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# Business Sustainability of Women Entrepreneurs in the Digital Era: The Role of Spiritual Capital, Digital Financial Literacy, Management Skills, and Digital Capital Access

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**Abstract:** This study aims to analyze the role of spiritual capital in enhancing women entrepreneurs' business sustainability in the digital era, particularly within the context of grassroots digital financial ecosystems such as Amartha. A quantitative approach was employed using a survey of 250 women entrepreneurs in Indonesia's culinary sector who actively utilize digital technology and participate in community-based digital financial platforms. Purposive sampling was applied, and the data were analyzed using Structural Equation Modeling (SEM). The results indicate that spiritual capital has a positive and significant effect on business sustainability. Spiritual capital also positively influences digital financial literacy and business management skills. While digital financial literacy does not directly affect business sustainability, it serves as an enabling capability through which spiritual capital contributes to sustainable business development. Business management skills demonstrate a significant positive effect on business sustainability, highlighting the importance of managerial competence in supporting women-led businesses. Furthermore, digital capital access moderates the relationship between business management skills and business sustainability, indicating that managerial capabilities become more effective when supported by digitally integrated financial ecosystems. Business sustainability in this study adopts the Triple Bottom Line perspective encompassing economic, social, and environmental dimensions. This study contributes to the women entrepreneurship and digital sustainability literature by proposing an integrated framework that combines spiritual capital, managerial capability development, and ecosystem-based digital financial access to support sustainable women-led businesses in the digital era.

**Keywords:** Business Performance, Digital Financial Literacy, MSME Sustainability, Spiritual Capital, Spiritual Values.

## INTRODUCTION

The development of digital technology has driven significant transformation in economic activities, including in the women's entrepreneurship sector. In the Indonesian context, women entrepreneurs, particularly in the culinary sector, play an important role in supporting the grassroots economy by creating employment opportunities and improving household welfare (Puspitasari et al., 2024). Along with the rapid growth of financial technology, digital financial ecosystems have increasingly become important instruments in supporting women-led

microbusiness sustainability through access to financing, digital infrastructure, and business networks.

One of the most prominent examples in Indonesia is Amartha, which initially began in 2010 as a community-based microfinance initiative in rural areas before transforming into a fintech platform that integrates digital technology, financing access, and community-based lending mechanisms. This transformation reflects the shift from conventional grassroots microfinance into a digitally integrated financial ecosystem designed to strengthen financial inclusion among underbanked women entrepreneurs. In this context, digital platforms do not merely function as financial service providers, but also as ecosystem-based infrastructures connecting capital access, technology, and entrepreneurial empowerment to support sustainable grassroots economic development.

Despite these developments, the sustainability of women's businesses in the digital era continues to face various challenges, including limited digital financial literacy, low managerial skills, and restricted access to digital resources (Faturrahman et al., 2025; Qalbia & Saputra, 2024). These challenges indicate that access to digital technology alone is insufficient without the capabilities and internal values necessary to utilize such access effectively. Business sustainability is not only influenced by economic and technical factors but also by internal non-economic factors (Tran & Nguyen-Thi-Phuong, 2024). In this study, business sustainability adopts the Triple Bottom Line perspective introduced by John Elkington, which emphasizes the integration of economic, social, and environmental dimensions in achieving sustainable business performance (Elkington, 2013).

One of the increasingly prominent factors in entrepreneurial literature is spiritual capital, which reflects internal values such as integrity, responsibility, ethical orientation, and meaningfulness in conducting business activities. Spiritual capital plays a crucial role in shaping entrepreneurial mindsets and behaviors in dealing with uncertainty, maintaining consistency, and making long-term decisions (Andersson et al., 2022; Hakim & Anshori, 2025). Within women-led microbusinesses, these internal values become increasingly relevant because entrepreneurs often operate under limited financial resources and dynamic market conditions.

