

a Model For Enhancing Economic Inclusion Through Community-Based Entrepreneurship Programs: a Study of Fatayat NU in South Sulawesi

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KEYWORDS	ABSTRACT
Keywords: Economic Inclusion; Community-Based Entrepreneurship; Fatayat NU; Women's Empowerment; Hub-and-Spoke Model. Conflict of Interest Statement: The author(s) declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest. Copyright © 2026 Vifada Management and Social Sciences. All rights reserved.	Purpose: This study aims to analyze community-based entrepreneurship and develop an initial design of a Tiered Hub-and-Spoke Economic Inclusion Model integrating supply chain coordination, Ahlussunnah wal Jama'ah socio-religious capital, and the local wisdom of Siri' na Pacce to support women's economic empowerment among Fatayat NU members in South Sulawesi. Research Method: An exploratory sequential mixed-methods design was employed. The qualitative stage involved Focus Group Discussions (FGDs) to identify initial conditions, business needs, and model components, followed by a survey of 30 women who owned or managed businesses in Makassar City and Gowa Regency. The eight-item instrument was valid and reliable (Cronbach's Alpha = 0.835). Simple linear regression was used for quantitative analysis. Results and Discussion: Community-Based Entrepreneurship had a positive and significant effect on Economic Inclusion ($B = 0.672$; $t = 5.950$; $p < 0.001$), with $R^2 = 0.558$. These findings provide preliminary empirical support for refining the proposed model rather than evidence of its implementation effectiveness. Implications: The findings support community-based capacity building, business formalization, financing access, digitalization, and coordinated supply-chain development. Future studies should test the model using larger samples and implementation-based designs. Originality: The study integrates community entrepreneurship, Islamic socio-religious capital, Siri' na Pacce, and a Hub-and-Spoke inclusion mechanism within a women's economic empowerment framework.

1) Introduction

Women's economic empowerment has become a central concern in contemporary management and entrepreneurship research, particularly in relation to inclusive economic development, organizational sustainability, and the reduction of structural inequalities. Within the framework of the Sustainable Development Goals (SDGs), gender equality and decent work are closely associated with women's opportunities to participate in productive economic activities, access entrepreneurial resources, and develop sustainable enterprises. Nevertheless, women's entrepreneurial participation remains constrained by unequal access to financial resources, institutional support, technology, and business networks. [Jeong and Yoo \(2022\)](#) demonstrated that women's participation in social entrepreneurship is shaped by interconnected organizational, social, and institutional conditions. Similarly, [Roy and Patro \(2022\)](#) identified persistent gender disparities in financial inclusion, emphasizing the need to examine how financial systems and institutional arrangements influence women's economic opportunities. These findings suggest that women's economic empowerment should not be understood solely as an individual entrepreneurial achievement but also as a management challenge involving resource allocation, organizational coordination, and institutional accessibility.

From a management perspective, women's microenterprises are important contributors to local economic activity, household livelihoods, and community development. However, their sustainability is frequently affected by limited managerial capabilities, inadequate financial access, fragmented business relationships, and unequal opportunities for organizational development. [Saluja et al. \(2023\)](#) identified financial exclusion as a multidimensional challenge requiring institutional, educational, and policy-related interventions. [Malmström et al. \(2024\)](#) further demonstrated that gender-related social norms help explain variations in entrepreneurs' access to bank financing, highlighting the importance of the broader institutional environment. These problems become particularly relevant in community-based entrepreneurial settings, where individual business owners may possess valuable productive capabilities but lack the organizational infrastructure necessary to integrate resources, standardize business practices, and establish competitive market relationships. Consequently, management approaches that emphasize collective entrepreneurship, resource integration, and coordinated business development warrant greater scholarly attention.

Recent developments in entrepreneurship research have increasingly emphasized the interaction between digital transformation, entrepreneurial capabilities, and sustainable value creation. [Holzmann and Gregori \(2023\)](#) examined the potential of digital technologies to support sustainable entrepreneurship, identifying business-model innovation and stakeholder inclusion as important mechanisms for sustainable value creation. Similarly, [Seyed Taheri \(2024\)](#), through a systematic literature review, highlighted opportunities associated with digitalization in women's entrepreneurship and sustainability. These studies suggest that digital technology can contribute to entrepreneurial development by improving market connectivity, facilitating interactions with stakeholders, and supporting innovative business models. However, the adoption of digital technologies does not automatically produce sustainable entrepreneurial outcomes. Its contribution depends on complementary organizational capabilities, access to resources, and the capacity of enterprises to incorporate digital tools into their operational and strategic activities. This distinction is important because technology-based interventions that overlook organizational coordination may have limited effectiveness in addressing the structural constraints experienced by women-owned microenterprises.

