

Financial Literacy and Psychological Well-being: Mediation Effect of Sustainable Development for Women-led Microenterprises using PLS-SEM

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Abstract

This study shows the predictive analysis between the interrelated constructs i.e. Financial Literacy, Psychological Well-being, & Sustainable Development for Women-led Microenterprises of the study to measure the influence on Entrepreneurial Success among women-led microenterprises in Uttar Pradesh. The study adopts a quantitative research design based on primary survey data collected from women entrepreneurs. Partial Least Square Structural Equation Modelling (PLS-SEM) is employed using Smart PLS 4 to examine the direct and indirect (mediating) relationships among the proposed constructs. The study further incorporated PLS predict and Importance-Performance Map Analysis (IPMA) to strengthen predictive assessment and strategic interpretation of the findings. The empirical results reveal that both direct (FL, PWB & SDWE) and mediating effect (SDWE) positively influence Entrepreneurial Success (ES). However, the predictive effect of SDWE is much stronger than ES. Further, the structural model indicates a robust predictive relevance for FL and PWB. The IPMA findings also identify PWB as the most strategically significant construct requiring continuous institutional and policy attention. The study makes a theoretical contribution by integrating existing RBV, KBV, SCT & COR theories in one sustaining resource model. Also, study provides important implications for policymakers, governance systems, incubator centers, and financial institutions for enhancing women-led microenterprises in Uttar Pradesh.

Keywords: Entrepreneurship, Financial Literacy, Knowledge Based-view, Microenterprises, Psychological wellbeing, Sustainable Development, Women Entrepreneurs.

Introduction:

Entrepreneurship plays a pivotal role in advancing economic development by promoting innovation, job creation and wealth accumulation (Hewett, 2025). Pawan K. Jha, & Shah Ali Adnan (2021) Micro, small, and medium enterprises (MSMEs) play a crucial role in India's economy, contributing significantly to industrial output, exports, and employment across domestic and international markets (Pawan k. Jha, 2021). Women entrepreneurs in India represent a heterogeneous group with varying level of education, business experience, and resource access. Research indicates that women-owned enterprises predominantly operate in the micro and small business

sectors, with a concentration in low-capital, labor-intensive sectors such as food and beverages, retail trade, fashion, and services. Women entrepreneurs play a strategic role in supporting local economies, generating household income, and fostering inclusive development across both rural and urban regions. The economic contribution of women-led MSMEs in India is substantial, with women owning most informal sector businesses. However, this contribution remains largely unrecognized, and women entrepreneurs continue to underperform in terms of survival rates, sales, and employment compared to their male counterparts. In Indian context, presents a particularly complex scenario where traditional gender roles, limited access to formal financial services, and inadequate educational opportunities intersect to create structural obstacles for women seeking economic independence (Shimpi, 2025b).

Financial literacy, means the ability to understand and apply financial information to make informed decisions, is a crucial skill for entrepreneurs (Agus et. al., 2023). Empirical study shows that improved financial literacy leads to better decision-making and enhanced business outcomes (Setyawati et.al., 2023; tumba et.al, 2022; Widjanarko et.al., 2022). The Indian state of Bihar, with its predominantly rural character and significant presence of self-help groups (SHGs), exemplifies both the potential and challenges of women's entrepreneurship in resource-constrained regions. Despite facing intense poverty and unemployment, women in rural Bihar have increasingly turned to entrepreneurship as a mechanism of economic survival and household stabilization. Agarwal et al. (2020) emphasized the unique skills of women entrepreneurs, such as innovation and risk-taking, which enable them to commercialize resources effectively. This study, which focuses on women in Uttar Pradesh and Uttarakhand, India, reveals that personal, social, and environmental factors significantly influence the development of entrepreneurial competencies.

Research conducted by Lin and Bates (2022) shows that financial literacy influences business performance and success. The findings of Tejedor et al., (2020) also concluded that financial literacy has an impact and contributes 88.9% to business success. In India, the gap between male and female financial literacy and financial inclusion is substantial, with men demonstrating 39.94% financial literacy compared to women's 36.13%, and a financial inclusion gap of 77.24% versus 75.15%, respectively. This disparity directly impedes women entrepreneurs' ability to access formal financial institutions, secure bank loans, and manage their enterprises effectively.

An entrepreneur's attributes influence the firm's performance as they infuse various aspects of themselves, such as their attributes, values, and experiences into multiple facets of the firm and its operations (Wallace et. al., 2010). Thus, entrepreneurship as a cognitive phenomenon gives an insight into an entrepreneur's psychology and explains "how" entrepreneurship can be successful (Chatterjee & Das, 2015). Many scholars have been drawn to the development of positive psychology in recent years, particularly passion, persistence, and emotional support, which profoundly impact an individual's psychological and behavioral activities (Feng & Chen, 2020; Stroe et. al., 2018). However, there is contradictory evidence for and against the effectiveness of entrepreneurial passion on venture performance. Studies have shown that entrepreneurial passion considerably influences venture success (Adomako & Ahsan, 2022; Drnovsek et. al., 2016), whereas others have found no effect (Ho et.al., 2014; Laskovala et. al., 2022). These contradictory findings have shaped the decision to conduct this study to fill the research gap and summarize the link between passion for entrepreneurship and venture performance.

Several theories can be used to drive the integration theoretical support for this study, the theory of resource-based view (RBV) and theory of knowledge-based view (KBV). The current research suggests that financial knowledge and skill are among the 'intangible strategic resources' which can result in better business performance, building on RBV (Agyapong & Attram, 2019; Luo & Cheng, 2022). Government efforts imply the value of knowledge but there is little research in India that is termed "KBV". This study aims to bridge this gap and to contribute to entrepreneurial success with new insights concerning aspects of intellectual capital in a knowledge-based view which are less studied in the literature. In another theoretical extension of Conservation of Resource (COR) theory combined with SCT (social cognitive theory), the self-efficacy and social learning are shown to be critical to convert financial behavior (psychology) to achieve measurable entrepreneurial success. This study gives a deep knowledge of cognition and behavior factors of the women entrepreneurs, this further supporting the relevance of COR with SCT in modern day to achieve success and sustainability in micro business.