The influence of spiritual capital on business sustainability is not always direct. Internal values need to be translated into practical capabilities relevant to the demands of the digital economy (Koskelainen et al., 2023). In this regard, digital financial literacy and business management skills become important capability-based factors that enable entrepreneurs to manage finances effectively, utilize digital financial services, adapt to technological changes, and operate businesses more systematically. These variables function as mediating mechanisms bridging spiritual capital and business sustainability (Elbanna et al., 2025).

External ecosystem support also plays a significant role in strengthening women entrepreneurs' sustainability. Digital capital access, which includes access to digital financial services, fintech platforms, digital infrastructure, and business networks, enables entrepreneurs to improve operational efficiency and expand market opportunities (Kiradoo, 2023). Within ecosystem-based platforms such as Amartha, digital capital access reflects not only financial inclusion but also the integration of technology, community-based financing systems, and digital empowerment mechanisms that collectively strengthen business resilience. Therefore, digital capital access functions not only as a resource but also as a moderating factor that strengthens the relationship between entrepreneurial capabilities and business sustainability (Puspita et al., 2025; Zhang et al., 2025).

Previous studies have generally examined women entrepreneurship sustainability from partial perspectives, with a predominance of quantitative approaches focusing separately on managerial, financial, or technological factors. Studies integrating spiritual capital, digital capability development, and ecosystem-based digital financial access within a comprehensive sustainability framework remain limited, particularly in the context of grassroots fintech

ecosystems for women entrepreneurs (Budiarto et al., 2024; Calabrò et al., 2021; Novita, 2025; Savitri et al., 2025; Vasconcelos, 2026). Previous studies rarely explain how internal entrepreneurial values are operationalized into sustainable business performance through digital and managerial capabilities within digitally integrated financial ecosystems.

Based on this gap, this study aims to analyze the role of spiritual capital in improving women entrepreneurs' business sustainability in the digital era by examining the mediating roles of digital financial literacy and business management skills, as well as the moderating role of digital capital access. This study contributes to the women entrepreneurship and digital sustainability literature by proposing an integrated framework that combines spiritual capital, digital capability development, and ecosystem-based digital financial access within grassroots digital financial ecosystems. Practically, the findings are expected to provide implications for policymakers and stakeholders in designing empowerment programs focused on strengthening digital capabilities, managerial skills, and inclusive digital financial ecosystems for women entrepreneurs.

Based on this description, this study adopts a quantitative approach to examine the structural relationships between variables in explaining women entrepreneurs' business sustainability in the digital era. Furthermore, the relationships between these variables are formulated in the following hypotheses:

H1: Spiritual capital has a positive effect on women entrepreneurs' business sustainability.
H2: Spiritual capital has a positive effect on digital financial literacy.
H3: Spiritual capital has a positive effect on business management skills.
H4: Digital financial literacy has a positive effect on women entrepreneurs' business sustainability.
H5: Business management skills have a positive effect on women entrepreneurs' business sustainability.
H6: Digital capital access moderates the relationship between business management skills and women entrepreneurs' business sustainability so that the relationship becomes stronger.