The growing relevance of social capital has introduced another important perspective into the study of women's entrepreneurial development. [Rahmatika et al. \(2024\)](#) examined online social capital in female entrepreneurship, highlighting the importance of social relationships and network-based resources for entrepreneurial empowerment. In Indonesia, [Tanoto and Tahalele \(2024\)](#) found that information and communication technology contributes to women's entrepreneurial empowerment through social and psychological capital. More recently, [Putri et al. \(2025\)](#) reported that social capital and entrepreneurial orientation are relevant to the business performance of women entrepreneurs in Bogor. Collectively, these findings demonstrate that networks, trust, knowledge exchange, and entrepreneurial capabilities are interconnected resources that can support enterprise development. Nevertheless, much of the evidence focuses on relationships among entrepreneurial resources, individual capabilities, and business outcomes rather than on the organizational mechanisms through which social capital can be transformed into an integrated business management system. The distinction between possessing social capital and managing it as a collective economic resource therefore represents an important conceptual issue.

The literature on women's entrepreneurship also increasingly recognizes the importance of contextual and institutional conditions. [Naguib and Barbar \(2025\)](#) proposed a multilevel and institutional perspective for understanding the relationship between female entrepreneurship and sustainability, illustrating the relevance of institutional pressures and broader socioeconomic environments. [Martins et al. \(2025\)](#) examined informal female entrepreneurship and emphasized the complex interaction among socioeconomic circumstances, cultural influences, and institutional arrangements. Their findings indicate that entrepreneurial activities cannot be adequately explained through individual characteristics alone, particularly when business activities operate within informal or community-oriented environments. Accordingly, the effectiveness of collective business models may depend on their compatibility with existing social norms, organizational structures, and shared community values. This perspective is particularly relevant to women's religious and community

organizations, where interpersonal trust, shared identity, mutual assistance, and moral commitments can potentially influence how economic activities are organized and governed.

In Indonesia, the intersection of women's entrepreneurship, digital participation, and community relationships provides an important setting for examining alternative management approaches. [Subekti and Perbawasari \(2025\)](#) demonstrated that social media serves not only as a marketing channel for women microentrepreneurs but also as a space for identity formation, social interaction, and collective empowerment. [Luawo \(2025\)](#), through a bibliometric and systematic literature review, identified social capital as an important contributor to women's entrepreneurial capabilities and the sustainability of micro, small, and medium-sized enterprises. [Furthermore, Azis \(2026\)](#) reported that digital capability among women entrepreneurs in Makassar was associated with household economic resilience indirectly through business performance. These findings reinforce the view that economic empowerment emerges through interactions among technological capabilities, social networks, entrepreneurial performance, and wider socioeconomic outcomes. However, they also point toward the need for management frameworks that explain how these different resources can be collectively coordinated instead of being developed through disconnected entrepreneurial interventions.

The relevance of an integrated management approach becomes particularly apparent in the context of Fatayat Nahdlatul Ulama (Fatayat NU) in South Sulawesi, Indonesia. As a women's socio-religious organization, Fatayat NU provides a potentially valuable institutional setting for community-based entrepreneurship through its organizational networks, shared identity, and community relationships. The central management issue explored in this review concerns the possibility that socially connected microenterprises may continue to operate as economically fragmented units when collective governance mechanisms, business coordination systems, and shared market infrastructure are insufficiently developed. This issue is examined as a context-specific proposition rather than as an empirically established condition of all Fatayat NU enterprises. A related review by [Suharyati and Handayani \(2024\)](#) identified multiple interconnected factors affecting women-owned enterprises in the digital era, suggesting that business development requires more than a single capability-building intervention. Similarly, [Musaigwa and Nojiyeza \(2026\)](#) concluded that digital entrepreneurship can support women's economic empowerment, but structural inequalities and ecosystem conditions continue to influence the distribution of its benefits. Together, these studies provide a rationale for considering organizationally integrated approaches to women's entrepreneurship in community-based settings.

Despite these advances, the literature remains fragmented across several related but insufficiently integrated research streams. Studies of female entrepreneurship have examined financial barriers, digitalization, social capital, and entrepreneurial capabilities, while research on sustainability and institutional environments has emphasized broader contextual influences. However, existing findings do not yet establish a consolidated management framework that simultaneously explains collective organizational governance, the coordination of distributed microenterprises, digital market integration, and culturally embedded business relationships. [Hribersek and Bird \(2022\)](#) highlighted the fragmentation of female entrepreneurship research and the need for more cohesive conceptual development. [Abdullah et al. \(2025\)](#) similarly documented the continuing challenges faced by women entrepreneurs operating within digital environments. These contributions underscore the value of moving beyond isolated explanations of entrepreneurial success toward an integrated understanding of how individual enterprises and collective institutions can collaborate to create sustainable economic value.

To address this conceptual gap, the present literature review proposes an Integrated Hub-and-Spoke Management Model as a potential framework for community-based women's economic empowerment. Within this proposed arrangement, the central organizational entity (hub) functions as a coordination mechanism responsible for collective business governance, product standardization, administrative support, financial facilitation, market development, and digital integration. Individual women-owned microenterprises (spokes) maintain their productive activities while participating in coordinated business processes and shared organizational resources. The model is further conceptualized as being embedded in the socio-religious values of Ahlussunnah wal Jama'ah, including

shiddiq (truthfulness), amanah (trustworthiness), and ta'awun (mutual assistance), together with the South Sulawesi cultural philosophy of Siri' na Pacce, associated with dignity, social responsibility, and solidarity. These values are proposed as contextual foundations for collective governance rather than treated as already validated predictors of enterprise performance. The model therefore combines organizational coordination, resource-sharing mechanisms, entrepreneurial capabilities, and culturally embedded governance within a unified conceptual structure.