With the significant role played by micro-enterprises in India's economy, the quantification of entrepreneurial success becomes even more important in the current macro-economic landscape for various stakeholders and academicians. To design more actionable policy interventions and institutional support mechanisms that catalyze inclusive economic growth and sustainable development, it is imperative to understand the link between financial literacy (FL), psychological well-being (PWB) and entrepreneurial success (ES) in the context of women entrepreneurship in Uttar Pradesh, India, especially through the lens of mediation effect of sustainable development for women-led microenterprises (SDWE).

2. Integration of Theoretical Framework and Development of Hypothesis

2.1 Resource-Based View Theory

According to the resource-based view (RBV), the sustainable competitive advantage of companies is based on the acquisition and development/ deployment of valuable, rare, inimitable, and non-substitutable (VRIN) resources that are hard to replicate by competitors (Barney, 1991).

The RBV is based on the idea that the success of an organization mainly relies on internal resources and capabilities ([Henry, 2025](#); [Muda & Musman, 2024](#); [B.Lalramengmawia & Dr.K.Lalromawia, 2026](#)). In microenterprises owned by women, intangible assets are often more important than tangible assets and in developing countries like India, especially, financial constraints often prevent women from accessing physical and financial capital ([Chaudhuri et al., 2018](#)). As a result, strategic intangible resources are increasingly important to the enterprise's long-term competitiveness and sustainability ([Stan et al., 2024](#); [Valentin et al., 2026](#)).

That being said, RBV does not propose that, by themselves, strategic resources automatically enhance firm performance. Recent literature on RBV makes increasingly clear that resources will have to be converted to organizational capability before resources impact on performance outcomes ([D'Oria et al., 2021](#)). Resources, therefore, give the potential for the competitive advantage only: the ability of the manager to use the resources is what makes the competitive advantage a reality. This is important in understanding women's microenterprises under severe resource limitation ([Mozumdar et al., 2020](#)). While financial skills are important for entrepreneurial success, they can only do so much on their own without entrepreneurs being able to put those skills into sustainable management, efficient resource utilization, innovation and strategic adaptation ([Gade, 2022](#); [Erhomosele & Obi, 2022](#)).

There is growing empirical evidence in recent years that financial literacy is an intangible resource of an organization that plays a strategic role ([Prakoso et al., 2026](#); [Molosiwa & Holland, 2025](#)). According to Adam (2022), the main factors for women's microbusinesses to become sustainable competitive are the effective combination of human resources, financial resources, technologies, and managerial knowledge (Adam, 2022). Likewise, Hasan (2024) showed that financial literacy, entrepreneurial literacy, and digital economic literacy are intellectual capital that positively helps MSMEs achieve success through entrepreneurial creativity, not directly affecting the performance of the MSMEs ([Hasan et al., 2024](#)). Similarly, Panda & Baral (2025) found that financial literacy has an indirect link to business performance via financial self-efficacy, meaning that the financial self-efficacy is the medium through which the knowledge-based resources add value to business performance (Panda, 2025).

2.2. Knowledge-Based View Theory

The KBV, an extension of the RBV, supports this argument even more by stating that organizational knowledge is the most strategically important asset to gain competitive advantage (Grant, 1996) & ([Pereira & Bamel, 2021](#)). It differentiates from the traditional RBV, which treats a wide range of organizational resources collectively as resources for knowledge, KBV specifically focuses on the knowledge creation, integration and application as the main mechanisms by which firms enhance performance.

The KBV states that it is not just knowledge that is important for creating a competitive advantage, but its ability to turn into organizational capacities ([Pradita et al., 2025](#); [Kaur & Mehta, 2016](#)). Hence, financial literacy is a knowledge-based resource in which contribution to enterprise success is dependent on the application of the

knowledge in enterprise operations ([Meressa, 2023](#); [Hasan et al., 2024](#)).

In this theoretical view, financial literacy is an element of strategic knowledge, which is a type of capital ([Hussain et al., 2025](#)). It empowers entrepreneurs to interpret financial products, assess investment opportunities, address risks of a business, interpret financial statements, and plan sustainable financial strategies ([Kumari et al., 2024](#)). However, KBV points out that knowledge is not all that makes an organization successful. Entrepreneurial success, on the other hand, can only come about when knowledge is translated into organizational processes that continuously enhance performance of the business ([Hernández-Linares et al., 2023](#)).

This process of change becomes critical in this study on women entrepreneurs of microenterprises. Financial literacy helps entrepreneurs build sustainable financial management practices, enhance the efficiency of their operations, build financial resilience, utilize their resources optimally, and promote innovation ([Kalan & Mahale, 2026](#); [Kumari et al., 2024](#)). Such organizational skills together make it possible to ensure the sustainable development of enterprise and then improve the success of entrepreneurs ([Hellvig & Nobre, 2024](#)). So, sustainable development can be seen as the organizational tool that makes financial knowledge the competitive edge to the company.

Empirical studies carried out in recent years strongly support this perspective of knowledge transformation. Findings from [Hasan \(2024\)](#) revealed that financial education has a significant impact on MSME success because in the form of knowledge, it creates better results, but these results have to be translated into organizational abilities ([Hasan et al., 2024](#)). Likewise, [Mishra \(2024\)](#) in their study of Indian women showed that the financial literacy of the women population in digital format positively influences financial decision making, and subsequently the intention of investment and entrepreneurial activities ([Mishra, 2024](#)). [Kanth \(2025\)](#) further noted that financial literacy contributes to financial well-being and financial behavior of rural women entrepreneurs, thereby affirming the proposition of impact of knowledge on organizational mechanisms but not necessarily to the performance impact ([Kanth, 2025](#)).

2.3. Conservation of Resources Theory with Social Cognitive Theory

Entrepreneurial psychological well-being is gradually being acknowledged as an important factor to entrepreneurial sustainability and success, especially for women entrepreneurs in resource-poor settings ([Tang, 2020](#)). This relationship has been well explained by the Conservation of Resources (COR) theory ([Hobfoll, 1989](#)), which states that people work to obtain, maintain, and protect important resources when dealing with stress and to maximize successful coping strategies for their future ([Hobfoll, 1989](#)). Psychological wellbeing is a strategic personal resource for sustaining business continuity and organizational resilience in the context of women entrepreneurs of micro businesses operating in India, who may be constrained by financial, institutional, gender discrimination and work family imbalance ([Newman et al., 2018](#); [Essuman et al., 2024](#)).

