

THE MODERATING EFFECT OF FINANCIAL LITERACY ON THE RELATIONSHIP BETWEEN WOMEN ENTERPRISE FUND UTILIZATION AND PROFITABILITY OF THE WOMEN-OWNED ENTERPRISES IN KAJIADO COUNTY, KENYA

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ABSTRACT

Women-owned enterprises globally face persistent profitability challenges despite receiving financial support from government programs. This study investigated the moderating effect of financial literacy on the relationship between Women Enterprise Fund utilization and profitability of women-owned enterprises in Kajiado County, Kenya. Anchored on Financial Literacy Theory, the study adopted an explanatory research design with 381 respondents selected through stratified random sampling, achieving a 72.4% response rate. Data were analyzed using descriptive statistics, correlation analysis, and Hayes' Process Macro Model 1. Results revealed strong positive correlations between loan amount utilization ($r = 0.899$), repayment period ($r = 0.898$), savings ($r = 0.930$), and profitability. The moderated model explained 90.21% of profitability variance compared to 87.93% baseline. Financial literacy significantly strengthened the effects of loan amount ($\beta = 0.493$, $p = 0.023$) and savings ($\beta = 0.587$, $p = 0.002$) on profitability. The study concludes that financial literacy is a critical moderating variable determining the effectiveness of government financial interventions in promoting sustainable enterprise profitability. The study recommends that policymakers integrate comprehensive financial literacy training programs into fund disbursement processes, establish quarterly literacy campaigns through local forums, and develop mobile-based learning platforms to enhance women entrepreneurs' financial competencies in marginalized regions.

Keywords: *Financial Literacy, Women Enterprise Fund, Profitability, Women-Owned Enterprises, Kajiado County*

1.1 Introduction

Women-owned enterprises globally face persistent profitability challenges despite receiving financial support from government and development programs. Women-led enterprises are reported to be 30% less profitable compared to their male counterparts, a disparity attributed to gender biases, systemic barriers, and limited access to high-growth sectors (International Finance Corporation, 2021). In Kenya, the Women Enterprise Fund (WEF) was established in 2007 to address these challenges by providing accessible and affordable credit to women entrepreneurs at various stages of business development. However, despite the availability of financial resources, the profitability outcomes of women-owned enterprises remain inconsistent, suggesting that access to funding alone may not guarantee business success.

The effectiveness of financial interventions in enhancing enterprise profitability is increasingly recognized as being contingent upon the financial literacy levels of recipients. Financial literacy encompasses the skills and knowledge that enable entrepreneurs to make informed decisions about loan utilization, savings management, and repayment strategies. Research has shown that financial training, record keeping, and cash flow forecasting significantly impact the business performance of women micro-entrepreneurs (Tumba, Onodugo, Akpan, & Babarinde, 2022). Financial literacy, when paired with access to finance, strengthens enterprise sustainability and women's economic empowerment (Andriamahery & Qamruzzaman, 2022). These findings suggest that financial literacy may play a critical moderating role in determining how effectively women entrepreneurs translate financial resources into profitable business outcomes.

In Kajiado County, Kenya, women-owned enterprises have experienced notable growth in numbers, yet their profitability remains below that of neighboring counties such as Machakos and Nakuru. While the number of women-owned enterprises in Kajiado increased by 60% between 2010 and 2023, average annual profitability grew by only 15%, compared to 25% in Machakos and 30% in Nakuru during the same period (Kariuki & Wambui, 2022; Mutua & Muriithi, 2023). This disparity raises important questions about the factors influencing the relationship between Women Enterprise Fund utilization and enterprise profitability. Understanding whether and how financial literacy moderates this relationship is crucial for designing more effective interventions that not only provide financial resources but also equip women entrepreneurs with the competencies needed to optimize fund utilization and achieve sustainable profitability.

1.2 Statement of The Problem

The profitability of women-owned enterprises in Kajiado County remains significantly lower compared to neighboring regions despite similar access to the Women Enterprise Fund. Between 2010 and 2023, women-owned enterprises in Kajiado experienced a 60% growth in numbers but achieved only a 15% increase in profitability, lagging behind Machakos (25% profitability growth) and Nakuru (30% profitability growth) (Kariuki & Wambui, 2022; Mutua & Muriithi, 2023). Previous studies have established that women enterprises in Kajiado County experienced an 8% decline in sales and profitability despite relying on microfinance services (Munuve, Githui, & Omurwa, 2020). Additionally, research on Kenya Women Trust Fund revealed a 30% decline in profits among women entrepreneurs (Nyamboga & Ali, 2020). These findings suggest that access to financial resources alone does not guarantee improved profitability outcomes for women-owned enterprises.

