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## Role of Financial Literacy Programs in Empowering Women-Led Startups: A Gender Equality Perspective

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### Abstract

Women-led startups play a vital role in promoting inclusive economic growth; however, persistent gender-based constraints such as limited financial knowledge and restricted access to finance continue to hinder their growth and sustainability. In this context, the present study examines the role of financial literacy programs in empowering women-led startups and advancing gender equality, with a specific focus on Coimbatore District. Using a structured schedule, primary data were collected from 380 women entrepreneurs, selected through stratified random sampling. The study employs mediation analysis to examine whether empowerment mediates the relationship between financial literacy programs and gender equality. The results reveal that financial literacy programs have a strong and significant positive effect on the empowerment of women-led startups, and empowerment, in turn, has a significant positive impact on gender equality outcomes. The indirect effect of financial literacy programs on gender equality through empowerment is statistically significant, while the direct effect is not, indicating full mediation. These findings suggest that financial literacy programs contribute to gender equality primarily by enhancing women's financial and managerial empowerment rather than through direct effects. The study empirically validates empowerment as a critical mechanism linking financial literacy initiatives to gender equality and aligns with the objectives of Sustainable Development Goal 5- Gender Equality. The findings offer important policy implications for designing gender-sensitive financial literacy programs aimed at strengthening women-led startups and promoting inclusive entrepreneurial development.

**Keywords:** Financial literacy programs, Women-led startups, Empowerment, Gender equality, MSMEs.

### Introduction

Women-led startups play a crucial role in fostering inclusive economic growth, innovation, and employment generation across both developed and developing economies. Despite their increasing participation in entrepreneurial activities, women entrepreneurs continue to face persistent structural barriers, including limited access to finance, inadequate financial knowledge, and gender-based constraints in business ecosystems (World Bank, 2020) <sup>[19]</sup>. Among these challenges, financial literacy has emerged as a critical determinant influencing the sustainability and growth of women-led startups.

Financial literacy refers to the ability to understand and effectively use financial skills such as budgeting, financial planning, credit management, and investment decision-making (OECD, 2018) <sup>[14]</sup>. For entrepreneurs, particularly women, financial literacy is not merely a personal capability but a strategic resource that enhances business performance, risk management, and long-term viability. Studies suggest that women entrepreneurs with higher levels of financial literacy demonstrate improved financial decision-making, greater confidence in engaging with financial institutions, and enhanced access to external funding (Lusardi & Mitchell, 2014) <sup>[11]</sup>.

Financial literacy programs, therefore, have gained prominence as targeted interventions aimed at empowering women entrepreneurs by strengthening their financial capabilities. These programs equip women-led startups with essential knowledge related to cash flow management, financial reporting, taxation, and capital acquisition, thereby reducing information asymmetry and dependency on informal financial practices (Atkinson & Messy, 2012) <sup>[1]</sup>. Empirical evidence indicates that participation in structured financial education initiatives positively influences entrepreneurial resilience, profitability, and business survival rates among women-owned enterprises (Bruhn & Zia, 2013) <sup>[2]</sup>.

From a gender equality perspective, financial literacy programs align closely with Sustainable Development Goal 5 (SDG 5), which emphasizes women's economic empowerment and equal participation in decision-making processes. Gender disparities in financial inclusion and literacy often reinforce broader inequalities in entrepreneurship, limiting women's ability to scale their ventures and compete on equal terms with male-led firms (UN Women, 2019) <sup>[17]</sup>. By addressing these disparities, financial literacy programs act as catalysts for gender equity, enabling women entrepreneurs to gain financial autonomy, enhance bargaining power, and challenge systemic biases

within financial markets.

In this context, examining the role of financial literacy programs in strengthening women-led startups is both timely and policy-relevant. Understanding how such programs contribute to entrepreneurial success through the lens of gender equality provides valuable insights for policymakers, financial institutions, and development agencies seeking to promote inclusive entrepreneurship and sustainable economic development.