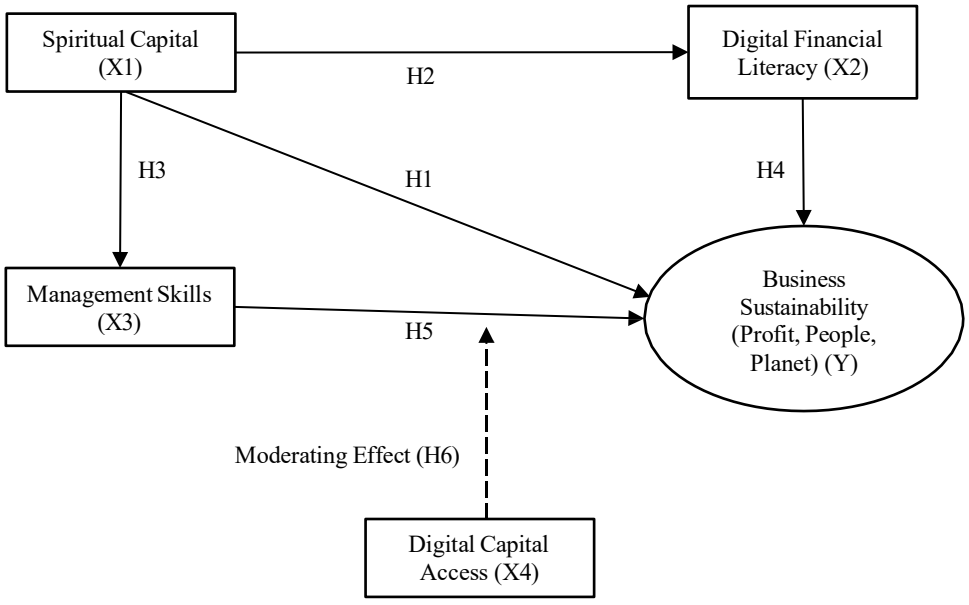



**Figure 1**. Research Conceptual Framework

## METHOD

### Types and Research Approach

This study employs a quantitative approach with an explanatory research design to examine the causal relationships among variables in explaining women entrepreneurs' business sustainability in the digital era. The explanatory approach was selected because it enables simultaneous testing of direct, mediating, and moderating relationships within an integrated conceptual framework. The study focuses on women-led microbusinesses operating within grassroots digital financial ecosystems, where digital technology, financial inclusion, and entrepreneurial capability development interact to support business sustainability. Data were collected through survey techniques using structured questionnaires, while data analysis was conducted using Structural Equation Modeling (SEM) to comprehensively examine the relationships among variables (Azhari et al., 2023; Setiawan, 2025; Wipulanusat et al., 2020).

### Population and Research Sample

The population of this study consists of women entrepreneurs engaged in the culinary sector in Indonesia who actively utilize digital technology in their business operations. The focus on women entrepreneurs was chosen because of their strategic role in supporting household and grassroots economic development within the context of the digital economy. The sampling technique used purposive sampling with several criteria, including women acting as business owners or managers, operating culinary businesses, actively utilizing digital technology such as digital payments and online marketing, and having a minimum of two years of business experience.

Respondents were connected to digital financial ecosystems, including community-based fintech platforms such as Amartha, which facilitate financing access, digital infrastructure, and technology-based financial services for grassroots entrepreneurs. Based on these criteria, a total of 250 respondents were obtained. This sample size is considered adequate for analysis using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, particularly for models involving mediation and moderation relationships. A larger sample size also improves statistical robustness and predictive accuracy.

### Operational Variables and Definitions

This study involves independent, mediating, moderating, and dependent variables to explain women entrepreneurs' business sustainability in the digital era. The operational definitions of the variables are as follows:

1) Spiritual Capital (X1)

Spiritual capital refers to internal values that reflect integrity, honesty, responsibility, ethical orientation, and meaningfulness in conducting business activities, which become the basis for entrepreneurial decision-making.

2) Digital Financial Literacy (X2)

Digital financial literacy refers to the ability of entrepreneurs to understand, access, and utilize digital financial services, including digital payment systems, fintech services, and technology-based financial management applications within digital financial ecosystems.

3) Business Management Skills (X3)

Business management skills refer to entrepreneurs' abilities to plan business activities, manage operations, market products, allocate resources, and make strategic decisions to support business development and sustainability.

4) Digital Capital Access (X4)

Digital capital access refers to entrepreneurs' ability to access digitally integrated financial services, fintech financing platforms, digital infrastructure, and business networks that support operational efficiency and business expansion.

5) Business Sustainability (Y)

Business sustainability refers to a business's ability to survive and develop continuously in the long term. In this study, business sustainability adopts the Triple Bottom Line perspective introduced by John Elkington, encompassing economic (profit), social (people), and environmental (planet) dimensions (Elkington, 2013).