While existing studies have identified challenges such as limited credit access, inadequate business skills, and socio-cultural barriers affecting women entrepreneurs in Kajiado (King'ola & Njeru, 2018; Nyandieka, 2022), there remains a critical gap in understanding how financial

literacy influences the relationship between Women Enterprise Fund utilization and enterprise profitability. Previous research has not adequately examined whether the financial knowledge and skills possessed by women entrepreneurs moderate the effectiveness of fund utilization in enhancing profitability. This study therefore sought to investigate the moderating effect of financial literacy on the relationship between Women Enterprise Fund utilization and profitability of women-owned enterprises in Kajiado County, Kenya.

1.3 Research Objectives

To determine the moderating effect of financial literacy on the relationship between women enterprise fund utilization and profitability of the women-owned enterprises in Kajiado County, Kenya.

1.4 Study Hypotheses

H0: Financial literacy does not moderate the relationship between Women Enterprise Fund utilization and profitability of women enterprises in Kajiado County.

2.1 Literature Review

2.2 Theoretical Framework

The study is anchored on the Financial Literacy Theory, which has evolved over the years with numerous scholars contributing to its conceptual development. In the 1990s, Mandell (1990) pioneered research on the relationship between financial literacy and personal finance, later collaborating with Lynch to explore consumer financial decision-making (Mandell & Lynch, 1990). The theory gained further prominence when Kiyosaki (2000) advocated for financial independence through literacy, while Lusardi (2009) explored global financial literacy levels and their implications for decision-making. The framework emphasizes the importance of individuals and organizations possessing financial knowledge and skills for effective decision-making. Key features of the theory include education and awareness, which promote proper management of finances, and the provision of tools for evaluating financial risks and opportunities. Financial literacy enables empowerment and confidence in financial affairs, leading to positive impacts on economic stability for both individuals and societies.

The theory is particularly relevant to this study as it provides a lens through which to examine how financial literacy moderates the relationship between Women Enterprise Fund utilization and enterprise profitability. Financially literate enterprise owners are better positioned to make smart capital allocation decisions, develop effective investment plans, and manage cash flow efficiently, thereby improving their company's sustainability and profitability (Atkinson & Messy, 2015). The theory suggests that women entrepreneurs with higher levels of financial knowledge and skills are more likely to utilize loans effectively, adhere to repayment schedules, and implement strategic savings practices that enhance business outcomes. However, the theory has been critiqued for its limitations in addressing how other factors such as income levels and cultural backgrounds can constrain the effectiveness of financial literacy in improving financial outcomes. Despite these limitations, the Financial Literacy Theory provides a robust theoretical foundation for understanding how financial knowledge and competencies influence the effectiveness of financial interventions among women entrepreneurs in Kajiado County.

2.3 Empirical Review

A study conducted across six states in Nigeria's North Eastern region found that financial literacy meaningfully impacts the success of women in business, with financial training emerging as the most significant factor affecting business performance variations among women managing small businesses (Tumba, Onodugo, Akpan, & Babarinde, 2022). The study,

which collected data from 247 entrepreneurs using structural equation modeling, revealed that different aspects of literacy including economic training, cash flow projections, and record keeping have notable impacts on business success. Supporting these findings, research on women-led entrepreneurs in halal businesses highlighted that Muslim women encounter challenges in conducting business activities, including limited access to capital, insufficient business management skills, and lack of government support, with financial literacy positively influencing business performance in this sector (Yasin, Mahmud, & Diniyya, 2020). Similarly, a study in Kenya investigating women's groups affiliated with JOYWO emphasized the significant role of financial literacy on group growth, recommending that management provide training to enhance members' financial literacy skills (Wangui, 2020). These findings collectively highlight the multidimensional nature of financial literacy and its differential impacts on enterprise outcomes across various geographical and cultural contexts.

