepreneurial orientation dimensions and entrepreneurial performance. Women scoring higher on EO dimensions achieved superior firm performance, personal wealth development, and social performance. However, in patriarchal settings, women's enterprise income may be appropriated by male household heads, limiting women's control over their entrepreneurial returns (Theis *et al.*, 2018) ^[61].

5.6.3 Empowerment and Livelihood Improvement

Broader empowerment impacts extend beyond economic metrics to encompass enhanced decision-making authority, improved nutritional outcomes for children, greater investment in education, expanded social networks, and increased political participation (Rola-Rubzen *et al.*, 2020; Quisumbing *et al.*, 2021) ^[52,49]. These outcomes align with the SDGs and justify public investment in women's entrepreneurial development. As Mudege *et al.* (2015) ^[37] caution, empowerment goes beyond counting women participating in activities to ensuring that activities are in themselves empowering.

6. Discussion

6.1 Relationship between Entrepreneurial Orientation and Institutional Support

The narrative synthesis reveals a complex and bidirectional relationship between entrepreneurial orientation and institutional support. Institutional support builds the resources, skills, and confidence that constitute EO dimensions; simultaneously, women with higher EO are more likely to seek out, effectively utilise, and advocate for institutional support. This bidirectionality implies that institutional support and entrepreneurial orientation are co-constitutive rather than independent variables.

6.2 Effectiveness of Extension Systems

The effectiveness of agricultural extension varies dramatically depending upon design, delivery, and institutional context. Conventional extension systems that are male-dominated, top-down, and individually targeted consistently fail to reach and benefit women. In contrast, gender-transformative extension combining female staffing, participatory methods, household engagement, and follow-up support demonstrates significantly greater impact (Nyberg *et al.*, 2025) ^[45].

6.3 Gender-Sensitive Interventions

Gender-sensitive interventions move beyond gender-blind and gender-specific approaches toward gender-transformative approaches that seek to change the power relations and institutional structures perpetuating inequality (McGuire *et al.*, 2022) ^[34].

6.4 Institutional Barriers

Institutional barriers operate at multiple levels, creating cumulative disadvantage. At the household level, male control over land, labour, and income constrains decision-

making. At the policy level, gender-blind or weakly implemented policies perpetuate structural inequalities. At the market level, gendered trading relationships and information asymmetries disadvantage women. The most effective institutional support operates across multiple levels simultaneously (Nyberg *et al.*, 2025) ^[45].

6.5 Comparative Insights from India and Global Contexts

India presents a particularly instructive case. SHGs have reached tens of millions of women but with highly variable quality; KVKs possess substantial technical capacity but uneven gender responsiveness; and government schemes are numerous but frequently underfunded and poorly

implemented (Ghosh *et al.*, 2023; Pattnaik and Lahiri-Dutt, 2021) ^[27,46]. Developed country contexts reveal that gender disparities in agricultural entrepreneurship persist even in contexts of relative institutional sophistication, confirming that institutional support alone, without attention to cultural norms and household dynamics, is insufficient for gender equality.

7. Enabling and Disabling Factors

Tables 1-4 present key enabling factors, disabling factors, institutional barriers, and successful intervention strategies identified across the reviewed literature, organised by level of influence.