COR theory suggests that individual entrepreneurs with a higher psychological well-being are better able to dedicate their mental and emotional energy to strategic planning, innovation, building relationships with stakeholders, and implementing sustainable business practices. These resource investment behaviors lead to “resource gain cycles” where psychological strengths help the entrepreneur gain more resources within the organization, which in turn results in greater business sustainability and long-term entrepreneurial success ([Malak, 2025](#)). Entrepreneurs in psychological distress, on the other hand, are more likely to strive to keep what they have left in the business, which is why they tend to invest less in innovation, business expansion, and sustainability efforts. According to COR theory, psychological wellbeing’s role in entrepreneurial success is mainly through increasing the sustainable development of the business and not an immediate direct impact on business performance ([Najjinda, 2025](#)) & ([Malak, 2025](#)).

Empirical evidence in recent years has confirmed this view. The psychological traits of entrepreneurs such as resilience, optimism, adaptability and emotional well-being have been consistently found to have a significant impact on the growth of the business, its survival and organizational resilience in studies on entrepreneurs ([Díaz et al., 2024](#); [Hartmann et al., 2022](#)). These results suggest that psychological resources improve entrepreneurs' opportunity recognition, uncertainty coping, and business continuity in adverse situations ([Najjinda, 2025](#)).

The strategic importance of psychological resources is described by COR theory, whereas Social Cognitive Theory (SCT) (Bandura, 2001) explains the mechanism of behaviour by which psychological resources affect entrepreneurial outcomes. SCT suggests that behavior is a product of the interaction between personal, environment, and behavior factors (Bandura, 2001). One of the key concepts of SCT is that of self-efficacy which is the confidence in one's capability to execute entrepreneurial activities effectively. Those entrepreneurs with higher psychological well-being tend to have higher self-efficacy, higher confidence in solving business problems, higher persistence in the case of adverse situations, and higher willingness to pursue long-term organizational goals (Marshall et al., 2020; Gielnik et al., 2020) & (Kanth, 2025).

Psychological well-being helps increase entrepreneurs' confidence to cope with financial uncertainty, to use digital technologies, assess business opportunities, develop relationships with stakeholders, and practice sustainable business practices within microenterprises owned by women (Liyanagamage et al., 2023). Entrepreneurs learn through sustained education, entrepreneurial practice and engaging with financial institutions and supportive networks and acquire behavioral skills that enhance the ability of their organizations to be resilient and to build sustainable enterprises. Based on this, SCT posits that psychological wellness can promote entrepreneurial success by enhancing self-regulation, adaptable learning, resilience, and proactive managerial action (Kanth, 2025), (Najjinda, 2025), & (De Hoe R., 2022).

COR theory and SCT have been integrated in order to give a complete explanation of the hypothesized mediation model. COR sees psychological well-being as an important personal resource while SCT is responsible for the relationship between the psychological resources and the behaviors of entrepreneurs, which are mediated by the development of self-efficacy and behavioral capability. These theories suggest that psychological health among entrepreneurs is associated with increased strategic planning, innovation, effective management of resources and sustainable behavior in the organization. These capabilities then help support the sustainable development of women's micro-businesses and contribute to entrepreneurs' success (Salubre, 2024).

This integrated view is also complimentary to the Resource Based View (RBV) and Knowledge Based View (KBV) presented above. RBV and KBV tell how the strategic resources and knowledge can generate the organizational capabilities; COR and SCT tell how the psychological resources can sustain the organizational capabilities in the face of environmental uncertainty faced by entrepreneurs (Salubre, 2024). Together, these theories have led to the conclusion that entrepreneurial success doesn't depend on the individual's financial literacy or psychological wellbeing but rather the entrepreneur's ability to convert these strategic resources into viable organizational capacities.

Based on this integrated theory, the present study puts forward the following hypotheses:

H1: Financial literacy has a significant effect on entrepreneurial success.

H2: Financial literacy has a significant effect on sustainable development of women-led microenterprises.

H3: Psychological well-being has a significant effect on entrepreneurial success.

H4: Psychological well-being has a significant on sustainable development of women-led microenterprises.

H5: Sustainable development of women-led microenterprises mediates the relationship between financial literacy and entrepreneurial success.

H6: Sustainable development of women-led microenterprises mediates the relationship between psychological well-being and entrepreneurial success.

H7: Sustainable development of women-led microenterprises has a significant effect on entrepreneurial success.

2.4. Integrated Conceptual Framework

The theoretical foundation and hypothesis discussion in previous sections led to the development of the conceptual model depicted in figure 1.

Figure 1. Conceptual Framework for the Sustaining Resources Model (SRM)



Source: Developed by author based on conceptual synthesis of existing literature

Figure 1 suggests that sustainability is a process rather than an endpoint: SDWE is the entrepreneurial behaviour at the enterprise level that must prevail before entrepreneurial success can occur: stable customer base, reinvesting profits, doing things differently to save resources, keeping good records. Rather, financial literacy and psychological well-being are what purchase the ability to sustain the enterprise long enough, and steadily enough, for success to build.

As a resource not affixed characteristic. Unlike traits, resources can be built, depleted, invested and transformed. FL and PWB are input resources, SDWE is the converted, enterprise level form of the resources when deployed in the model, and ES is the eventual outcome of that sustained conversion.

The two-stage process in which they explain the conversion of financial literacy as a resource and as embedded knowledge into sustainable operation is *stage 1* (resource → practice), and *stage 2* (practice → sustainable operation). The parallel conversion for psychological well-being is explained by COR: An entrepreneur with a grater psychological resource capacity can maintain effortful practices without falling into a resource-loss spiral. *Stage 2*; SCT argues that sustained practice isn't just a result of itself but is an active cause of success – the reason for that sustained effort provides repeated mastery experiences, which in turn leads to a sense of self-efficacy, which is the psychological fuel for additional success, growth and confidence.