Research in Bangladesh investigated the impact of finance, expertise, and financial literacy on empowering women through their entrepreneurial endeavors, surveying 950 medium enterprises owned by women using structured questionnaires (Andriamahery & Qamruzzaman, 2022). By employing equation modeling and multivariate regression analysis, the research uncovered both direct and indirect effects of these key factors on women's empowerment, highlighting a strong correlation between the sustainability of women's entrepreneurship and their empowerment. The study recommended that financial literacy, financial accessibility, and technical know-how policies should be effectively structured to increase the rate of women empowerment. This research underscores the interconnected nature of financial resources and financial knowledge in achieving sustainable business outcomes. Complementing these findings, research on women entrepreneurs accessing various financial products emphasized that understanding financial products and services is essential for driving economic success, particularly evident among women running enterprises in challenging environments where strong financial management is key to thriving (Mallik & Singla, 2021; Yasin, Mahmud, & Diniyya, 2020). Furthermore, studies have demonstrated that poor financial decisions and inadequate management can lead to decreased profitability and operational struggles, highlighting how a lack of financial literacy can significantly hinder business performance (Harrison & Muiru, 2021).

In India, the incorporation of financial literacy into government schemes such as Mudra Yojana and Stand-Up India has been effective in assisting women entrepreneurs to succeed in management of their finances and reduce official hurdles (Bank of Baroda, 2023). Research has established that financial literacy, including general, specific, and overall knowledge, which are influenced by education and profit ratios, are essential for improving business stability (Yasin, Mahmud, & Diniyya, 2020). Skills such as budgeting, credit management, and bookkeeping have been identified as crucial factors that significantly enhance the performance of women entrepreneurs (Wanjama, Okwema, & Nyamagwa, 2022). In the United States, SBA loans include financial literacy training to equip women with critical skills in budgeting, planning, and investing, leading to improved business outcomes (U.S Small Business Administration, 2024). Similarly, South Africa's Isivande Women's Fund and Kenya's Women Enterprise Fund highlight the importance of monetary education in fostering business success (Chiloane-Tsoka, 2020; Ngugi & Mungai, 2021). These global examples demonstrate that financial literacy training, when integrated into funding programs, enables women entrepreneurs to better manage budgets, make informed investment decisions, and maintain healthy cash flow, all of which contribute to more efficient use of financial resources.

Research in Zimbabwe's Mashonaland West province investigated the effect of microfinance on women-led enterprises, finding that micro savings products positively contributed to the development of these enterprises, with micro investment products supporting business growth

(Zvirikuzhe, 2022). However, the study noted the need for exploration of long-term impacts of micro-saving products and other financial products. In Kilifi County, Kenya, research examining the economic role of women-owned firms and their challenges in accessing credit from commercial banks revealed that savings functioned as loan collateral and provided capital for future business needs, with savings patterns and deposit frequency influencing debt administration (Julius, 2021). Supporting these findings, a study in Busia County emphasized the role of savings in microfinance services, revealing that savings substantially strengthen women-led enterprises, improve access to credit, and serve as collateral for securing loans (Luswet, 2021). Similarly, research in Makurdi, Nigeria, established that savings services significantly contribute to the development of women-led enterprises, with accessible and secure savings services identified as pivotal for enterprise performance (Wombo, Ogaga, & Tsetim, 2020). These studies collectively demonstrate that financial literacy enhances women's ability to implement effective savings strategies, though the relationship between financial knowledge and savings behavior remains complex and context-dependent.

While studies have established direct relationships between financial literacy and business performance (Tumba et al., 2022; Wangui, 2020), and between fund access and enterprise outcomes (Andriamahery & Qamruzzaman, 2022), few have explicitly examined the moderating role of financial literacy in the context of government-funded programs like the Women Enterprise Fund. Previous research has focused primarily on financial literacy as an independent variable influencing business success (Yasin, Mahmud, & Diniyya, 2020; Mallik & Singla, 2021), rather than as a conditional factor that may strengthen or weaken the effectiveness of financial interventions. Additionally, most studies examining financial literacy among women entrepreneurs have been conducted in contexts different from Kajiado County, limiting the applicability of findings to this specific marginalized region. The contextual gap is particularly evident as research by King'ola and Njeru (2018) and Nyandieka (2022) identified challenges facing women entrepreneurs in Kajiado but did not investigate how financial literacy might mitigate these challenges or enhance the effectiveness of available financial resources. This study addresses these gaps by explicitly testing financial literacy as a moderating variable in the relationship between Women Enterprise Fund utilization and enterprise profitability in Kajiado County.