Table 1: Enabling Factors for Farm Women's Entrepreneurial Orientation

Level	Factor	Mechanism	Key Sources
Individual	Education and literacy	Enhances information processing and decision-making capacity	Desai <i>et al.</i> (2024); Nyberg <i>et al.</i> (2025)
Individual	Financial literacy	Improves credit access, investment decisions and financial management	Desai <i>et al.</i> (2024)
Individual	Technical skills	Enables adoption of improved practices and value addition	Lamontagne-Godwin <i>et al.</i> (2019)
Individual	Achievement motivation	Drives persistence, goal-directed behavior and resilience	Muindi and Masurel (2022)
Household	Husband support	Provides mobility permission, resource access and decision-making space	Po and Hickey (2020); Quaye <i>et al.</i> (2019)
Household	Shared labor responsibilities	Reduces time poverty and enables participation in training programs	Carnegie <i>et al.</i> (2020)
Group	SHG membership	Builds social capital, financial access and collective agency	Raghunathan <i>et al.</i> (2019); Ghosh <i>et al.</i> (2023)
Group	Women-only groups	Creates safe spaces for confidence building and peer learning	Beuchelt and Badstue (2013)
Group	Mixed-gender groups after initial women-only phase	Enables cross-gender collaboration and challenges stereotypes	Carnegie <i>et al.</i> (2020)
Institutional	Female extension agents	Enhances cultural acceptability, role modeling and trust building	Alvi <i>et al.</i> (2021)
Institutional	Tailored extension content	Increases relevance to women's crops, activities and constraints	Nyberg <i>et al.</i> (2025)
Institutional	Participatory methods	Promotes hands-on learning, confidence building and peer exchange	Degrande and Arinloye (2015)
Institutional	Microfinance access	Provides capital for investment, risk-taking and enterprise development	Rola-Rubzen <i>et al.</i> (2020)
Institutional	ICT and digital platforms	Expands information access, market linkages and reduces mobility constraints	Shahbaz <i>et al.</i> (2023)
Societal	Gender-aware policies	Establishes legal frameworks, resource allocation and accountability mechanisms	Tsige <i>et al.</i> (2020)
Societal	Male engagement programs	Helps transform gender norms, build allyship and reduce resistance	Najjar <i>et al.</i> (2013)

Table 2: Disabling Factors for Farm Women's Entrepreneurial Orientation

Level	Factor	Consequence	Key Sources
Individual	Low literacy	Limited access to written information and documentation barriers	Fon (2015); Misiko and Halm (2016)
Individual	Time poverty	Inability to attend training and limited enterprise management	Nyberg <i>et al.</i> (2025)
Individual	Low confidence	Self-exclusion from opportunities and limited negotiation capacity	Umar <i>et al.</i> (2021)
Household	Male control over land	Exclusion from credit, extension services and decision-making	Neway and Zegeye (2022)
Household	Restricted mobility	Limited market access, training participation and network building	Ampaire <i>et al.</i> (2017)
Household	Domestic violence	Fear of empowerment, constrained agency and physical harm	Mudege <i>et al.</i> (2015)
Group	Elite capture	Marginalization of poor women and unequal distribution of benefits	Agarwal (2020)
Group	Male-dominated cooperatives	Exclusion of women's voices and denial of leadership opportunities	Seuneke and Bock (2015)
Institutional	Male-biased extension services	Exclusion of women, irrelevant content and inappropriate training schedules	Umar <i>et al.</i> (2021)
Institutional	Lack of female staff	Cultural barriers, absence of role models and trust deficits	Lamontagne-Godwin <i>et al.</i>

			(2019)
Institutional	Complex bureaucratic procedures	Exclusion of less educated women, corruption and delays	Tsige <i>et al.</i> (2020)
Institutional	Inadequate childcare provision	Non-attendance in training programs and increased time constraints	Carnegie <i>et al.</i> (2020)
Societal	Patriarchal gender norms	Systematic discrimination, restricted public participation and suppression of women's voices	Badstue <i>et al.</i> (2020)
Societal	Religious restrictions	Mobility constraints and restrictions on male-female interactions	Alvi <i>et al.</i> (2021)
Societal	Weak policy implementation	Gap between policy rhetoric and actual practice with weak accountability mechanisms	McGuire <i>et al.</i> (2022)

Table 3: Institutional Barriers and Gender-Related Challenges

Barrier Category	Specific Challenge	Manifestation	Mitigation Strategy
Structural	Land tenure discrimination	Women rarely own land and therefore lack collateral for institutional credit access	Joint land titling, legal reforms and alternative collateral mechanisms
Structural	Male-dominated extension workforce	Women feel uncomfortable interacting with male extension agents due to cultural restrictions	Recruitment of female extension agents, mobile extension services and digital advisory alternatives
Structural	Inadequate gender budgeting	Gender-sensitive policies exist without sufficient financial allocation or operational support	Earmarked funds, gender-responsive budgeting and expenditure tracking mechanisms
Procedural	Complex application requirements	Illiterate and marginalised women are excluded while intermediaries capture benefits	Simplified procedures, local language support and women-friendly institutional interfaces
Procedural	Inconvenient timing and location	Domestic responsibilities and mobility restrictions reduce participation	Flexible scheduling, village-level programme delivery and childcare provision
Cultural	Norms restricting women's public roles	Women experience self-exclusion, male resistance and community-level sanctions	Male engagement initiatives, gradual exposure strategies and success demonstration models
Cultural	Association of agriculture with masculinity	Women are excluded from advanced agricultural and entrepreneurial training opportunities	Female role models, women-specific training content and recognition programmes
Economic	Limited access to productive assets	Women operate small-scale, low-margin enterprises with limited growth opportunities	Asset transfer programmes, group-based investments and graduated credit support
Economic	Market exploitation by intermediaries	Women receive low prices, delayed payments and unfair quality penalties	Collective marketing systems, direct market linkages and digital market platforms