## Review of Literature

### Financial Literacy and Entrepreneurial Performance

Financial literacy has been widely recognized as a key driver of entrepreneurial success, influencing financial decision-making, business sustainability, and growth. Lusardi and Mitchell (2014)<sup>[11]</sup> argue that financially literate entrepreneurs are better equipped to manage cash flows, assess financial risks, and make informed investment decisions. Empirical studies have demonstrated a positive association between financial literacy and firm performance, including profitability, sales growth, and survival rates, particularly among small and medium enterprises (Wise, 2013; Sankar *et al.*, 2024)<sup>[12]</sup>.

Entrepreneurs with limited financial knowledge often rely on informal practices, which increases vulnerability to financial mismanagement and business failure (Fatoki, 2014)<sup>[5]</sup>. Financial literacy programs have been shown to mitigate these risks by improving budgeting skills, record-keeping, and financial planning capabilities (OECD, 2018)<sup>[14]</sup>. Bruhn and Zia (2013)<sup>[2]</sup> found that structured financial education significantly enhances managerial capital and financial practices among emerging entrepreneurs, leading to improved business outcomes.

### Women Entrepreneurship and Financial Constraints

Despite the growing participation of women in entrepreneurship, women-led startups face disproportionate financial constraints compared to their male counterparts. These constraints include limited access to formal credit, lower levels of financial inclusion, and gender-based discrimination in financial markets (World Bank, 2020)<sup>[19]</sup>. Several studies highlight that women entrepreneurs often possess lower levels of financial literacy due to historical, social, and institutional barriers, which adversely affect their business decision-making (Klapper & Parker, 2011)<sup>[9]</sup>.

Gender gaps in financial literacy are consistently reported across countries, with women scoring lower on financial knowledge indicators such as interest rates, inflation, and risk diversification (OECD, 2018)<sup>[14]</sup>. These gaps restrict women's ability to evaluate financial products, negotiate funding terms, and leverage growth opportunities for their startups (Chen & Volpe, 2002)<sup>[3]</sup>. As a result, women-led enterprises tend to remain smaller in scale and less likely to transition from informal to formal business structures (UN Women, 2019)<sup>[17]</sup>.

### Role of Financial Literacy Programs in Women-Led Startups

Financial literacy programs have emerged as effective policy interventions aimed at addressing the financial capability gaps among women entrepreneurs. Atkinson and Messy (2012)<sup>[1]</sup> emphasize that targeted financial education programs tailored to women's entrepreneurial contexts enhance both financial confidence and competence. Such programs typically cover areas including financial planning, accounting practices,

taxation, credit management, and investment strategies.

Empirical evidence supports the effectiveness of financial literacy programs in strengthening women-led startups. Drexler, Fischer, and Schoar (2014)<sup>[4]</sup> found that simplified financial training programs significantly improved financial practices and business revenues among women entrepreneurs in developing economies. Similarly, Field *et al.* (2016)<sup>[6]</sup> reported that women who participated in financial and business training programs demonstrated higher business persistence and improved financial decision-making.

Moreover, financial literacy programs contribute to increased access to finance by enabling women entrepreneurs to prepare accurate financial statements and business plans, which are critical for securing institutional funding (Fatoki, 2014)<sup>[5]</sup>. Enhanced financial literacy also reduces dependency on informal credit sources, thereby improving financial resilience and long-term business sustainability (Wise, 2013).

### Financial Literacy, Gender Equality, and Sustainable Development

From a gender equality perspective, financial literacy programs play a pivotal role in empowering women entrepreneurs and advancing inclusive economic development. The United Nations identifies women's economic empowerment as a core component of Sustainable Development Goal 5 (Gender Equality), emphasizing equal access to financial resources and decision-making opportunities (UN, 2015)<sup>[18]</sup>. Financial literacy enables women to exercise greater control over financial decisions, strengthen bargaining power within households and markets, and challenge structural inequalities (UN Women, 2019)<sup>[17]</sup>. Studies indicate that financially empowered women entrepreneurs contribute positively to broader social and economic outcomes, including employment generation, poverty reduction, and community development (World Bank, 2020)<sup>[19]</sup>. However, existing literature also highlights the need for context-specific and gender-sensitive financial literacy programs to maximize impact, as generic training models may not adequately address women's unique entrepreneurial challenges (OECD, 2018)<sup>[14]</sup>.