Accordingly, this review addresses the following research question: How can community-based entrepreneurship, organizational resource integration, digital capabilities, and socio-cultural governance be synthesized into an integrated Hub-and-Spoke management framework for women's economic empowerment? More specifically, the review seeks to identify the principal organizational and institutional barriers affecting women-owned microenterprises, synthesize the managerial mechanisms that support collective entrepreneurship, and develop a conceptual framework appropriate for community-based business development. The proposed novelty lies in integrating the Hub-and-Spoke coordination architecture with women's entrepreneurship, social capital, digital business capabilities, and culturally embedded governance, particularly within the organizational context of Fatayat NU in South Sulawesi. Unlike studies that separately examine entrepreneurial barriers, digital adoption, or social relationships, this review aims to explain how these dimensions may interact within a collective management system. Its anticipated contribution is primarily conceptual: establishing a set of theoretically informed relationships and propositions that can guide subsequent empirical investigation, model validation, and organizational implementation.

The remainder of this paper is organized as follows. Section 2 describes the literature review methodology, including the search strategy, eligibility criteria, study selection, and synthesis procedures. Section 3 presents the thematic findings concerning women's entrepreneurial barriers, social capital, digital capabilities, organizational integration, and socio-cultural governance. Section 4 discusses the proposed Integrated Hub-and-Spoke Management Model and its theoretical and managerial implications. Finally, Section 5 summarizes the conclusions, identifies the limitations of the review, and proposes directions for future empirical research.

Two additional studies further strengthen the proposed framework. [Treanor \(2022\)](#) emphasized the importance of gender-sensitive and context-specific approaches to entrepreneurship, particularly in environments where institutional structures influence women's access to entrepreneurial opportunities. [Saluja \(2024\)](#) identified crowdfunding as an alternative financing mechanism for women entrepreneurs while emphasizing the continuing importance of social networks, trust, and financial literacy. These insights suggest that an integrated community-based management model should incorporate both institutional sensitivity and diversified financing arrangements. They also reinforce the need to investigate whether collective organizational structures can reduce the transaction costs and resource-access barriers associated with independently managed microenterprises.

2) Literature Review and Hypothesis Development

Women's economic inclusion refers to the extent to which women have equitable opportunities to access, control, and utilize economic resources, participate in entrepreneurial activities, and make independent financial decisions. From a management perspective, economic inclusion extends beyond income generation to encompass access to formal financial services, entrepreneurial capabilities, digital technologies, market networks, and leadership opportunities. These dimensions are interconnected because access to financial resources alone may be insufficient to ensure sustainable entrepreneurial development without complementary managerial capabilities and institutional support. [Roy and Patro \(2022\)](#) highlighted persistent gender disparities in financial inclusion, emphasizing the importance of addressing barriers that restrict women's participation in financial systems. Similarly, [Saluja et al. \(2023\)](#) identified financial, educational, and institutional constraints as interconnected challenges affecting women's economic participation.

The significance of women's economic inclusion is further reflected in Sustainable Development Goals 5 and 8, which emphasize gender equality, decent work, and inclusive economic growth. In the context of microenterprise development, financial inclusion plays an important role

in enabling women entrepreneurs to mobilize capital, manage business risks, and pursue opportunities for enterprise expansion. However, the availability of financial services does not necessarily translate into effective financial participation when entrepreneurs face limited financial literacy, inadequate institutional support, or restricted access to entrepreneurial networks. [Malmström et al. \(2024\)](#) demonstrated that gender-related factors influence entrepreneurs' access to bank financing, suggesting that financial exclusion is partly embedded in broader institutional and social arrangements. These findings indicate that economic inclusion should be examined as a multidimensional outcome rather than merely as access to credit or financial accounts.

Recent studies have increasingly recognized the contribution of collective arrangements to overcoming financial barriers among women entrepreneurs. [Simba et al. \(2023\)](#) examined community-based financing arrangements in developing economies and found that reciprocity, solidarity, collective participation, and interpersonal trust facilitated women's access to shared financial resources. Their findings provide evidence that community relationships can function as alternative mechanisms for resource mobilization, particularly where formal financial institutions remain difficult to access. Nevertheless, collective financing arrangements may also encounter challenges involving governance, accountability, resource limitations, and uneven member participation. Therefore, strengthening women's economic inclusion requires organizational mechanisms that combine financial accessibility with entrepreneurial capacity development, transparent resource management, and sustainable market participation.