Table 4: Successful Intervention Strategies

Strategy	Description	Context	Evidence
Staged group formation	Formation of women-only groups initially followed by gradual transition to mixed-gender groups	Myanmar, India, Bangladesh	Carnegie <i>et al.</i> (2020); Beuchelt and Badstue (2013)
Couples-based training	Joint participation of husbands and wives in extension and entrepreneurship programmes	Ethiopia, Kenya, Ghana	Theis <i>et al.</i> (2018); Badstue <i>et al.</i> (2020)
Female farmer field schools	Women-led participatory learning approaches conducted on farmers' own fields	Multiple African and Asian contexts	Degrade and Arinloye (2015); Oumer <i>et al.</i> (2014)
Digital extension using voice and local language	Delivery of accessible agricultural information through localised digital platforms	India, Bangladesh, sub-Saharan Africa	Coggins <i>et al.</i> (2022); Saha <i>et al.</i> (2024)
SHG-bank linkage with business training	Integration of financial inclusion with entrepreneurial skill development	India	Raghunathan <i>et al.</i> (2019); Desai <i>et al.</i> (2024)
Gender-responsive budgeting in agriculture	Allocation of dedicated funds for women-focused agricultural and entrepreneurship programmes	Rwanda, Ethiopia, India	Randell and McCloskey (2014); Tsige <i>et al.</i> (2020)
Male champion identification	Engagement of supportive men as allies and advocates for women's empowerment	Multiple contexts	Quaye <i>et al.</i> (2019); Najjar <i>et al.</i> (2013)
Childcare support at training venues	Provision of childcare facilities to reduce women's reproductive labour burden during training	Myanmar, India	Carnegie <i>et al.</i> (2020)
Women-led FPOs and cooperatives	Collective enterprise models managed and controlled by women	India, Kenya, Uganda	Arunkumar <i>et al.</i> (2025); Agarwal (2020)

8. Conceptual Framework

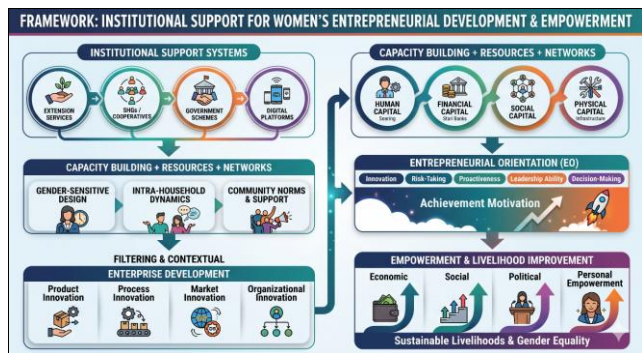


Fig 1: Author's Conceptual Framework: Institutional Support, Entrepreneurial Orientation, and Empowerment among Farm Women

Framework Description

The conceptual framework posits that institutional support systems-encompassing agricultural extension, SHGs and cooperatives, government schemes, and digital platforms-generate capacity building, resources, and networks that constitute the foundation for entrepreneurial development. Their effectiveness is mediated by three critical factors: gender-sensitive design of interventions, intra-household dynamics, and community norms and support structures.

Gender-sensitive design ensures that institutional support is delivered in ways that are accessible and empowering for women through female staff, flexible scheduling, local language use, and content relevance. Intra-household dynamics determine whether women can deploy enhanced capabilities within the domestic sphere.

When effectively mediated, institutional support enhances entrepreneurial orientation across its six dimensions: innovativeness, risk-taking, proactiveness, leadership ability, decision-making capacity, and achievement motivation. Enhanced EO in turn drives enterprise development through product, process, market, and organisational innovations, ultimately generating multidimensional empowerment across economic, social, political, and personal domains. The framework emphasises feedback loops-empowered women are better positioned to access and leverage institutional support, creating virtuous cycles. Conversely, when mediating factors are unfavourable, institutional support may generate dependency or backlash.