3. Research Methodology

3.1. Sampling Technique and Measurements

The study is quantitative in nature, and data was obtained from 197 micro-entrepreneurs belonging to Uttar Pradesh. A multistage sampling was employed to select respondents for the study. In first stage, administrative units were selected. Secondly, a sampling frame of women-owned micro enterprises was prepared. Finally, respondents were selected through simple random sampling to ensure that each eligible women entrepreneur had an equal probability of inclusion. This probability of sampling enhances the representative of the sample and minimizes selection bias.

This study measures and investigates the relationship between the variable's financial literacy, psychological well-being, sustainable development for women-owned microenterprises, and entrepreneurial success. This research includes 24 statement items, consisting of: 6 statement items for the financial literacy; 6 statement items for the psychological well-being; 6 statement items for sustainable development for women-led enterprises; and 6 statement items for the entrepreneurial success among women-owned microenterprises in district of Lucknow. Next, the research determined each construct using a five-point Likert scale consisting of 'strongly disagree' (1),

‘disagree’ (2), ‘neutral’ (3), ‘agree’ (4), and ‘strongly agree’ (5).

3.2. Data Analysis

The present study employs Partial Least Square Structural Equation Modeling (PLS-SEM) to examine the hypothesized relationships among the constructs (4) under investigation. PLS-SEM was selected over covariance-based SEM (CB-SEM) given its established suitability for models with relatively small to moderate sample sizes and its predictive orientation, which iterates between the measurement and structural models to maximize explained variance rather than overall model fit (Hair, 2022).

To determine the minimum required sample size, the study applied the widely used “10-times rule” (Hair J. F., 2011), which stipulates that the sample size should exceed ten times the maximum number of structural (inner) or measurement (outer) model links directed at any single latent construct. In the present model, each of the constructs is operationalized through six indicator items measured on a five-point Likert scale, yielding a maximum of six outer model links per construct. The structural model, comprising seven hypothesized relationships inclusive of direct and mediating effects, does not exceed three inner model links directed at any single construct, given that only four constructs are specified in total. As the outer model links ($k = 6$) exceed the inner model links, the outer link count constitutes the binding constraint. Accordingly, the minimum required sample size is 60 respondents ($n \geq 10 \times 6 = 60$).

While this figure represents the minimum threshold under the 10 – times rule, the rule has been critiqued for disregarding statistical power, expected effect sizes, and significance levels, and consequently tends to yield imprecise estimates (Goodhue, 2012). Furthermore, no multivariate technique, including PLS-SEM, possesses an inherent capacity to drive valid estimations from an inadequately sized or non-representative sample (Hair J. F., 2017); (Rigdon, 2016). Researchers are therefore advised to complement rule-of-thumb heuristics with formal power-based estimation procedures, such as the inverse square root method (Kock, 2018), which incorporates anticipated effect size, significance level ($p = 0.05$), and statistical power ($1 - \beta = 0.80$) into the sample size calculation.

In view of these considerations, and to accommodate the reduced statistical power associated with testing mediated (indirect) effects – which involve the product of two path coefficients rather than a single direct path (Hair, 2022) – the study targeted a sample size of 197 women-owned micro enterprises responses in Lucknow district, exceeding the minimum threshold of 60 respondents derived from the 10-times rule. This sample size provides adequate statistical power for bootstrapped significance testing (5,000 subsamples) of both direct and indirect structural paths.

4. Results & Analysis

4.1. Measurement Model Assessment

In this study, a measurement model analysis was used to assess the reliability, composite reliability (CR), average variance extracted (AVE) and discriminant validity (FLC). For the assessment of construct reliability, this study has used Cronbach’s alpha (CA) and Composite reliability (CR). The results for CA & CR with loading factors are presented in table 1.

Table 1: Result Summary

Construct	Item	Convergent Validity		Reliability		
		Loading Factor	AVE	Cronbach’s Alpha	Rho_C	Rho_A
Financial Literacy	FL 1	0.846	0.632	0.883	0.911	0.888
	FL 2	0.843				
	FL 3	0.759				

Psychological Well-being	FL 4	0.783	0.757	0.936	0.949	0.938
	FL 5	0.783				
	FL 6	0.752				
	PWB 1	0.907				
	PWB 2	0.855				
	PWB 3	0.838				
Sustainable development for Women-owned Microenterprises	PWB 4	0.838	0.746	0.932	0.946	0.933
	PWB 5	0.884				
	PWB 6	0.896				
	SDWE 1	0.861				
	SDWE 2	0.862				
	SDWE 3	0.904				
Entrepreneurial Success	SDWE 4	0.870	0.704	0.916	0.935	0.917
	SDWE 5	0.861				
	SDWE 6	0.825				
	ES 1	0.861				
	ES 2	0.856				
	ES 3	0.821				
	ES 4	0.852	0.704	0.916	0.935	0.917
	ES 5	0.796				
	ES 6	0.848				

Source: Authors' analysis using Smart PLS 4 based on primary collected data.

The measurement model was first used to evaluate the discriminant and convergent validities (Hair et.al., 2017). The results show that each construct had an appropriate factor loading, as shown in *Table 1*. As shown in the table, the loading factor value is greater than 0.70 ($\geq$), minimum range is **0.752** (FL 6) and the maximum range is **0.907** (PWB 1), considered strong indicator could be explained by the measured construct.

The value of Cronbach's alpha and composite reliability of each construct were greater than 0.70, indicating the respondents' consistency in answering the question items in the study (Hair et.al., 2017). The AVE value for all constructs was greater than 0.50 [range between (minimum) **0.632** and **0.757** (maximum)] with composite reliability having value greater than 0.70 or higher, indicating adequacy. This meant that the convergent validity test stage in this study was considered good enough.

Furthermore, discriminant validity in the present study is established through the Fornell-Larcker criterion (FLC), as proposed by Henseler et al., (2015). This criterion entails comparing the square roots of latent variables with AVE values. Focusing on the square root of every construct's AVE instead of the inter-construct correlations will

help us fairly validate our results. These findings are shown in *Table 2*, thereby confirming the validity and reliability of our study.