2.4 Conceptual Framework

This section provides profitability as measured through the determination of profit margin for the identified women-led enterprises. The independent variables are informed by the Women enterprise Fund conditions which are repayment period, loan amount and savings on loans. Loan amount was operationalized by the loan amount received per year. Repayment period was operationalized by time taken to repay the loan amount received per year. Savings on loans was operationalized by amount of savings attached to each loan received. The study's moderating variable is financial literacy held by the women in management of their enterprises this variable was operationalized by financial skills and knowledge of the women entrepreneurs.

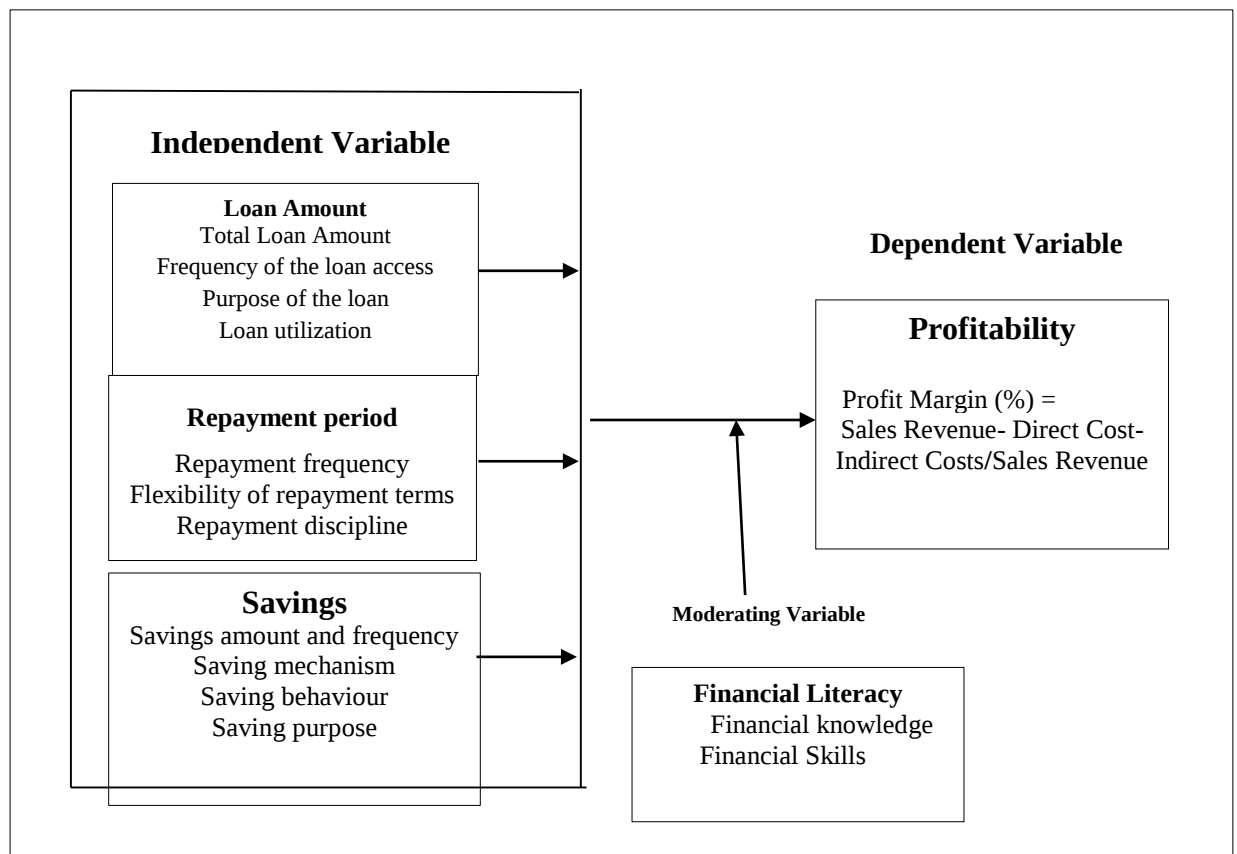


Figure 1: Conceptual Framework

3.1 Research Methodology

3.1.1 Research Design and Philosophy

The study adopted a positivism research philosophy and an explanatory research design to investigate the moderating effect of financial literacy on the relationship between Women Enterprise Fund utilization and profitability of women-owned enterprises in Kajiado County. The positivism philosophy ensured objectivity and reliable, scientifically verified results, while the explanatory design enabled identification of correlations and causality between loan amount, repayment period, savings, financial literacy, and profitability. The target population comprised 8,100 women entrepreneurs who accessed the Women Enterprise Fund between 2018 and 2022 across five sub-counties.