**Data Collection Techniques**

Data were collected using a structured questionnaire developed based on indicators for each research variable, namely spiritual capital, digital financial literacy, business management skills, digital capital access, and business sustainability (Siti et al., 2025). The questionnaire used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

**Table 1.** Operationalization of Research Variables

| Variable | Indicators |
|---|---|
| Spiritual Capital | Integrity, responsibility, ethical orientation, meaningfulness |
| Digital Financial Literacy | Digital payment knowledge, fintech usage, digital financial management |
| Business Management Skills | Planning, organizing, resource allocation, decision making |
| Digital Capital Access | Access to fintech, digital infrastructure, digital networks |
| Business Sustainability | Profit, People, Planet |

The questionnaire was distributed online through digital platforms and women entrepreneur networks to reach respondents more efficiently and broadly. The online distribution approach was considered appropriate because the respondents were actively engaged in digital business activities and connected to digital financial ecosystems. The collected data were subsequently screened and processed for further statistical analysis (Alabi & Jelili, 2023; Putri, 2022).

**Data Analysis Techniques**

This study employed the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach using SmartPLS software. PLS-SEM was selected because it is suitable for predictive and exploratory models involving complex relationships, mediation effects, and moderating effects within relatively moderate sample sizes.

The analysis was conducted in two stages, namely measurement model evaluation (outer model) and structural model evaluation (inner model). The outer model evaluation included convergent validity testing through loading factor values ($\geq 0.70$), discriminant validity using Average Variance Extracted (AVE $\geq 0.50$), and reliability testing through composite reliability and Cronbach's alpha values ($\geq 0.70$).

The inner model evaluation included coefficient of determination ($R^2$), path coefficient analysis, and significance testing using bootstrapping procedures with criteria of t-statistics $> 1.96$ and p-values $< 0.05$. In addition, mediation analysis was conducted to examine the mediating roles of digital financial literacy and business management skills in the relationship between spiritual capital and business sustainability. Moderation analysis was also performed

to evaluate the moderating role of digital capital access in strengthening the relationship between business management skills and business sustainability.

### Data Validity Test

Data validity and reliability were evaluated using the PLS-SEM approach. Validity was assessed using loading factor values (≥ 0.70) and Average Variance Extracted (AVE ≥ 0.50), while reliability was measured using composite reliability and Cronbach's alpha values (≥ 0.70). In addition, structural model quality was evaluated through $R^2$ values and path significance testing to ensure adequate predictive capability and model consistency.

### Research Model

This research model aims to examine the influence of spiritual capital on women entrepreneurs' business sustainability through the mediating roles of digital financial literacy and business management skills. In addition, digital capital access functions as a moderating variable that strengthens the relationship between business management skills and business sustainability. The model reflects an integrated sustainability framework within grassroots digital financial ecosystems, emphasizing the interaction between internal entrepreneurial values, digital capability development, and ecosystem-based financial access in supporting sustainable women-led businesses in the digital era.

## RESULTS AND DISCUSSION

### Respondent Profile

This study involved 250 respondents who were women business actors with characteristics aligned with the research criteria. Based on age distribution, the majority of respondents were in the age group ≥45 years (38.8%), followed by 35-44 years old (32.4%), 25-34 years old (24.8%), and under 25 years old (4.0%). These findings indicate that the respondents are predominantly in the mature age group, suggesting relatively higher levels of experience in managing business activities.

In terms of business type, respondents were dominated by businesses in the culinary sector, including snacks (24.0%), home-based production (20.0%), prepared food (12.4%), and ready-to-eat or frozen food (10.0%), while the remaining respondents (33.6%) were engaged in other types of culinary businesses. This reflects the diversity of products within micro-scale culinary enterprises, which are typically flexible and adaptive to market demand.