9. Policy and Practical Implications

9.1 For Policy Makers

Policy makers should promote gender-responsive agricultural reforms through dedicated budgeting, stronger land rights, women's representation in institutions, and gender-disaggregated monitoring systems to ensure meaningful empowerment outcomes.

9.2 For Extension Agencies

Extension agencies must recruit more female staff, provide gender-sensitive training, and design women-centred programs using flexible, participatory, and locally accessible approaches.

9.3 For NGOs

NGOs should scale successful gender-transformative practices, engage men as allies, strengthen local institutional capacity, and adopt intersectional approaches that address diverse women's experiences.

9.4 For Financial Institutions

Financial institutions should develop flexible, women-friendly financial products, simplify procedures, integrate financial literacy training, and support group-based lending through SHGs and cooperatives.

9.5 For Researchers

Researchers should prioritise longitudinal and intersectional studies, evaluate institutional effectiveness, and use participatory methods that centre women's voices and local realities.

9.6 For Rural Development Agencies

Rural development agencies should adopt integrated development approaches, strengthen institutional coordination, expand digital infrastructure, and promote women-led collective enterprises such as FPOs and cooperatives.

10. Research Gaps and Future Directions

10.1 Lack of Longitudinal Studies

Most research on farm women's entrepreneurship employs cross-sectional designs that capture snapshots rather than trajectories. Longitudinal studies are essential for understanding how entrepreneurial orientation develops over time and which interventions generate sustained effects. Future research should prioritise panel data collection, cohort studies, and retrospective life-history approaches.

10.2 Limited Studies on Digital Entrepreneurship

Research examining women's digital entrepreneurship-including e-commerce, social media marketing, and digital service provision remains limited. Future research should examine which digital platforms are most accessible and beneficial for women, how digital literacy can be effectively built, and how digital and non-digital strategies can be integrated.

10.3 Need for Regional Comparisons

Existing research is concentrated in India and sub-Saharan Africa, with limited coverage of Latin America, Southeast Asia, Central Asia, and the Middle East. Comparative research across regions would illuminate which institutional configurations are most effective under different agro-ecological, economic, and cultural conditions.

10.4 Lack of Intersectional Approaches

Most research treats women farmers as a homogeneous category, obscuring differences based on caste, class, religion, ethnicity, age, marital status, land ownership, and disability. Future research must employ intersectional frameworks to design and evaluate differentiated interventions.

10.5 Need for Institutional Effectiveness Studies

While numerous studies document the existence and reach of institutional support programs, relatively few rigorously evaluate their effectiveness in enhancing entrepreneurial orientation. Impact evaluation employing experimental or quasi-experimental designs is needed to establish causal relationships between institutional mechanisms and outcomes.

10.6 Need for Empirical Validation Studies

The conceptual framework proposed in this review requires empirical validation across diverse contexts. Quantitative structural equation modelling, qualitative comparative analysis, and mixed-methods approaches can test the hypothesised relationships. Validation studies should examine whether the framework holds across contexts and identify context-specific modifications.

10.7 Emerging Research Frontiers

Several emerging areas warrant scholarly attention, including climate change adaptation and women's entrepreneurial resilience, the role of migration and remittances in shaping women's agricultural entrepreneurship, youth engagement and intergenerational transfer of farm women's enterprises, and the interface between traditional knowledge systems and modern institutional support mechanisms.

11. Conclusion

This narrative review highlights that farm women's entrepreneurial orientation is strongly shaped by institutional support systems rather than individual factors alone. Agricultural extension services, SHGs, KVKs, NGOs, government schemes, microfinance institutions, and digital platforms contribute significantly to agripreneurial development when designed in gender-sensitive and culturally appropriate ways.

The review further shows that effective support systems combine material assistance with efforts to transform gender relations at household, community, and policy levels. The proposed framework explains how institutional support strengthens entrepreneurial orientation and promotes women's empowerment and livelihood improvement. Important research gaps remain in longitudinal studies, digital entrepreneurship, regional comparisons, and intersectional analysis addressing these is essential for sustainable, equitable, and inclusive agricultural development.

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