Table 2. Discriminant Validity Fornell-Larcker Criterion (FLC)

	ES	FL	PWB	SDWE
ES	0.839			
FL	0.762	0.795		
PWB	0.875	0.770	0.870	
SDWE	0.878	0.786	0.889	0.864

Source: Authors' analysis using Smart PLS 4 based on primary collected data.

For checking the multi-collinearity, VIF (variance inflation factor) values were calculated. Belsley, B. & Peat, J., (1991) proposed that if the value of VIF is $1 < VIF < 5$, it specifies that the variables are moderately correlated to each other. *Table 3* shows that VIF values found in this study, the minimum range is **1.837** (FL1) and maximum range is **4.083** (PWB1) were all within the recommended range, so there is no issue of multi-collinearity being found.

Table 3. Collinearity statistics (VIF)

	VIF
ES1	2.755
ES2	2.676
ES3	2.212
ES4	2.646
ES5	2.020
ES6	2.601
FL1	2.463
FL2	2.553
FL3	1.837
FL4	1.892
FL5	2.147
FL6	1.974
PWB1	4.083
PWB2	2.765
PWB3	2.603
PWB4	2.514
PWB5	3.360
PWB6	3.457
SDWE1	3.089

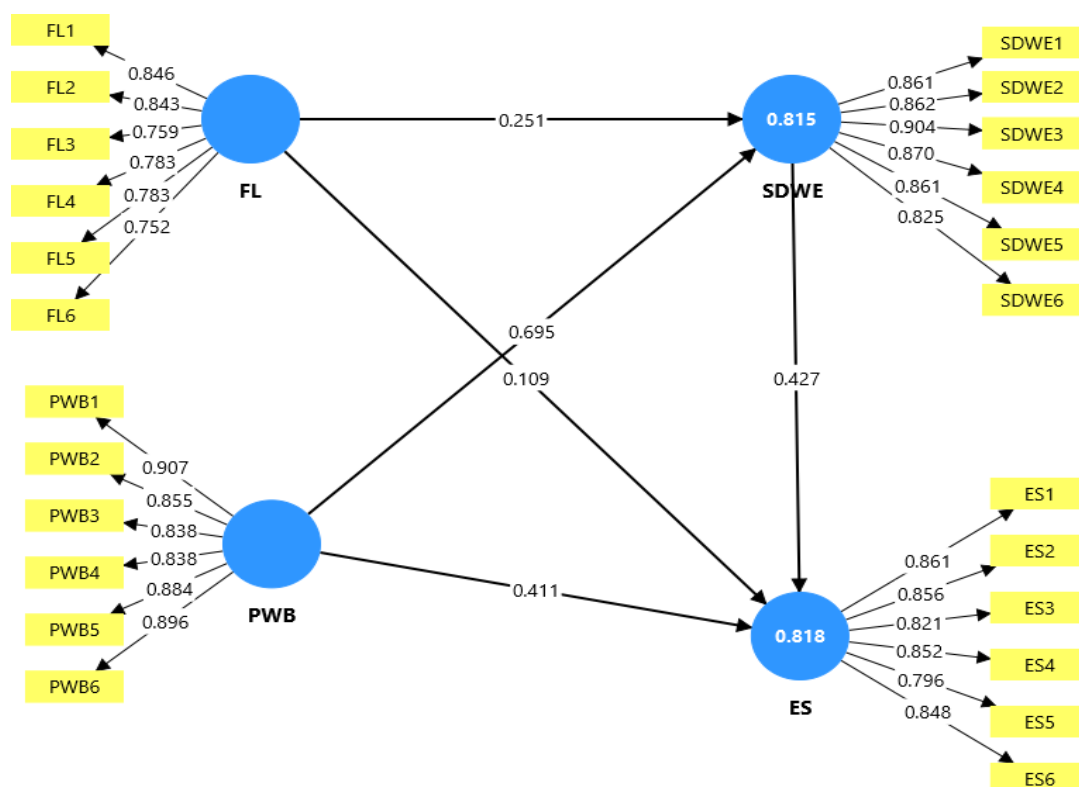
SDWE2	3.045
SDWE3	3.718
SDWE4	3.088
SDWE5	2.770
SDWE6	2.609

Source: Authors' analysis using Smart PLS 4 based on primary collected data.

4.2. Assessment of Structural Model and Hypothesis Testing

The results of the structural model assessment using Smart PLS 4 are shown in *Figure 2*. Results indicate that Financial Literacy, Psychological well-being, and Sustainable development for Women-owned microenterprise have a positive impact on Entrepreneurial Success. The path coefficient for Financial Literacy ($\beta = 0.109$) shows that determinants of financial literacy (budgeting, expense distinction, saving behavior, & loan comparison) have a positive impact on entrepreneurial success. Moreover, the results reveal that the effect of psychological well-being (PWB) ($\beta = 0.411$) and SDWE ($\beta = 0.427$) on entrepreneurial success is relatively strong, meaning that life satisfaction, stress management, emotional balance, reinvesting profits, green practices and contributing in society are important factors in achieving the long-term sustainability with entrepreneurial success.

Figure 2. Structural Model and Hypothesis Testing



Source: Authors' computation using Smart PLS 4 based on primary collected data

The results of the research model, which consisted of path coefficient for direct and indirect (mediating) effects are shown in *Figure 2*.

The *figure 2* shows the coefficients of the structural model and a summary of the model fit. This study evaluates the inner model on the basis of significance value, R^2 , Q^2 (predictive relevance) (Hair et al., 2017). In this study, the authors tested seven hypotheses. Running bootstrapping using 5,000 sub-sample at 95% confidence level was run to assess the statistical significance of each path coefficient.

4.2.1. Results of H1 & H2

Stated that financial literacy has a significant effect on both entrepreneurial success ($\beta = 0.109$, $t = 1.981$, $p = 0.048$) and sustainable development of women-led microenterprises ($\beta = 0.251$, $t = 3.164$, $p = 0.002$) as shown in *table 4*. Henceforth, first two hypotheses are accepted. Therefore, financial literacy is a significant determinant of both ES and SDWE. The authors conclude that financial literacy positively influence entrepreneurial success with sustainable development of women-led microenterprises in Uttar Pradesh. Thus, the more the entrepreneurs are financially literate in terms of setting up budget, profit/loss calculation, expense distinction, advancing saving behavior, awareness of government schemes related to their business, loan comparison habits, reinvesting business profit, ecofriendly practices, stability, and community contribution, the more they can positively influence their growth in terms of income growth, satisfaction, recognition, confidence in making decisions and future expansion plan. Subsequently, it leads to sustainable development of microbusiness and overall entrepreneurial success.