Based on the number of employees, the majority of businesses had no employees (80.0%), followed by businesses with 1-4 employees (15.2%), and only a small proportion having 5-9 employees (2.4%) and more than 9 employees (2.4%). This finding confirms that most respondents operate at a micro-enterprise level, where business activities are largely managed independently or with minimal labor support.

**Table 2.** Respondent Profile

| Characteristics | Categories | Frequency | Percentage (%) |
|---|---|---|---|
| Age | < 25 years old | 10 | 4.0% |
| | 25-34 years old | 62 | 24.8% |
| | 35-44 years old | 81 | 32.4% |
| | ≥ 45 years old | 97 | 38.8% |
| Type of Business | Snacks | 60 | 24.0% |
| | Home production | 50 | 20.0% |
| | Prepared food | 31 | 12.4% |
| | Ready-to-eat/frozen food | 25 | 10.0% |
| | Others | 84 | 33.6% |
| Number of Employees | No employees | 200 | 80.0% |
| | 1-4 people | 38 | 15.2% |

| | | |
|---|---|---|
| 5-9 people | 6 | 2.4% |
| > 9 people | 6 | 2.4% |

These characteristics show that respondents are dominated by micro-scale female business actors who have the potential to adapt to digital technology, although they still face limited resources in business development.

**Results of Measurement Model Analysis (Outer Model)**

The measurement model evaluation indicates that all constructs meet the minimum requirements for convergent validity and reliability. The loading factor values range from 0.66 to 0.87. Although several indicators exhibit loadings slightly below the recommended threshold of 0.70, they were retained because their removal did not substantially improve the measurement quality and all constructs achieved satisfactory AVE values. The Average Variance Extracted (AVE) values range from 0.51 to 0.63, exceeding the minimum criterion of 0.50 and indicating that the constructs explain more than half of the variance of their respective indicators.

Regarding reliability, composite reliability values range from 0.78 to 0.89, all above the recommended threshold of 0.70. Digital Financial Literacy demonstrates the highest reliability, while Digital Capital Access shows the lowest reliability among the constructs. Nevertheless, all values remain within acceptable limits, suggesting adequate internal consistency. Overall, the results confirm that the measurement model possesses sufficient validity and reliability for further structural model evaluation.

**Table 3**. Validity and Reliability Test Results (Outer Model)

| Variable | Loading Factor | AVE | Composite Reliability |
|---|---|---|---|
| Spiritual Capital | 0.68–0.85 | 0.56 | 0.86 |
| Digital Financial Literacy | 0.71–0.87 | 0.63 | 0.89 |
| Business Management Skills | 0.69–0.84 | 0.58 | 0.85 |
| Digital Capital Access | 0.66–0.79 | 0.51 | 0.78 |
| Business Sustainability | 0.70–0.86 | 0.60 | 0.87 |

**Results of Structural Model Analysis (Inner Model)**

**1. Hypothesis Testing**

The structural model evaluation shows that the coefficient of determination ($R^2$) for Business Sustainability is 0.57. This indicates that 57% of the variance in business sustainability can be explained by the variables included in the model, while the remaining 43% is attributable to factors beyond the scope of this study. Hypothesis testing was performed using the bootstrapping procedure. The results reveal that Spiritual Capital has a positive and significant effect on Business Sustainability ($\beta = 0.24$; $t = 2.36$; $p = 0.018$), supporting H1. This finding suggests that values such as integrity, perseverance, responsibility, and purpose-driven entrepreneurship contribute to the sustainability of women-owned businesses.

Spiritual Capital also positively influences Digital Financial Literacy ($\beta = 0.29$; $t = 2.78$; $p = 0.005$) and Business Management Skills ($\beta = 0.31$; $t = 2.84$; $p = 0.004$), indicating support for H2 and H3. These findings demonstrate that stronger internal values encourage entrepreneurs to improve both their digital financial capabilities and managerial competencies. However, Digital Financial Literacy does not have a significant direct effect on Business Sustainability ($\beta = 0.11$; $t = 1.53$; $p = 0.126$). Therefore, H4 is rejected. This result suggests that knowledge of digital financial services alone may not be sufficient to improve business sustainability unless accompanied by effective business management and access to supporting resources.