3.1.2 Sampling and Data Collection

A stratified random sampling technique selected 381 respondents using Yamane's (1967) formula at 95% confidence level, with systematic sampling selecting every 21st participant from each sub-county. Primary data were collected through structured questionnaires using a five-point Likert scale, with composite indices calculated by averaging responses across multiple items. A pilot test with 18 women groups in Kiambu County yielded a Cronbach's alpha of 0.90, confirming instrument reliability.

3.1.3 Data Analysis

Data analysis used Stata version 17 for descriptive statistics (means, standard deviations) and panel regression analysis. The Hausman test ($\chi^2 = 33.43$, $p = 0.052$) determined random effects modeling was appropriate. Diagnostic tests confirmed data normality (Kolmogorov-Smirnov, $p > 0.05$), absence of multicollinearity ($VIF < 10$), and homoskedasticity (Breusch-Pagan, $p = 0.062$).

3.1.4 Moderation Analysis

Hayes' (2013) Process Macro Model 1 tested moderation by first examining direct effects, then incorporating interaction terms between independent variables and centered financial literacy. Conditional effects were probed at low, moderate, and high financial literacy levels using simple slopes analysis, with the Johnson-Neyman technique identifying exact threshold values where moderation effects became significant or non-significant.

4.1 Results and Findings

A 72.4% response rate was achieved where 276 women entrepreneurs shared their responses from a target sample of 381 women-owned enterprises.

4.2 Descriptive Results

Descriptive statistics of the study variables are presented for comprehensive demographics of women entrepreneurs and their enterprises which have accessed the Women Enterprise Fund in Kajiado County. The descriptive analysis encompasses demographic characteristics, business operational features, and key performance indicators. Descriptive results for demographic profiles, business characteristics, and financial performance measures are summarised below.

Table 1: Descriptive Results

Parameter	Mean	SD	Minimum	Maximum
Age	2.66	1.032	1	5
Ownership	1.64	0.695	1	3
Classification	1.28	0.465	1	3
Industry	1.80	0.782	1	4
Revenue	2.05	1.032	1	5
Direct Cost	1.21	0.456	1	3
Indirect Cost	1.04	0.289	1	3
Profitability Change	1.26	0.667	1	3
Profits Reinvestment	1.03	0.217	1	3

Source: Research data (2024)

The demographic analysis reveals that women entrepreneurs accessing the Women Enterprise Fund have a mean age of 2.66, most of the respondents are middle aged categories of scale 31 to 45 years of age. The $SD = 1.032$ demonstrates reasonable age distribution among the 276 respondents, suggesting reasonable representation across different age cohorts while maintaining concentration in the prime entrepreneurial years. This age distribution aligns with entrepreneurial lifecycle theory, which posits that individuals in middle age categories possess optimal combinations of business experience, financial responsibility, and risk management capabilities necessary for successful enterprise operations.

The ownership characteristics show a $M = 1.64$ with $SD = 0.695$, indicating that the sample predominantly consists of individually owned enterprises with some variation toward partnership arrangements with family or non-family members. This ownership pattern reflects the typical structure of women-owned businesses in developing economies, where sole proprietorship dominates due to factors such as limited access to partnership capital, preference for autonomous decision-making, and the informal nature of many women-led enterprises. The relatively low standard deviation suggests moderate homogeneity in ownership structures within the sample.

Enterprise classification exhibits a mean of 1.28 with minimal variation ($SD = 0.465$), confirming that the sample is overwhelmingly composed of micro enterprises. The exceptionally low standard deviation indicates high homogeneity within the sample regarding business size, reflecting the concentration of women entrepreneurs in micro-scale operations that characterize the informal and semi-formal sectors in developing economies. This enterprise size distribution is consistent with existing literature on women's entrepreneurship in Sub-Saharan Africa.

Industry variable shows $M = 1.80$ with $SD = 0.782$, suggesting some concentration in specific sectors a lean towards retail shops and service provision such as catering and salon services, there is reasonable diversification across different industry categories among the women entrepreneurs. This distribution indicates that the Women Enterprise Fund serves entrepreneurs across multiple economic sectors, enhancing the representativeness of the study findings.