Collective entrepreneurial cooperation represents an essential dimension of community-based entrepreneurship because it enables entrepreneurs to share resources, exchange business knowledge, coordinate production activities, and access opportunities through community networks. In resource-constrained environments, collaboration may reduce individual operational burdens and facilitate access to resources that would otherwise be difficult to obtain independently. [Simba et al. \(2023\)](#) found that collective relationships characterized by solidarity, reciprocity, and trust played an important role in facilitating community-based financing among women entrepreneurs. Their findings suggest that collaborative mechanisms can help reduce certain barriers to entrepreneurial participation. [Tanoto and Tahalele \(2024\)](#) further demonstrated the importance of social capital in supporting women's entrepreneurial empowerment in Indonesia. These findings reinforce the argument that entrepreneurial relationships can generate benefits beyond individual business capabilities. Nevertheless, collaborative arrangements are not inherently effective; unequal participation, weak accountability, and poorly coordinated activities may limit their contribution to economic outcomes. Effective community entrepreneurship therefore requires cooperation supported by organizational commitment, transparent resource allocation, and coordinated business management.

Within Fatayat NU, collective entrepreneurial cooperation is expected to facilitate financial resource sharing, market networking, and opportunities for entrepreneurial leadership. By strengthening relationships among women entrepreneurs and supporting collective problem-solving, community-based entrepreneurship may improve members' capacity to participate in productive economic activities. Based on these theoretical arguments and empirical findings, the first hypothesis is formulated as follows:

H1: Collective entrepreneurial cooperation has a positive and significant relationship with women's economic inclusion among Fatayat NU members in South Sulawesi.

Entrepreneurial capacity building refers to the systematic development of knowledge, managerial competencies, technical skills, and business capabilities required to establish, manage, and expand entrepreneurial activities. Within women's microenterprises, capacity-building initiatives may include financial literacy education, production management, product innovation, digital marketing, business planning, and regulatory compliance. These capabilities are particularly relevant because access to resources may not generate meaningful economic outcomes when entrepreneurs lack the knowledge or managerial competencies necessary to utilize them effectively. From a human capital perspective, education, training, and experience contribute to the development of productive competencies that support economic participation. However, entrepreneurial capacity building is

more complex than the provision of occasional training programs. Its effectiveness depends on the relevance of learning materials, opportunities for practical application, continued institutional support, and entrepreneurs' capacity to integrate acquired knowledge into business operations. [Holzmann and Gregori \(2023\)](#) highlighted the role of digital technologies in sustainable entrepreneurship, suggesting that entrepreneurial development increasingly requires capabilities that connect technological resources with business innovation and organizational processes.

Recent empirical evidence in Indonesia further supports the relevance of integrated entrepreneurial capabilities. [Tanoto and Tahalele \(2024\)](#) found that information and communication technology contributed to women's entrepreneurial empowerment through social and psychological capital. Their findings indicate that technological resources may become more valuable when accompanied by supportive social relationships and individual capabilities. Accordingly, capacity-building strategies that focus exclusively on technical training without strengthening organizational relationships and managerial practices may be insufficient to support sustainable economic inclusion. Peer mentoring provides an additional mechanism for entrepreneurial capability development. Unlike conventional training, peer mentoring emphasizes reciprocal learning, practical experience sharing, collaborative problem-solving, and continued interaction among entrepreneurs. Within community-based organizations, more experienced entrepreneurs may support other members by sharing knowledge about business management, supplier relationships, financial planning, and market development. This arrangement is conceptually consistent with the findings of [Simba et al. \(2023\)](#), who identified reciprocity and collective relationships as important mechanisms in community-based entrepreneurial resource mobilization. Nevertheless, their study primarily investigated financing relationships; it does not directly establish the effectiveness of formal peer-mentoring programs.

Within the proposed Hub-and-Spoke Management Model, entrepreneurial capacity building and peer mentoring are therefore considered complementary management mechanisms. The Hubs may coordinate structured training and business development assistance, while experienced members within the Spokes may facilitate peer-to-peer knowledge exchange and practical mentoring. These activities are expected to improve members' managerial competence, confidence in business decision-making, and capacity to access economic opportunities. Accordingly, entrepreneurial training and peer mentoring are expected to contribute positively to women's economic inclusion by strengthening the capabilities required to utilize financial resources, develop business networks, and generate independent income. Based on this reasoning, the second hypothesis is proposed as follows: **H2: Entrepreneurial capacity building and peer mentoring have a positive and significant relationship with women's economic inclusion among Fatayat NU members in South Sulawesi.**

The effectiveness of community-based entrepreneurship cannot be explained exclusively through economic resources, managerial capabilities, and organizational structures. Social norms, religious values, and cultural identities may also influence business relationships, collective participation, and entrepreneurial decision-making. From an institutional perspective, organizational behavior is shaped not only by formal rules and procedures but also by informal norms that influence trust, legitimacy, cooperation, and accountability. Within community-based enterprises, these informal mechanisms may provide important foundations for sustainable collaborative relationships. [Parwez \(2017\)](#) emphasized that shared cultural values, mutual trust, and community relationships contribute to the organization of entrepreneurial activities. More recently, [Simba et al. \(2023\)](#) demonstrated that reciprocity, solidarity, and trust supported collective financial resource mobilization among women entrepreneurs. These studies provide a theoretical basis for understanding the potential economic functions of socially embedded values. However, their findings do not establish that specific religious or local cultural principles necessarily produce higher levels of economic inclusion. Such relationships require careful contextual interpretation and empirical examination. Within Fatayat NU, the principles of Ahlussunnah wal Jama'ah (Aswaja) provide a normative foundation for community relationships and organizational conduct. Three values are particularly relevant to the proposed entrepreneurial framework. Shiddiq, or truthfulness, emphasizes honesty and integrity in business transactions and financial reporting. Amanah, or trustworthiness, reflects responsibility and accountability in managing collective resources and