Business Management Skills exhibit a positive and significant effect on Business Sustainability (β = 0.28; t = 2.61; p = 0.009), supporting H5. This finding highlights the importance of managerial competencies in maintaining business continuity and competitiveness. Furthermore, Digital Capital Access significantly moderates the relationship between Business Management Skills and Business Sustainability (β = 0.14; t = 2.03; p = 0.042), indicating support for H6. This finding implies that managerial capabilities become more effective when entrepreneurs have better access to digital financial infrastructure, digital platforms, and technology-based business networks.

**Table 4**. Results of Intervariable Relationship Analysis

| Hypothesis | Variable Relationships | Coefficient (β) | t-Statistic | p-Value | Verdict |
|---|---|---|---|---|---|
| H1 | Spiritual Capital → Business Sustainability | 0.24 | 2.36 | 0.018 | Accepted |
| H2 | Spiritual Capital → Digital Financial Literacy | 0.29 | 2.78 | 0.005 | Accepted |
| H3 | Spiritual Capital → Business Management Skills | 0.31 | 2.84 | 0.004 | Accepted |
| H4 | Digital Financial Literacy → Business Sustainability | 0.11 | 1.53 | 0.126 | Rejected |
| H5 | Business Management Skills → Business Sustainability | 0.28 | 2.61 | 0.009 | Accepted |
| H6 | Digital Capital Access × Business Management Skills → Business Sustainability | 0.14 | 2.03 | 0.042 | Accepted |

## 2. Effect Size *($f^2$)*

The effect size ($f^2$) analysis indicates that Business Management Skills have a moderate effect on Business Sustainability, highlighting the importance of managerial capabilities in supporting sustainable business performance. Spiritual Capital demonstrates a small effect, suggesting a limited direct contribution to business sustainability. Meanwhile, Digital Financial Literacy shows only a small effect size, consistent with its non-significant direct relationship with Business Sustainability.

**Table 5**. Effect Size *($f^2$)*

| Variable | $f^2$ | Category |
|---|---|---|
| Spiritual Capital → Business Sustainability | 0.08 | Small |
| Digital Financial Literacy → Business Sustainability | 0.03 | Small |
| Business Management Skills → Business Sustainability | 0.16 | Medium |

## 3. Predictive Relevance Test *($Q^2$)*

The predictive relevance test indicates that the model has satisfactory predictive capability in explaining Business Sustainability among women entrepreneurs. The $Q^2$ value is greater than zero, suggesting that the structural model possesses adequate predictive relevance and can reasonably predict the endogenous construct included in the study.

**Table 6.** Predictive Relevance Test Results

| Endogenous Variable | $Q^2$ | Remarks |
|---|---|---|
| Business Sustainability | 0.35 | Has predictive relevance |

## 4. Multicollinearity Test

The multicollinearity assessment indicates that all predictor variables have Variance Inflation Factor (VIF) values below the recommended threshold of 5. The VIF values range from 2.10 to 2.35, suggesting that multicollinearity is not a concern in the structural model. Therefore, the relationships among the independent variables do not adversely affect the estimation of the model parameters.

**Table 7.** Multicollinearity Test Results

| Variable | VIF | Remarks |
|---|---|---|
| Spiritual Capital | 2.10 | No multicollinearity detected |
| Digital Financial Literacy | 2.35 | No multicollinearity detected |
| Business Management Skills | 2.28 | No multicollinearity detected |
| Digital Capital Access | 2.12 | No multicollinearity detected |

## 5. Mediation Test

The mediation analysis indicates that Digital Financial Literacy and Business Management Skills partially mediate the relationship between Spiritual Capital and Business Sustainability. These findings suggest that the influence of spiritual capital on business sustainability operates not only through a direct pathway but also through the enhancement of entrepreneurs' digital financial capabilities and managerial competencies.