### Research Gap

While prior studies provide substantial evidence on the importance of financial literacy and women entrepreneurship, limited research explicitly examines the role of financial literacy programs in strengthening women-led startups through a gender equality lens. Many studies focus on general entrepreneurial outcomes without integrating gender equality frameworks or SDG-based perspectives. This gap underscores the need for empirical investigation into how financial literacy programs contribute not only to business performance but also to advancing gender equality in entrepreneurial ecosystems.

### Objectives

To analyse how financial literacy programs contribute to the empowerment of women-led startups and advancing gender equality.

### Conceptual Framework

#### Financial Literacy Programs → Empowerment → Gender Equality

The conceptual framework of the study is based on the proposition that financial literacy programs contribute to gender equality through the empowerment of women-led startups. Financial literacy programs enhance women entrepreneurs' knowledge and skills related to financial

management, access to credit, budgeting, and investment decisions, which are critical for improving financial autonomy and strategic business decision-making (Lusardi & Mitchell, 2014; OECD, 2013)<sup>[11, 13]</sup>. Such improvements strengthen the economic and managerial empowerment of women-led startups by increasing control over financial resources, confidence, and participation in key business decisions. Drawing on empowerment theory, empowerment represents an expansion of women's agency and ability to make meaningful economic choices in contexts where such opportunities were previously constrained (Kabeer, 1999)<sup>[7]</sup>. Empowered women entrepreneurs are more likely to overcome structural gender barriers, enhance their economic participation, and influence broader social and economic outcomes, thereby contributing to the advancement of gender equality, particularly in terms of access to opportunities, decision-making power, and economic inclusion (Sen, 1999; Kabeer, 2005)<sup>[16, 8]</sup>. Accordingly, the framework positions empowerment as a mediating mechanism through which financial literacy programs translate into gender equality outcomes, aligning the study with the objectives of Sustainable Development Goal 5 and providing a theoretical basis for examining the role of financial literacy initiatives in promoting inclusive and gender-equitable entrepreneurial development.

### Research Methodology

The population for the present study comprises women-owned or women-led Micro, Small, and Medium Enterprises operating in Coimbatore District. Based on data from the Udyam Registration portal and national estimates of women's participation in MSMEs, the number of women-owned MSMEs in Coimbatore District is estimated to be approximately 23,000 units, which served as the population frame for the study. Using the Krejcie and Morgan (1970)<sup>[10]</sup> sample size determination formula, the minimum required sample size was calculated as 378 respondents at a 95 per cent confidence level and a 5 per cent margin of error. To enhance the reliability of the findings and to account for potential non-responses or incomplete questionnaires, the final sample size was rounded up to 380 women entrepreneurs. Primary data were collected using the schedule method, and respondents were selected through stratified random sampling to ensure adequate representation of women entrepreneurs across different categories of MSMEs.

### Analysis and Interpretation

#### Mediation Analysis Results

The mediation analysis reveals a statistically significant indirect effect of financial literacy programs on gender equality through financial empowerment. As shown in Table \_\_\_, the indirect effect is positive and significant ( $\beta = 0.664$ ,  $SE = 0.047$ ,  $Z = 14.185$ ,  $p < .001$ ), indicating that financial literacy programs substantially influence gender equality outcomes via the empowerment of women-led startups. In contrast, the direct effect of financial literacy programs on gender equality is positive but statistically non-significant ( $\beta = 0.090$ ,  $SE = 0.049$ ,  $Z = 1.824$ ,  $p = .068$ ). However, the total effect remains positive and statistically significant ( $\beta = 0.754$ ,  $SE = 0.034$ ,  $Z = 21.916$ ,  $p < .001$ ), suggesting that the overall influence of financial literacy programs on gender equality is largely transmitted through the mediating variable.