fulfilling business commitments. Ta'awun, or mutual assistance, promotes cooperation, collective support, and reciprocal responsibility among community members. These values may strengthen organizational relationships by encouraging transparent transactions, reducing opportunistic behavior, and promoting cooperation among entrepreneurs. From a management perspective, their relevance lies in the potential translation of ethical commitments into organizational practices, including shared decision-making, financial accountability, collective mentoring, and responsible resource management. However, ethical principles should not be assumed to function automatically as effective governance mechanisms. Their operational contribution depends on how consistently they are practiced, institutionalized, and supported through formal management procedures.

In addition to Aswaja principles, the cultural philosophy of Siri' na Pacce, associated with communities in South Sulawesi, provides another contextual dimension. Siri' relates to dignity, honor, and responsibility, whereas Pacce reflects empathy, compassion, and social solidarity. Within a community entrepreneurship framework, these values may encourage commitment to product quality, fulfillment of business responsibilities, and sensitivity to the economic difficulties experienced by other community members. Their inclusion provides a context-sensitive perspective on the relationships between cultural identity, collective governance, and women's entrepreneurial participation. The integration of Aswaja values and Siri' na Pacce is therefore proposed as a mechanism for strengthening ethical entrepreneurial governance and community solidarity. However, the potential economic contributions of these values should be distinguished from their normative importance. The present study conceptualizes their internalization as observable entrepreneurial practices, including honest transactions, fulfillment of collective responsibilities, reciprocal assistance, and commitment to shared business standards. It is expected that stronger internalization of these values may contribute to trust-based collaboration and improve women's opportunities to participate in community economic activities. Accordingly, the third hypothesis is developed as follows:

H3: The internalization of Aswaja values and Siri' na Pacce has a positive and significant relationship with women's economic inclusion among Fatayat NU members in South Sulawesi.

3) **Research Design and Methodology**

This study employed an exploratory sequential mixed-methods design, integrating qualitative exploration and quantitative analysis. The qualitative phase aimed to identify entrepreneurial challenges, organizational resources, and business development needs among Fatayat Nahdlatul Ulama (Fatayat NU) members in South Sulawesi, Indonesia. The findings informed the preliminary development of the Integrated Hub-and-Spoke Management Model and the quantitative research instrument. The subsequent quantitative phase examined the relationship between community-based entrepreneurship and women's economic inclusion using simple linear regression. Following [Creswell \(2018\)](#), this sequential approach enabled the integration of contextual insights with preliminary statistical evidence. The study focused on conceptual model development rather than evaluating the effectiveness of an implemented intervention. The study was conducted in Makassar City and Gowa Regency, South Sulawesi, Indonesia. Makassar represents an urban economic environment characterized by broader market opportunities and digital business activities, whereas Gowa represents a suburban and agricultural setting with potential for local production and microenterprise development. These locations were selected to explore potential linkages between community-based production activities and urban marketing networks.

Qualitative participants included Fatayat NU administrators, community representatives, and women entrepreneurs with relevant organizational and business experience. The quantitative sample consisted of 30 Fatayat NU members selected through purposive sampling. Eligible respondents were required to own or manage an active business, reside or operate in Makassar or Gowa, and voluntarily participate in the study. The sample was intended to provide preliminary empirical insights rather than statistically representative estimates for all Fatayat NU entrepreneurs in South Sulawesi.

The research instrument consisted of a structured questionnaire using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Two principal variables were examined: community-based entrepreneurship (X) and women's economic inclusion (Y).

Community-based entrepreneurship was measured through collective cooperation, entrepreneurial training and organizational support, peer mentoring, and the internalization of Aswaja and Siri' na Pacce values. Women's economic inclusion was assessed through access to financial resources, entrepreneurial leadership opportunities, and perceived economic independence. Additional contextual considerations included employment opportunities and community economic development in relation to Sustainable Development Goal 8.

Table 1. Research Variables and Measurement Indicators

Variable	Code	Measurement indicator	Major reference
Community-Based Entrepreneurship (X)	CBE1	Collective entrepreneurial cooperation	Parwez (2017); Simba et al. (2023)
	CBE2	Entrepreneurial training and organizational support	Holzmann & Gregori (2023)
	CBE3	Peer mentoring and knowledge sharing	Simba et al. (2023)
	CBE4	Internalization of Aswaja and Siri' na Pacce values	Contextualized from qualitative findings
Women's Economic Inclusion (Y)	WEI1	Access to financial resources	Roy & Patro (2022); Saluja et al. (2023)
	WEI2	Entrepreneurial leadership opportunities	Tanoto & Tahalele (2024)
	WEI3	Perceived independent income and economic self-reliance	Saluja et al. (2023)

Source: Authors' conceptualization based on previous literature and the qualitative research framework.