4.2.2. Results of H3 & H4

This section stated that psychological well-being are the determinants of entrepreneurial success ($\beta = 0.441$, $t = 4.961$, $p = 0.000$) and also for sustainable development of women-led microenterprises ($\beta = 0.695$, $t = 9.028$, $p = 0.000$). The results led to the acceptance of both the hypothesis (*H3 & H4*) as shown in *table 4*. This suggests that psychological well-being is a significant determinant of entrepreneurial success and for sustainable development of women-led microenterprises in Uttar Pradesh. Thus, the more the entrepreneurs have psychological well-being by managing their stress level, emotional balance, sense of purpose, confidence to face challenges and life satisfaction, the more they can influence their growth such as income growth, recognition, customer stability and future expansion of enterprise. In return, it leads to overall success of women entrepreneurs and sustainability of microenterprises.

4.2.3. Results of H5, H6 & H7

The findings show that sustainable development of women-led microenterprises (SDWE) mediates the relationship between first financial literacy and entrepreneurial success ($\beta = 0.107$, $t = 2.451$, $p = 0.014$), secondly between psychological well-being and entrepreneurial success ($\beta = 0.297$, $t = 4.351$, $p = 0.000$). The results led to the acceptance of both the specific indirect effect hypothesis (*H5 & H6*) as shown in the *Table 4*. This suggests that SDWE is a significant mediating determinant of entrepreneurial success for both financial literacy and psychological well-being among women in Uttar Pradesh. Thus, it shows that the FL & PWB influences success of entrepreneurship through direct and indirect effect having p value less than 0.05.

Literature suggests that statistically significant positive direct and indirect relations points towards a partial mediation. This study's results indicate a two partial mediation relationship between (i) financial literacy and entrepreneurial success via indirect path (SDWE), (ii) psychological well-being and ES via SDWE (indirect path).

Nevertheless, the last hypothesis (7th) stated that SDWE also positively influences the entrepreneurial success. The results led to the acceptance of *H7* ($\beta = 0.427$, $t = 4.784$, $p = 0.000$) which suggests that using sustainable practices, reinvesting past profits, keeping records of business activity and contributing in society, led to influence their overall growth of enterprise and economic success of women entrepreneurs.

Table 4. Path Coefficient Analysis

Hypotheses	Association	Coefficient	Standard deviation	T-value	P - value	Decision
H1	FL -> ES	0.109	0.055	1.981	0.048	Supported
H2	FL -> SDWE	0.251	0.079	3.164	0.002	Supported
H3	PWB -> ES	0.441	0.083	4.961	0.000	Supported
H4	PWB -> SDWE	0.695	0.077	9.028	0.000	Supported

H5	FL -> SDWE - > ES	0.107	0.044	2.451	0.014	Supported
H6	PWB -> SDWE -> ES	0.297	0.068	4.351	0.000	Supported
H7	SDWE -> ES	0.427	0.089	4.784	0.000	Supported

Source: Source: Authors' analysis using Smart PLS 4 based on primary collected data.

4.2.4. Result of Predictive Relevance

Table 5 depicts the R^2 value, which is 81.5 % (SDWE) and 81.8% (ES), concluding that the variances in the endogenous construct (SDWE and ES) can be substantially explained by all exogenous constructs (financial literacy and psychological well-being) with regards to women-owned microenterprises in Uttar Pradesh, as per suggestions of Cohen (1988).

Additionally, table 5 contains the Q^2 _predictive relevance evaluation of the proposed structural model by using the PLS predict procedure. The results show that the model has strong predictive capacity for SDWE and ES. The Q^2 prediction is positive and equals 0.802 (SDWE) and 0.776 (ES) respectively. This shows that the proposed framework has significant output of sample predictive relevance to explain financial literacy and psychological well-being among women in Uttar Pradesh.

Table 5. R^2 & Q^2 (Predictive relevance)

	R^2	Adjusted R^2	Q^2 _predict	RMSE	MAE	Predict relevance
SDWE	0.815	0.813	0.802	0.449	0.345	Strong
ES	0.818	0.815	0.776	0.48	0.379	Strong

Source: Authors' analysis using Smart PLS 4 based on primary collected data.

(Note: Predictive relevance was measured using the PLS predict procedure in Smart PLS 4. Positive values of Q^2 _predict show that the structural model has predictive ability for the endogenous construct. The prediction error and model forecasting accuracy were also assessed by considering the RMSE and MAE values.)

The model estimation prediction error is shown by the RMSE of 0.449 (SDWE) & 0.345 (ES) and MAE of 0.48 (SDWE) & 0.379 (ES). The results support predictive adequacy of the model, given the positive and relatively strong Q^2 _predict value. The predictive assessment generally enhances the robustness of the proposed framework and indicates that Financial Literacy and Psychological Well-Being together contribute to the prediction of Sustainable Development of Women-led Microenterprises and Entrepreneurial Success.