The revenue variable demonstrates a $M = 2.05$ with a $SD = 1.032$, indicating moderate revenue levels with considerable variation among enterprises in the range of Kshs. 200,000 to Kshs. 250,000. Direct costs show a mean of 1.21 ($SD = 0.456$), while indirect costs exhibit a mean of 1.04 ($SD = 0.289$), most enterprises operate with relatively low-cost structures ranging between Kshs. 50,000 to Kshs. 100,000 per annum typical SME's. The lower mean for indirect costs compared to direct costs reflects the operational characteristics of small-scale women-owned businesses that typically have minimal overhead expenses.

Profitability change shows a mean of 1.26 with SD of 0.667, while profits reinvestment exhibits a mean of 1.03 and SD of 0.217. In conclusion most enterprises experience some level of profitability improvement once they received the women enterprise fund, though the reinvestment of profits remains limited, which is characteristic of survival-oriented rather than growth-oriented enterprises common among women entrepreneurs in developing economies.

4.3 Correlation Analysis

Pearson correlation coefficients were computed to assess the linear associations among profitability, loan amount, repayment period, savings, and financial literacy.

Table 4.10: Correlation Findings

	Profitability	Loan Amount Utilization	Repayment Period	Savings
Profitability	1.000 0.000			
Loan Amount Utilization	0.899	1.000		
	0.000			
Repayment Period	0.898	0.672	1.000	
	0.000	0.000		
Savings	0.930	0.567	0.470	1.000
	0.000	0.000	0.000	

The correlation analysis reveals that loan amount utilization exhibits a very strong positive and statistical significant association with profitability ($r = 0.899$, $p = 0.000 < 0.05$). This substantial correlation coefficient exceeds Cohen's (1988) threshold for large effect sizes ($r > 0.5$), demonstrating both statistical significance and a practically important association between the quantum of loans accessed from the Women Enterprise Fund and subsequent business profitability outcomes. The magnitude of this correlation suggests that women entrepreneurs who access and utilize larger loan amounts have more profitability, providing strong preliminary evidence that adequate capitalization through external financing enhancing enterprise success among women-led businesses in Kajiado County. Tumba et al. (2022) and Andriamahery & Qamruzzaman (2022) corroborate this through their studies that proper financial training equips women with the ability to utilize loans effectively and access to finance and literacy reinforce responsible use and empowerment.

The repayment duration variable exhibits a significant positive association with profitability ($r = 0.898$, $p = 0.000 < 0.05$). This robust correlation coefficient suggests that longer repayment periods are strongly associated with enhanced business profitability, likely reflecting the cash flow advantages and operational flexibility that extended repayment terms provide to women entrepreneurs. The statistical significance of this relationship at the $\alpha = 0.05$ level confirms that the observed association represents a systematic pattern in the data rather than random variation, supporting the theoretical proposition that favourable repayment terms contribute to improved business performance by reducing financial stress and allowing entrepreneurs to allocate more resources toward revenue-generating activities. Wangui (2020) emphasizes that financial literacy enables better planning, including repayment strategies.

The savings variable exhibits association with profitability ($r = 0.930$, $p = 0.000 < 0.05$). This exceptionally high correlation coefficient indicates that women entrepreneurs who demonstrate higher levels of savings behaviour through the Women Enterprise Fund consistently achieve superior profitability outcomes compared to their counterparts with lower savings utilization. The statistical significance at the $\alpha = 0.05$ level provides genuine association with substantial effect size, aligning with financial management theory which posits that accumulated savings provide businesses with financial resilience, emergency funds, and the capacity to profit solely. This finding supports (Zvirikuzhe, Ariamahery & Qamruzzaman 2022) who concluded that financial discipline through savings and planning strengthen enterprise sustainability.

4.4 Hypothesis Testing

The research study presents results on the examination of the relationships between Women Enterprise Fund utilization variables and profitability. Regression models to tested the direct effects of loan amount, repayment period, and savings on profitability and financial literacy moderation.

Table 2: Model summary on women enterprise fund utilization and profitability

Profitability	Coef.	Std. Err.	Z	P value
Loan amount	0.315	0.092	3.42	0.001
Repayment Period	0.227	0.084	2.70	0.007
Savings	2.255	0.103	21.800	0.000
_cons	0.082	0.044	1.870	0.061
Rsquare	0.8793			
Wald chi2(3)	9834.22			
Prob > chi ²	0.000			

Source: Research data (2024)

$$y = 0.082 + 0.315 X_1 + 0.227X_2 + 2.255X_3$$

Moderation effect of financial literacy between women enterprise fund utilization and profitability

The study's fourth objective assessed how financial literacy influences the relationship between Women Enterprise Fund usage and profitability of women-owned businesses in Kajiado County. A null hypothesis was tested using a moderation model and Hayes' Process Macro model 1. Financial literacy was interacted with fund utilization variables to evaluate its moderating role. The R-squared change value was used to determine the significance of this effect, as shown in Tables 3 and 4.