Data were collected through focus group discussions (FGDs), structured questionnaires, participatory observation, and documentation. FGDs explored entrepreneurial challenges, collective business opportunities, organizational support, and the proposed functions of the Hub-and-Spoke Management Model. Participatory observation was used to examine existing business activities and community interactions, while organizational records and business-related documents provided supplementary contextual information. Questionnaire responses were subsequently collected to measure community-based entrepreneurship and women's economic inclusion and assess the perceived relevance of the preliminary model components. Qualitative data were analyzed thematically through coding, categorization, and interpretation to identify recurring patterns relevant to the proposed management model. Quantitative data were analyzed using descriptive statistics, instrument validity and reliability assessments, and simple linear regression. Item validity was evaluated by comparing item-total correlation coefficients with a critical value of 0.361 for a two-tailed test with 30 observations, while reliability was assessed using Cronbach's alpha, with a minimum threshold of 0.70. Regression assumptions were examined through the Shapiro-Wilk test for residual normality and a linearity assessment using the deviation-from-linearity procedure. Hypothesis testing was conducted at a 5% significance level using the t-test, while the coefficient of determination (R^2) indicated the proportion of variance in women's economic inclusion statistically explained by community-based entrepreneurship.

4) **Results and Discussion**

a) **Results**

Respondent Characteristics and Business Profiles

This study involved 30 women entrepreneurs affiliated with Fatayat Nahdlatul Ulama (Fatayat NU) in South Sulawesi, Indonesia, who actively operated businesses in Makassar City and Gowa Regency. These two locations represent distinct but potentially complementary economic environments, encompassing urban market-oriented activities and local resource-based production. Regarding geographical distribution, 53.3% of respondents ($n = 16$) operated businesses in Gowa

Regency, while 46.7% (n = 14) were based in Makassar City. Respondents from Gowa were predominantly engaged in local commodity-based enterprises, processed food production, and handicrafts utilizing locally available resources. In contrast, respondents from Makassar were more frequently involved in downstream entrepreneurial activities, including culinary businesses, creative industries, Muslim fashion products, and digitally supported trading activities. The geographical distribution revealed different entrepreneurial characteristics between the two locations. Gowa demonstrated potential advantages in raw material availability and primary production, whereas Makassar offered opportunities associated with product processing, digital commerce, and broader consumer markets. These observed characteristics provided an initial contextual basis for exploring possible production-market linkages within the proposed Hub-and-Spoke Management Model. In terms of business scale, most respondents operated microenterprises. Approximately 83.3% (n = 25) managed micro-scale businesses with financial or operational arrangements distinguishable from household activities. Nevertheless, administrative and regulatory constraints remained evident, as 70.0% (n = 21) reportedly lacked a Business Identification Number (Nomor Induk Berusaha, NIB) and halal certification. This finding indicates that business formalization and regulatory compliance were relevant concerns among the surveyed entrepreneurs.

The respondent characteristics are summarized in Table 2.

Table 2. Respondent Characteristics and Business Profiles (N = 30)

Characteristic	Category	Frequency	Percentage
Business location	Gowa Regency	16	53.3%
	Makassar City	14	46.7%
Business scale	Microenterprises with separate business arrangements	25	83.3%
	Other business arrangements	5	16.7%
Business formalization	Reportedly lacking NIB and halal certification	21	70.0%
	Remaining respondents	9	30.0%

Source: Processed primary data (2026). Percentages were calculated from 30 respondents. The business-scale and formalization categories summarize the reported survey findings.

Instrument Validity and Reliability

Before conducting regression analysis, the measurement instrument was assessed for validity and internal consistency. The instrument consisted of eight questionnaire items designed to capture dimensions related to women's economic inclusion, collective entrepreneurial cooperation, training relevance, mentoring support, and community-based business development.

Item validity was examined using correlation coefficients compared with a critical value of 0.361 at a significance level of 0.05. The reported item correlations ranged from 0.361 to 0.776. All eight items met or reached the specified threshold, although the second item was positioned at the critical boundary. The results of the item validity assessment are presented in Table 3.

Table 3. Results of Instrument Validity Testing

Item	Measurement statement	r-value	p-value
1	Access to financial resources	0.393	0.032
2	Equal opportunities for business leadership	0.361	0.050
3	Fatayat programs supporting adequate income	0.677	< 0.001
4	Teamwork prioritized over individual competition	0.377	0.040
5	Entrepreneurial training aligned with local market needs	0.776	< 0.001
6	Mentoring support for entrepreneurial confidence	0.708	< 0.001
7	Community-based business models supporting employment opportunities	0.730	< 0.001
8	Economic development contributing to broader economic self-reliance	0.655	< 0.001

Source: Processed primary data (2026). Critical correlation value = 0.361; significance level = 0.05.

The reported item correlations generally satisfied the predetermined validity criterion. However, the second item, with an r-value of 0.361 and a p-value of 0.050, should be interpreted cautiously because its statistical significance lies at the conventional threshold. The exact correlation coefficient and p-value should be verified using the unrounded statistical output.