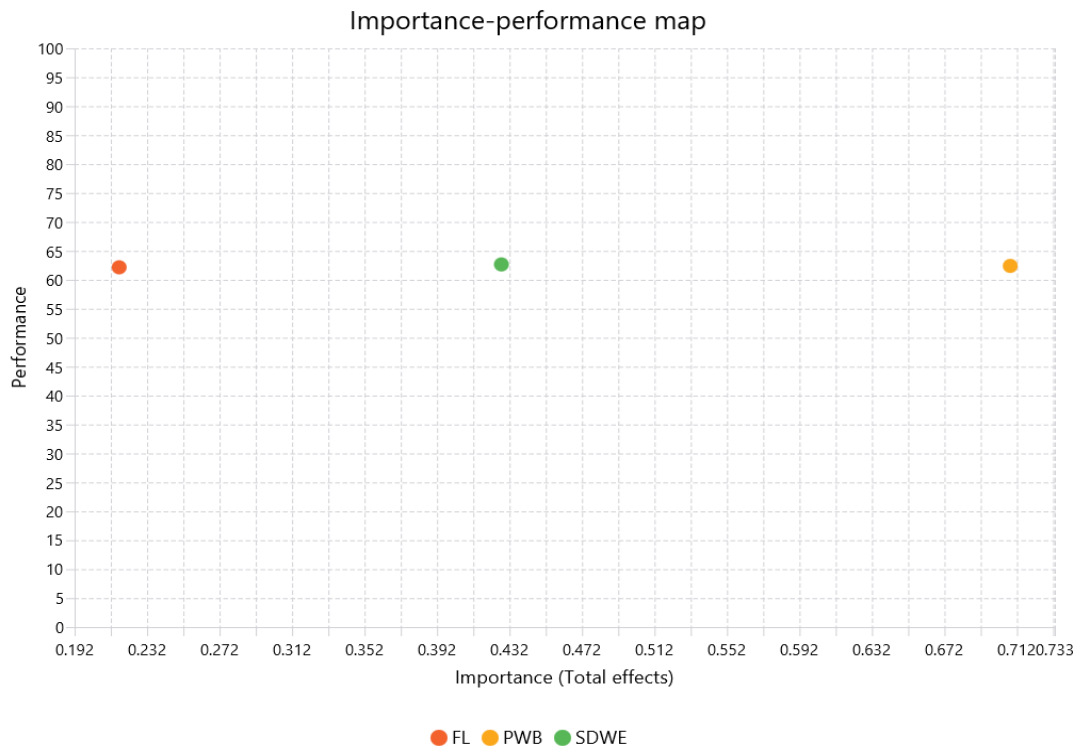
4.3. Importance – Performance Map Analysis (IPMA) for Entrepreneurial Success

IPMA was performed using Smart PLS4 to determine the constructs that have high importance and performance in predicting Entrepreneurial Success. Importance values represent total effects. Performance values are the average latent variable performance scores scaled between 0 and 100. Figure 3 and Table 6 present the results of Importance – Performance Map Analysis for Entrepreneurial Success. The analysis simultaneously examines the relative importance and performance levels of the predictor constructs in the proposed framework, which provides more managerial and strategic implications.

The results indicate that Psychological Well-being has the highest importance value (0.708) and relatively moderate performance score (62.408). This proves that psychological well-being dimensions such as stress management, emotional balance, future outlook, sense of purpose, life satisfaction and challenge confidence are very influential determinants that affect entrepreneurial success. Secondly, the findings suggest that enhancing

psychological mechanisms among women may positively influence overall sustainability and women's economic growth.

Figure 3. IPMA for Entrepreneurial Success



Source: Source: Authors' analysis using Smart PLS 4 based on primary collected data.

Additionally, another remaining constructs, Financial literacy and Sustainable Development of Women-led Microenterprises also makes a positive contribution towards Entrepreneurial Success although its relative importance is still lower than that of Psychological Well-Being. The construct has a performance score of 62.170 (FL) & 62.666 (SDWE) and an importance value of 0.216 & 0.427; it shows that reinvestment, community contribution, ecofriendly practices, budgeting, saving behavior and loan comparison are still facilitating entrepreneurial success among women-led enterprises in Uttar Pradesh.

The IPMA findings as a whole highlight Psychological Well-Being as a strategically significant area that needs ongoing institutional and policy focus. The analysis also indicates that strengthening women's psychological resilience, confidence and sense of purpose in financial decision-making may help to enhance sustained participation in economic empowerment initiatives. At the same time, improving financial literacy (FL) and sustainable development of women-led microenterprises (SDWE) could complement long-term adoption and sustainability of empowerment outcomes across women entrepreneurs in Uttar Pradesh.

Table 6. Construct-Level Importance–Performance Map Analysis Results

Constructs	Importance Effect	Performance	Strategic Priority
FL	0.216	62.170	Moderate
PWB	0.708	62.408	High
SDWE	0.427	62.666	Moderate

Source: Authors' analysis using Smart PLS 4 based on primary collected data.

5. Discussion and Practical Implications

5.1. Discussion

This study aims to explore the influence of financial literacy, psychological well-being and sustainable development for women-led microenterprises on entrepreneurial success in Uttar Pradesh, using the integrated theories of Resource-Based View (RBV), Knowledge-Based View, Social Cognitive and Conservation of resource theory. This study highlights the critical role of FL, PWB and SDWE in enhancing the entrepreneurial growth. Despite their significant contribution to the economy, women entrepreneurs face barriers, including access of financial benefits, low knowledge, and inadequate development programs tailored to their needs (Andriamahery & Qamruzzaman, 2022; Anggadwita & Dhewanto, 2016; Guzman & Kacperczyk, 2019; Oktari, 2021).

The findings support *H1 and H2*. In other words, financial literacy positively influences entrepreneurial success, along with sustainable development for women-led microenterprises. It means, the direct path from financial literacy to entrepreneurial success, alongside its effect on SDWE, suggests that practices such as budgeting, distinguishing personal & business expenses, saving, and comparing loans do not just improve financial control; they also enable women to reinvest, maintain customer stability, and plan for future expansion. Similarly, women with higher financial literacy are better able to prepare cash budget, keep records, and manage liquidity, and this translates into higher growth and performance.

Withing the framework of RBV and KBV, financial literacy is considered a strategic intangible (J. B. Barney, 1991; Das & Teng, 2000; Jappelli & Padula, 2013; Velibeyoglu & Yigitcanlar, 2010). Previous research shows that entrepreneurs with higher FL are more capable of utilizing financial products and managing financial complexities (Egbo et al., 2020; Lee & Huruta, 2022). (Andriamahery & Qamruzzaman, 2022) assert that FL provides women entrepreneurs with essential and necessary information and skills for making sound financial-related decisions, hence improving their enterprise performance sustainability. This study results strengthens previous findings, demonstrating that women entrepreneurs with enhanced financial literacy could have more information that helps them to navigate the loan administration process, hence promoting their business growth and sustainability.