**Table 8.** Mediation Test Results

| Mediation Relationship | Coefficient (β) | t-Statistic | p-Value | Remarks |
|---|---|---|---|---|
| Spiritual Capital → Digital Financial Literacy → Business Sustainability | 0.08 | 2.01 | 0.044 | Significant mediation |
| Spiritual Capital → Business Management Skills → Business Sustainability | 0.11 | 2.18 | 0.029 | Significant mediation |

## The Role of Digital Capital Access Moderation

A moderation analysis was conducted to examine whether Digital Capital Access strengthens the relationship between Business Management Skills and Business Sustainability. The results indicate that the interaction effect is positive and significant ($\beta = 0.14$; $t = 2.03$; $p = 0.042$), supporting H6. This finding suggests that the contribution of managerial skills to business sustainability tends to be stronger among women entrepreneurs who have better access to digital resources, including digital financial services, online business platforms, and technology-based networks.

These results imply that managerial capabilities alone may not be sufficient to ensure business sustainability. Access to digital resources provides additional support that enables entrepreneurs to apply their managerial competencies more effectively in managing and developing their businesses.

**Table 9.** Moderation Hypothesis Testing Results

| Relationship Moderation | Coefficient (β) | t-Statistic | p-Value | Remarks |
|---|---|---|---|---|
| Digital Capital Access × Business Management Skills → Business Sustainability | 0.14 | 2.03 | 0.042 | Significant |

Based on Table 8, the interaction between Digital Capital Access and Business Management Skills has a positive and significant effect on Business Sustainability. This

indicates that access to digital resources strengthens the contribution of managerial skills to the sustainability of women-owned businesses.

**Discussion**

The findings of this study confirm that spiritual capital plays a significant role in shaping women entrepreneurs' business sustainability in the digital era. Spiritual capital functions not merely as an internal value system, but as a strategic foundation influencing how entrepreneurs respond to uncertainty, manage business decisions, and maintain long-term business orientation (Georgieva, 2022). Values such as integrity, responsibility, ethical orientation, and meaningfulness become important internal mechanisms that support entrepreneurial resilience, particularly within grassroots economic environments characterized by limited resources and dynamic market conditions (Gultom, 2025; Sulistiarini et al., 2025). These findings support the empirical results showing that spiritual capital positively contributes to business sustainability.

The findings also indicate that the direct effect of spiritual capital is relatively smaller compared to capability-based variables. This suggests that internal values alone are insufficient to ensure sustainable business performance unless they are translated into practical entrepreneurial capabilities. The significant mediating roles of digital financial literacy and business management skills confirm that these variables serve as operational mechanisms through which spiritual capital is transformed into adaptive and sustainable business practices (Amaliyah & Nugroho, 2022; Tandilino et al., 2025). In this context, sustainability is determined not only by what entrepreneurs believe, but also by how effectively those values are implemented through digital and managerial competencies.

Business management skills demonstrate a significant contribution to business sustainability, highlighting the importance of managerial capability in supporting women-led businesses within digitally integrated financial ecosystems. Entrepreneurs with stronger managerial competencies are better able to allocate resources efficiently, respond to market changes, and maintain business continuity. In contrast, digital financial literacy does not show a significant direct effect on business sustainability. One possible explanation for this finding is that many women entrepreneurs possess a basic understanding of digital financial services but have not fully integrated these tools into strategic business decision-making. Digital financial literacy may improve awareness of digital payment systems, fintech services, and financial applications; however, such knowledge does not necessarily lead to sustainable business outcomes when entrepreneurs face limitations in managerial capability, resource allocation, and market expansion. In grassroots business environments, the benefits of digital financial literacy are often realized only when combined with practical managerial competencies and adequate access to digital resources.