The reliability assessment produced a Cronbach's alpha coefficient of 0.835 for the eight-item instrument, exceeding the minimum acceptance criterion of 0.70. This result indicates satisfactory overall internal consistency for the reported set of questionnaire items.

Nevertheless, because the instrument contains indicators associated with two conceptually distinct variables, the reliability of community-based entrepreneurship and women's economic inclusion should also be evaluated separately to establish the internal consistency of each construct.

Regression Assumption Testing

Prior to hypothesis testing, the assumptions of simple linear regression were assessed using residual normality and linearity tests. Residual normality was examined using the Shapiro-Wilk test, while the linearity assessment employed the deviation-from-linearity procedure.

The Shapiro-Wilk test produced a statistic of 0.954 with a significance value of 0.215, exceeding the 0.05 threshold. Therefore, the test did not indicate a statistically significant departure from residual normality. The deviation-from-linearity test yielded an F-statistic of 0.211 and a significance value of 0.930, indicating no statistically significant evidence of deviation from the specified linear relationship.

Table 4. Results of Regression Assumption Testing

Assumption test	Statistic	p-value	Interpretation
Residual normality (Shapiro-Wilk)	W = 0.954	0.215	No significant departure from normality
Linearity (Deviation from Linearity)	F = 0.211	0.930	No significant evidence of nonlinearity

Source: Processed primary data (2026). Significance level = 0.05.

These findings provided no statistical evidence of violations of the two assumptions examined, supporting the continuation of simple linear regression analysis. However, the results should not be interpreted as verification of all regression assumptions, as additional diagnostic considerations include independence of observations, homoscedasticity, and influential observations.

Simple Linear Regression and Hypothesis Testing

Simple linear regression was employed to examine the relationship between community-based entrepreneurship (X) and women's economic inclusion (Y) among Fatayat NU entrepreneurs in South Sulawesi.

The analysis produced the following estimated regression equation:

$$\hat{Y} = 5.877 + 0.672X$$

The positive regression coefficient of 0.672 indicates that a one-unit increase in the community-based entrepreneurship score was associated with an estimated 0.672-unit increase in the women's economic inclusion score. The direction of this relationship was consistent with the proposed research hypothesis. The detailed regression coefficients are presented in Table 5.

Table 5. Results of Simple Linear Regression Analysis

Predictor	B	Std. Error	t-value	p-value
Constant	5.877	2.059	2.854	0.008
Community-Based Entrepreneurship (X)	0.672	0.113	5.950	< 0.001

Source: Processed primary data (2026). Dependent variable: Women's Economic Inclusion (Y); N = 30.

The hypothesis test yielded a t-value of 5.950, exceeding the critical t-value of 2.048 at 28 degrees of freedom and a 5% significance level. The corresponding p-value was below 0.001, indicating a statistically significant positive relationship between community-based entrepreneurship and women's economic inclusion. Accordingly, the null hypothesis was rejected, and the alternative hypothesis was statistically supported. The findings indicate that higher levels of community-based entrepreneurship were associated with higher reported levels of women's economic inclusion among the surveyed Fatayat NU members. The explanatory capacity of the regression model was assessed using the correlation coefficient (R), the coefficient of determination (R^2), and adjusted R^2 .

Table 6. Model Summary and Explanatory Power

R	R Square	Adjusted R Square
0.747	0.558	0.542

Source: Processed primary data (2026). Predictor: Community-Based Entrepreneurship (X); dependent variable: Women's Economic Inclusion (Y).

The correlation coefficient of 0.747 indicates a positive association between the two variables. The coefficient of determination (R^2) of 0.558 shows that community-based entrepreneurship statistically accounted for approximately 55.8% of the observed variation in women's economic inclusion scores within the sample. The remaining 44.2% represents variation not explained by the specified regression model, including potential influences from other unmeasured factors and residual variation.

The adjusted R^2 value of 0.542 indicates that approximately 54.2% of the observed variation was accounted for after adjustment for the model's number of predictors and sample size.

b) Discussion

Community-Based Entrepreneurship and Women's Economic Inclusion

The findings reveal a positive and statistically significant relationship between community-based entrepreneurship and women's economic inclusion among Fatayat Nahdlatul Ulama (Fatayat NU) entrepreneurs in South Sulawesi ($B = 0.672$, $p < 0.001$). The coefficient of determination ($R^2 = 0.558$) indicates that community-based entrepreneurship explains 55.8% of the observed variation in economic inclusion within the sample. These results suggest that entrepreneurial cooperation, capacity-building activities, peer mentoring, and community networks collectively represent relevant resources for supporting women's economic participation. The findings are consistent with [Parwez \(2017\)](#), who emphasized the importance of social capital, trust, and collective resources in community-based entrepreneurship. Similarly, [Simba et al. \(2023\)](#) demonstrated that community networks facilitate women's access to financial resources through cooperation and reciprocity. Tanoto and Tahalele (2024) further highlighted the contribution of social capital and technological capabilities to women's entrepreneurial empowerment in Indonesia. These studies support the argument that economic inclusion depends not only on individual entrepreneurial capabilities but also on access to supportive organizational relationships. From a management perspective, the findings highlight the potential importance of transforming community relationships into coordinated economic activities.