The study's results also support the third, fourth and seventh hypothesis (*H3, H4 & H7*), which states that psychological well-being positively influences entrepreneurial success, along with sustainable development for women-led microenterprises. It means, the direct path from psychological well-being to entrepreneurial success, alongside its effect on SDWE, suggests that stress management, emotional balance, purpose of life, satisfaction, confidence and persistence do not just improve self-resilience; they also enable women to reinvest profits, maintain customer stability, use ecofriendly practices in business and plan for expansion of enterprise. Similarly, women with stable mindset (self-efficacy) are better able to perform business activities.

However, psychological well-being emerges as the most powerful predictor of entrepreneurial success (ES) and SDWE in the structural model, which reinforces Conservation of Resources theory with Social Cognitive Theory: psychological resources help women maintain effortful, long-term business behaviors under resources constraints. Existing studies emphasize that entrepreneurs with higher psychological well-being show stronger resilience, adaptability and persistence, which in turn predict firm growth and survival. In this study, the strong coefficients from psychological well-being to both SDWE and ES suggest that mental health, stress management and a sense of purpose are not peripheral "soft" factors: they are core mechanisms enabling sustained reinvestment, adoption of eco-friendly practices and community-oriented activities that feed back into business continuity. This complements recent evidence that women's psychological resources and self-efficacy are essential for converting empowerment initiatives and access to finance into actual entrepreneurial sustainability (Andriamahery, A., & Qamruzzaman, M. (2022).

Moreover, this study also supports fifth and sixth hypothesis (*H5 & H6*), which shows the mediating role of sustainable development for women-owned microenterprises (SDWE) is central to the theoretical contribution. Literature suggests that statistically significant positive direct and indirect relations points towards a partial mediation (Hair et.al., 2017). This study's results indicate a partial mediation relation between Financial Literacy

& Entrepreneurial success and between Psychological Well-being & Entrepreneurial success via SDWE, indicating that success is produced through a two-stage process: first, resources are developed at the individual level (financial literacy and psychological well-being) and second, these are translated into operational behaviors (such as record keeping, reinvestment, green practices, stable customer relations) that sustain the microenterprise over time.

The predictive relevance shown in the PLS predict analysis further enhances the practical significance of the proposed framework. The positive value of Q2 predict indicates that the influence of financial literacy, psychological well-being and SDWE has a significant predictive power to explain the entrepreneurial success. This observation emphasizes the significance of the proposed framework for policymakers, financial institutions, organizations, and government schemes that aim to transform financial and psychological resources into sustainable organizational capabilities.

5.2. Practical Implications

For policy makers, the findings indicate that financial literacy for women should focus on the practical skills for a business (cash flow management, loan comparison and reinvestment plans), instead of general financial literacy awareness campaigns. There is evidence that if these trainings are coupled with improved access and inclusion in the financial sector, women enterprises perform and sustain better. Government intervention in such areas should therefore use financial literacy and make access to formal finance more accessible in Uttar Pradesh – via simple products, digital payment methods, and SHG-based financing (Lestari et al., 2025; Andriamahery & Qamruzzaman, 2022; Rizvi & Ahmad, 2024; Peter et al., 2025).

The powerful role of psychological well-being in the context of NGO development, incubators and entrepreneurship support programs, means that psychological support is an integral part of design. Resilience and self-efficacy are closely related to women entrepreneurs' response to uncertainty, and can be nurtured through stress management workshops, peer groups, mentoring and counselling. The development of financial skills and confidence in a group has also been found to have positive effects on women's entrepreneurial confidence and literacy (Hou, 2025; Tumba et al., 2022; Abodunde et al., 2020).

For financial institutions and microfinance providers, there is a mediator between financial conditions and good practices, such as record-keeping, reinvestment, and environmentally or socially responsible activities. Research indicates that combined technical and finance training boosts women's enterprises' survival and growth rate. Women entrepreneurs can approach capability building as a business investment: learning how to do basic budgeting, book keeping and paying attention to digital finance, and consciously taking care of their psychological health and sustainable business practices, can lead to a long-term entrepreneurial success (Andriamahery & Qamruzzaman, 2022; Tumba et al., 2022; Nabisaalu et al., 2022).

5.3. Limitations

This study shows the predictive analysis of financial literacy, psychological well-being, sustainable development for women-led microenterprises and entrepreneurial success using small sample data. The results helped shed light on the possible impact of these interrelated constructs on the performance and sustainability of women's microenterprises. The study also offers opportunities for future research in this field of study, replicated with a larger and more geographically widespread sample of data to improve the generalizability and robustness of the findings. A longitudinal study could also be used in the research to track the financial literacy, mental health, sustainable development behaviors and entrepreneurial outcomes over time. In addition, other variables like digital financial literacy, technological integration, government support, ecopreneurship and social support can be considered for future research to gain more holistic view of women-led micro enterprises.

6. Conclusion

The study concludes that financial literacy and psychological well-being are important and interdependent factors influencing the entrepreneurial success of women entrepreneurs of microenterprises in Uttar Pradesh and SDWE are important mechanism through which these individual level resources translate to enterprise level success.

Financial literacy directly contributes to entrepreneurs' success and also supports sustainable development, thus women with financial literacy and awareness of budgeting & saving, and comparing loans, are more likely to sustain and expand their businesses.

Overall, psychological well-being is found to have the most powerful direct and indirect effect on success and is a key determinant of women's ability to reinvest, adapt resilient practices, and grow their enterprises. The results do support a COR/SCR perspective integrated with RBV & KBV perspective on entrepreneurial success, which is more about resources into viable organizational resources.

The study further demonstrates that financial literacy and psychological well-being continue to facilitate entrepreneurial success, although sustainable development for women-owned microenterprises depends substantially upon entrepreneurial success. The integration of PLS-SEM, PLS predict, and Importance-Performance Map Analysis (IPMA) additionally strengthening the analytical robustness of the study by providing explanatory, predictive, and strategic insights simultaneously. In particular, the IPMA findings identified Psychological Well-being as the most strategically important construct requiring continuous institutional and policy attention.

Funding: This paper received fund from Indian Council of Social Science Research (ICSSR) organization.

Conflicts of Interest: The authors declare no conflict of interest.

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