Table 3: Model summary of moderation on women enterprise fund and profitability

Profitability	Coef.	Std. Err.	Z	P value
Loan amount	0.642	0.311	2.060	0.040
Repayment Period	0.308	0.228	1.350	0.176
Savings	2.493	0.275	9.060	0.000
Financial Literacy*Loan amount	0.493	0.216	2.280	0.023
Financial Literacy* Repayment period	0.215	0.205	1.050	0.294
Financial Literacy*Saving	0.587	0.194	3.030	0.002
_cons	0.078	0.059	1.32	0.187
Rsquare	0.9021			
Wald chi2(6)	4983.62			
Prob > chi2	0.000			

Source: Research data (2024)

$$y = 0.078 + 0.642 X_1 + 0.308X_2 + 2.493X_3 + 0.493 X_{1it}X_{4it} + 0.215 X_{2it}X_{4it} + 0.587 X_{3it}X_{4it}$$

Where y is profitability of selected enterprises run by women in Kajiado County, Kenya; X_1 is loan amount; X_2 is repayment amount; X_3 is savings; and X_4 is financial literacy, $X_1 X_4$ interaction between loan amount and financial literacy, $X_2 X_4$ interaction between repayment period and financial literacy $X_3 X_4$ interaction between savings and financial literacy, with random effects and error term.

The moderation analysis confirms financial literacy significantly influences the relationship between Women Enterprise Fund usage and profitability. The moderated model's R^2 of 0.9021 shows it explains 90.21% of profitability variance an improvement of 2.28% over the baseline R^2 of 0.8793. This validates financial literacy as a key moderating factor enhancing model accuracy. The Wald chi-square value of 4983.62 (df = 6, p = 0.000) confirms overall model significance. These findings highlight the importance of integrating financial literacy into enterprise support strategies.

Table 4. Conditional Effect of Loan amount at levels of financial literacy

Financial Literacy	Effect of Loan Amount	SE	p-value	95% CI
Low (0.00)	1.200	0.1400	0.0000	[0.91,1.48]
Moderate (0.87)	0.9500	0.1100	0.0000	[0.73,1.17]
High (2.23)	0.5600	0.0900	0.0000	[0.38,0.74]

Source: Research data (2024)

The interaction term coefficients show varied moderating effects across different aspects of fund utilization, highlighting how financial inputs relate to enterprise performance.

Specifically, the interaction between loan amount and financial literacy produced a significant positive coefficient of 0.493 ($SE = 0.216$, $z = 2.280$, $p = .023$), confirming moderation at the 5% level. This indicates that higher financial literacy strengthens the profitability impact of loan utilization, enabling entrepreneurs to better optimize borrowed capital.

The moderation analysis using Hayes' Process Macro (Model 1) showed that the impact of loan amount on profitability declines as financial literacy increases. At literacy levels of 0.00, 0.87, and 2.23, the profitability effects were 1.20, 0.95, and 0.56 units respectively, all statistically significant. The Johnson-Neyman technique identified a threshold of financial literacy = 3.39, beyond which loan amount no longer significantly affects profitability. A negative interaction term ($\beta = -0.29$, $p = 0.000$) confirms that financial literacy weakens the loan-profitability link

Table 5. Conditional Effect of Loan repayment period at levels of financial literacy

Financial Literacy	Effect of Loan Repayment Period	SE	p-value	95% CI
Low (0.00)	1.1621	0.1528	0.0000	[0.8618,1.4624]
Moderate (0.87)	0.8195	0.1204	0.0000	[0.5828,1.0562]
High (2.23)	0.2834	0.0927	0.0024	[0.1012,0.4656]

Source: Research data (2024)

In the moderation analysis, the interaction between repayment period and financial literacy was found to be statistically non-significant, $b = 0.22$, $SE = 0.21$, $z = 1.05$, $p = .294$. This suggests that financial literacy does not significantly moderate the relationship between repayment terms and profitability within that model. The lack of significance implies that, at face value, the effect of repayment on profitability remains relatively stable across varying levels of financial literacy. However, this preliminary finding invites further scrutiny, especially given the theoretical relevance of financial literacy in shaping financial outcomes.