However, economic inclusion also depends on financial literacy, market accessibility, digital capabilities, and institutional support ([Roy & Patro, 2022](#); [Saluja et al., 2023](#)). Therefore, the results support the study's main hypothesis while indicating the need for an integrated management approach. Because the analysis was cross-sectional, the findings establish an association rather than a causal effect.

Development of the Integrated Hub-and-Spoke Management Model

The respondent profiles and statistical findings provide a basis for proposing an Integrated Hub-and-Spoke Management Model to address fragmented entrepreneurial activities and limited access to business support services. The finding that 70% of respondents reportedly lacked business registration and halal certification highlights the relevance of coordinated administrative assistance. Furthermore, the complementary economic characteristics of Gowa Regency and Makassar City suggest opportunities to connect local production with urban markets.

The proposed model consists of three interconnected components. The Hubs function as organizational coordination centers responsible for business licensing assistance, entrepreneurial training, financial facilitation, branding, and digital marketing. The Spokes represent individual and community-based enterprises that maintain production activities according to their local capabilities. The Network connects these enterprises through collective marketing, distribution, and information sharing. This structure draws on supply chain integration principles emphasizing coordination and resource efficiency ([Christopher, 2016](#)). The model also incorporates the socio-religious values of Ahlussunnah wal Jama'ah (Aswaja), particularly shiddiq (truthfulness), amanah (trustworthiness), and ta'awun (mutual assistance), alongside the local cultural philosophy of Siri' na Pacce. These values provide a contextual foundation for trust, accountability, and cooperation among participating entrepreneurs. Their integration distinguishes the proposed model from approaches focused exclusively on operational and financial coordination.

Theoretical and Managerial Implications

The study contributes to community-based entrepreneurship literature by integrating social capital, organizational resource coordination, and culturally embedded governance into a proposed framework for women's economic inclusion. Its theoretical contribution lies in explaining how community relationships and shared organizational resources may be structured to support collective entrepreneurial development.

Practically, the findings suggest that Fatayat NU could strengthen women's entrepreneurship through coordinated business assistance, shared marketing facilities, and structured mentoring programs. However, the Hub-and-Spoke Management Model remains a preliminary conceptual framework and has not been implemented or evaluated. Future research should examine its feasibility and effectiveness through pilot implementation, larger samples, and longitudinal assessment.

5) Conclusion

This study examined the relationship between community-based entrepreneurship and women's economic inclusion among Fatayat Nahdlatul Ulama (Fatayat NU) entrepreneurs in South Sulawesi, Indonesia, and developed a preliminary Integrated Hub-and-Spoke Management Model. Using an exploratory sequential mixed-methods design, the study combined qualitative exploration with quantitative analysis involving 30 women entrepreneurs in Makassar City and Gowa Regency. The findings revealed a positive and statistically significant relationship between community-based entrepreneurship and women's economic inclusion ($B = 0.672$, $t = 5.950$, $p < 0.001$), with an R^2 of 0.558. These results indicate that community-based entrepreneurship accounted for 55.8% of the observed variation in women's economic inclusion within the sample.

The study contributes to management and entrepreneurship literature by proposing an integrated framework that combines collective entrepreneurship, organizational resource coordination, and socio-cultural values. The proposed model consists of three interconnected components: the Hubs as organizational coordination centers, the Spokes as local entrepreneurial units, and the Network as a collective marketing and distribution mechanism. Its originality lies in incorporating Ahlussunnah wal Jama'ah (Aswaja) values and the local philosophy of Siri' na Pacce into a community-based entrepreneurial management framework. From a practical and policy perspective, the model provides an initial reference for developing coordinated business assistance, financial

accessibility, entrepreneurial mentoring, and collective market integration within women's community organizations.

Nevertheless, the study has several limitations. The quantitative analysis involved only 30 purposively selected respondents from two locations, limiting the generalizability of the findings. Furthermore, the cross-sectional analysis identified statistical associations rather than causal relationships, and the proposed Hub-and-Spoke Management Model has not yet been implemented or evaluated. Future research should conduct pilot implementation, employ larger and more representative samples, and apply longitudinal or quasi-experimental designs to assess changes in entrepreneurial performance and economic inclusion. Additional factors, including financial literacy, digital capabilities, market conditions, and institutional support, should also be examined to strengthen the proposed model's explanatory and practical relevance.

Statement on the Use of Generative Artificial Intelligence (AI)

During the preparation of this manuscript, the authors used **ChatGPT (OpenAI)** and **Grammarly** solely to support language editing, grammar correction, clarity, and readability. All AI-assisted content was critically reviewed, revised, and validated by the authors. These tools were not used as authors or as substitutes for scientific judgment, data analysis, interpretation of findings, or the formulation of conclusions. The authors take full responsibility for the accuracy, originality, integrity, and final content of the manuscript. This disclosure complies with the journal's [Policy on the Use of Generative Artificial Intelligence \(GenAI\)](#).

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