#### Path Analysis Results

The path estimates further support the proposed conceptual

framework. Financial literacy programs have a strong and statistically significant effect on financial empowerment ( $\beta = 0.933$ ,  $SE = 0.031$ ,  $Z = 30.387$ ,  $p < .001$ ), indicating that participation in financial literacy initiatives substantially enhances the empowerment of women-led startups. In turn, financial empowerment exhibits a significant positive effect on gender equality ( $\beta = 0.712$ ,  $SE = 0.044$ ,  $Z = 16.040$ ,  $p < .001$ ), demonstrating that empowered women entrepreneurs are more likely to experience and contribute to improved gender equality outcomes. The direct path from financial literacy programs to gender equality remains statistically non-significant ( $\beta = 0.090$ ,  $SE = 0.049$ ,  $Z = 1.824$ ,  $p = .068$ ), reinforcing the mediating role of financial empowerment.

#### Nature of Mediation

Taken together, the results indicate full mediation, as the indirect effect is significant while the direct effect is not. This finding suggests that financial literacy programs do not directly influence gender equality outcomes; rather, their impact operates primarily through enhancing the financial empowerment of women-led startups. The results empirically validate the study's conceptual framework and highlight financial empowerment as a critical mechanism linking financial literacy initiatives to gender equality advancement.

#### Findings of the Study

The study examined the role of financial literacy programs in empowering women-led startups and advancing gender equality in Coimbatore District. The findings reveal that financial literacy programs have a strong and significant positive impact on the empowerment of women-led startups. The path analysis results indicate that participation in financial literacy initiatives significantly enhances women entrepreneurs' financial knowledge, confidence, and ability to manage business finances effectively. This suggests that financial literacy programs play a crucial role in strengthening women's economic and managerial empowerment.

Further, the results demonstrate that financial empowerment has a significant positive effect on gender equality outcomes. Empowered women entrepreneurs exhibit greater financial autonomy, improved decision-making capacity, and increased participation in economic activities, which collectively contribute to advancing gender equality. This finding reinforces the view that empowerment is a critical pathway through which women entrepreneurs can overcome structural gender barriers and achieve equitable participation in entrepreneurial ecosystems.

The mediation analysis provides important insights into the mechanism underlying this relationship. The indirect effect of financial literacy programs on gender equality through empowerment is statistically significant, while the direct effect of financial literacy programs on gender equality is not significant. This indicates the presence of full mediation, suggesting that financial literacy programs do not directly lead to gender equality outcomes unless they first enhance the empowerment of women-led startups. The significant total effect further confirms that the overall influence of financial literacy programs on gender equality is substantial but operates primarily through empowerment.

Overall, the findings empirically validate the proposed conceptual framework and highlight empowerment as a key mediating mechanism linking financial literacy programs to gender equality. The results also align with the broader objectives of Sustainable Development Goal 5 by demonstrating that targeted financial capability-building

interventions can promote gender-equitable entrepreneurial development.

### Suggestions and Policy Implications

Based on the findings of the study, several policy and practical suggestions are proposed. First, financial literacy programs should be strengthened and expanded, with a specific focus on women entrepreneurs. Government agencies, financial institutions, and entrepreneurship development organisations should design gender-sensitive financial literacy initiatives that address the unique financial challenges faced by women-led startups, including access to credit, financial planning, risk management and also to encourage job satisfaction, organisational citizenship behaviour (Sankar *et al.*, 2025).

Second, since empowerment plays a mediating role, financial literacy programs should go beyond basic financial knowledge and explicitly aim to enhance women's financial autonomy, confidence, and decision-making authority. Training modules should integrate practical components such as hands-on financial planning, business simulations, and mentoring support to translate financial knowledge into empowerment outcomes.

Third, policymakers should integrate financial literacy programs with broader women entrepreneurship support systems, including access to finance, incubation facilities, and networking platforms. Linking financial literacy initiatives with formal financial institutions can improve women entrepreneurs' ability to access institutional credit and reduce dependence on informal financing sources.

Fourth, entrepreneurship development policies should explicitly recognise financial empowerment as a pathway to achieving gender equality. Monitoring and evaluation frameworks of financial literacy programs should include empowerment and gender equality indicators rather than focusing solely on business performance outcomes.

Finally, future research may extend the present study by incorporating longitudinal data to examine the long-term effects of financial literacy programs on empowerment and gender equality. Comparative studies across regions or sectors could also provide deeper insights into contextual variations and help refine policy interventions aimed at promoting inclusive and gender-equitable entrepreneurship.

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