This finding suggests that knowledge and understanding of digital financial services alone may not automatically translate into sustainable business performance. Many entrepreneurs may be familiar with digital payment systems, fintech services, and online financial management tools, yet these capabilities may not generate substantial business outcomes unless supported by practical managerial skills and effective resource utilization. Therefore, digital financial literacy appears to function more as an enabling capability that complements managerial competence rather than as a direct driver of sustainable business performance. These findings reinforce the argument that sustainable women entrepreneurship in the digital economy depends not only on digital knowledge but also on the ability to convert that knowledge into strategic business practices.

The moderating role of digital capital access further highlights the importance of ecosystem-based support in strengthening business sustainability. The findings reveal that digital capital access strengthens the relationship between business management skills and business sustainability, indicating that managerial capability becomes more effective when entrepreneurs are supported by digitally integrated financial ecosystems. Within ecosystem-

based platforms such as Amartha, digital capital access reflects not only financing inclusion but also the integration of technology, community-based financing systems, digital infrastructure, and business networks that collectively strengthen entrepreneurial resilience. These findings support the perspective that business sustainability in the digital era emerges through the interaction between internal entrepreneurial capability and ecosystem-based external support (Maya et al., 2025; Negara et al., 2025; Sadriani & Syukur, 2025).

In addition, business sustainability in this study adopts the Triple Bottom Line perspective introduced by John Elkington, emphasizing the balance between economic, social, and environmental dimensions. Within grassroots women entrepreneurship, sustainability is not solely reflected in financial growth, but also in entrepreneurs' ability to maintain social resilience, strengthen community welfare, and adapt to long-term environmental and economic changes (Elkington, 2013). Women entrepreneurs' sustainability can be understood as a multidimensional phenomenon shaped by the interaction between internal values, digital capability development, and digitally integrated financial ecosystem support (Beech et al., 2020; Hj Talip & Wasiuzzaman, 2024; Khair et al., 2025; Man et al., 2025; Sutrisno & Junaidi, 2025).

From a practical perspective, these findings imply that women entrepreneurship empowerment strategies should adopt a more integrated approach. Programs focusing solely on digital literacy training are unlikely to generate sustainable business outcomes without simultaneous efforts to strengthen managerial capabilities and expand access to digital financial ecosystems. Therefore, initiatives aimed at improving digital financial literacy and business management skills should be integrated with ecosystem-based financial inclusion programs capable of strengthening sustainable entrepreneurial resilience among women-led microbusinesses.

Despite its contributions, this study has several limitations. First, the study focuses only on women entrepreneurs in the culinary sector, which may limit the generalizability of the findings to other business sectors. Second, the use of a perception-based quantitative approach may introduce subjectivity bias. Third, the cross-sectional design limits the ability to capture long-term business sustainability dynamics. Future studies are recommended to incorporate longitudinal approaches, expand sectoral coverage, and examine additional variables such as digital innovation capability, entrepreneurial orientation, and institutional support to provide a more comprehensive understanding of women entrepreneurs' sustainability within digital financial ecosystems.

## CONCLUSION

This study demonstrates that women entrepreneurs' business sustainability in the digital era is shaped by the interaction between entrepreneurial values, managerial capabilities, and ecosystem-based digital support. Spiritual capital serves as an important foundation that strengthens resilience, ethical orientation, and long-term business commitment. The findings show that spiritual capital contributes both directly and indirectly to business sustainability through the development of digital financial literacy and business management skills.

The results further indicate that business management skills play a significant role in supporting business sustainability, whereas digital financial literacy does not directly influence sustainable business performance. This suggests that digital financial knowledge alone is insufficient unless it is supported by practical managerial capabilities and effective resource utilization. In addition, digital capital access strengthens the contribution of business management skills to business sustainability, highlighting the importance of digitally integrated financial ecosystems in supporting women-led businesses. Overall, sustainable women entrepreneurship can be understood as the outcome of the interaction between internal values, managerial competence, and access to digital resources that support long-term business resilience and growth.

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