A more in-depth follow-up analysis using the Process macro (Hayes, 2013) provided a richer understanding of the conditional dynamics at play. Conditional effects analysis showed that repayment had a strong positive impact on the outcome when financial literacy was low but this effect weakened and eventually reversed as financial literacy increased, becoming non-significant beyond a moderator value of 2.49 by the Johnson-Neyman technique. This result suggests that financial literacy does indeed shape the effectiveness of repayment strategies, and that its moderating role may be masked in simpler models. The conditional effects underscore the importance of tailoring financial interventions to individuals' literacy levels.

Table 6. Conditional Effect of Savings at levels of financial literacy

Financial Literacy	Effect of Savings	SE	p-value	95% CI
Low (0.00)	1.5979	0.1924	0.000	[1.2198,1.9761]
Moderate (0.87)	1.2102	0.1697	0.000	[0.8766,1.5438]
High (2.23)	0.6034	0.1791	0.008	[0.2514,0.9554]

Source: Research data (2024)

There is a significant interaction between savings and financial literacy, $b = 0.59$, $SE = 0.19$, $z = 3.03$, $p = .002$. This suggests that financial literacy strengthens the relationship between savings utilization and profitability. In practical terms, financially literate individuals are more capable of converting saved resources into profitable outcomes, likely due to more strategic investment decisions and efficient resource allocation. The implication is clear: savings alone are beneficial, but their impact is amplified when paired with financial knowledge, especially in entrepreneurial or business contexts.

The moderation analysis using Hayes' Process Macro revealed a significant interaction ($b = -0.45$, $SE = 0.07$, $t = -6.12$, $p = 0.000$), showing that financial literacy weakens the savings profitability link. Savings had the strongest effect at low literacy ($b = 1.60$), moderate at mid-levels ($b = 1.21$), and marginal at high literacy ($b = 0.60$). The Johnson-Neyman technique identified a threshold of 2.72, below which savings remained significant for 77.8% of participants. These results suggest that financially literate women entrepreneurs rely less on savings alone, favouring more diversified financial strategies. These moderation results show that financial literacy strengthens the impact of loan amount and savings on profitability among women entrepreneurs, as evidenced by the significant interaction terms (Loan Amount Financial Literacy: $p = 0.023$; Savings Financial Literacy: $p = 0.002$), supporting previous findings by Tumba et al. (2022) and Andriamahery & Qamruzzaman (2022), who emphasized the role of financial literacy in enhancing enterprise outcomes and maximizing fund usage.

5.1 Conclusions

The study concludes that financial literacy significantly moderates the relationship between Women Enterprise Fund utilization and profitability of women-owned enterprises in Kajiado County, Kenya. Financial literacy strengthens the positive effects of loan amount utilization and savings on profitability, demonstrating that women entrepreneurs with higher financial knowledge and skills are better positioned to convert financial resources into profitable business outcomes. While access to the Women Enterprise Fund provides essential capital, the ability to make strategic decisions about loan utilization, implement effective savings strategies, and manage repayment obligations depends critically on financial literacy levels. The findings reveal that financial literacy is not merely a supportive factor but a critical moderating variable that determines the effectiveness of government financial interventions in promoting sustainable enterprise profitability among women entrepreneurs in marginalized regions.

6.1 Recommendations

Based on the study findings, policymakers and Women Enterprise Fund administrators should prioritize integrating comprehensive financial literacy training programs into fund disbursement processes to maximize the profitability impact of financial interventions. These programs should focus on practical skills including budgeting, loan management, savings optimization, and strategic investment planning tailored to women entrepreneurs' specific business contexts. The fund should consider establishing quarterly financial literacy campaigns conducted through local community forums, utilizing certified literacy ambassadors who can deliver culturally appropriate training in accessible formats. Additionally, financial literacy assessment should be incorporated as a prerequisite for loan disbursement, with ongoing refresher training provided to beneficiaries throughout the loan cycle. The Women Enterprise Fund should also develop simplified financial management tools and mobile-based learning platforms that enable women entrepreneurs to access financial education resources conveniently. Furthermore, peer learning groups should be encouraged where financially literate women entrepreneurs can mentor others, creating sustainable knowledge-sharing networks.

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