



The role of Training Skills on the Relationship between Financial Services and Organization Performance among Small and Medium Enterprises in Libya

Omer Mohamed Ali¹, Mahmoud Abdualaziz Y. Yakhlf², Mohamed Aghel^{3*},
Abdulhadi Mohamed Alhadi Drhoub⁴

¹University of Sharia Science, Libya, ²Department of Accounting, Faculty of Commerce, Azzaytuna University, Tarhunah, Libya,

³Management and Science University, Shah Alam, Malaysia. ⁴Azzaytuna University, Tarhunah, Libya.

*Email: mohammed.3geel@gmail.com

Received: 05 October 2025

Accepted: 26 February 2026

DOI: <https://doi.org/10.32479/irmm.22587>

ABSTRACT

This study investigates the impact of financial services on SME performance in Libya, examining training skills as a mediating mechanism. Using a quantitative research design, data were collected via a structured questionnaire distributed to 530 SMEs, with 392 valid responses obtained, representing a 74% response rate. The study employs PLS-SEM to assess direct and indirect relationships among constructs. The results indicate that financial services positively and significantly influence both SME performance and training skills. Training skills, in turn, positively affect SME performance and mediate the relationship between financial services and performance. These findings underscore that access to financial resources alone is insufficient; SMEs must possess internal capabilities, particularly through training, to effectively utilize financial services for enhanced outcomes. The study contributes to human capital and capability-based perspectives in fragile economies and provides practical insights for policymakers, financial institutions, and SME managers, emphasizing the importance of integrating financial support with targeted skill development initiatives to achieve sustainable SME growth.

Keywords: SME Performance, Financial Services, Training Skills, PLS-SEM, Libya, Human Capital

JEL Classifications: M53, G21, L26, O12

1. INTRODUCTION

Small and medium enterprises (SMEs) play a critical role in driving economic diversification, employment creation, and private-sector development, particularly in fragile and transitioning economies such as Libya. Despite their strategic importance, Libyan SMEs continue to underperform due to structural and managerial barriers, most notably limited access to financial services, weak institutional support, and low levels of managerial and financial capability (Elsharie, 2021). In emerging and fragile economies, broader financial and accounting research highlights the growing need for stronger financial systems and improved financial practices to support economic development (Ahmuda and Yakhlf, 2024). Similar findings have been observed

in Libya's higher education and public-sector contexts, where weak organizational capabilities and insufficient knowledge systems have been shown to undermine financial performance (Aghel et al., 2024; Aghel and Azam, 2026). However, in the case of Libyan SMEs, many firms struggle not because financial products are unavailable, but because entrepreneurs lack the financial literacy, managerial training, and operational skills required to use financial services productively. These weaknesses frequently result in financial mismanagement, suboptimal investment decisions, and reduced business sustainability.

In Libya, SMEs represent the backbone of the private sector, accounting for a majority of new business creation and serving as a central engine for employment generation and economic

diversification (World Bank, 2023). However, most SME activities remain concentrated in traditional and low-value-added sectors such as retail, trade, and small-scale services, with limited participation in manufacturing and technology-driven industries (OECD, 2020). Recent empirical studies show that Libyan SMEs continue to face substantial constraints, including limited access to formal finance, low managerial capability, and weak institutional support (Esaudi et al., 2021; Eljamel, 2022). Moreover, a large proportion of Libyan SMEs operate informally, lacking proper accounting systems, digital integration, and structured financial management practices, which restricts their ability to effectively utilize financial services and scale their operations (Cortelezzi et al., 2025). These sector-specific challenges reinforce the importance of improving the financial capability and training of SME owners to enhance organizational performance within a fragile and rapidly changing economic environment.

International evidence shows that access to finance alone does not guarantee improved performance; rather, the effectiveness of financial services depends on entrepreneurs' capability to understand, interpret, and apply financial information. A recent systematic review by Graña-Álvarez et al. (2022) demonstrates that SMEs with higher financial literacy leverage credit facilities more effectively and achieve superior financial and operational outcomes. Similarly, Abdallah et al. (2024) report that financial literacy enhances SMEs' performance and amplifies the positive effect of access to finance. In developing economies, insufficient financial training is consistently linked to weak financial control systems and increased vulnerability to business failure (Adato and Onsare, 2024). These conditions closely mirror the Libyan context, where structured training opportunities for SME owners remain limited, thereby weakening the link between financial access and performance outcomes.

From a theoretical perspective, this relationship can be explained through Human Capital Theory (Becker, 1965), which posits that training enhances knowledge, skill, and productivity, and through the resource-based view (RBV) (Barney, 1991), which emphasizes the strategic value of financial resources and internal capabilities in driving performance. Additionally, dynamic capabilities theory (Augier and Teece, 2007) suggests that SMEs must possess capability-enhancing mechanisms such as managerial training to transform financial inputs into competitive advantages. These theoretical lenses jointly highlight that training skills are not merely supportive factors but essential mechanisms that shape how SMEs utilize financial services.

Despite the growing global recognition of the complementarity between financial access and entrepreneurial capability, empirical research in Libya remains scarce. Most existing studies examine financial constraints or SME challenges in isolation, without considering how training and financial skills may strengthen or mediate the relationship between financial services and organizational performance. This gap persists even though Libyan scholarship has shown that capability-building mechanisms such as knowledge management significantly strengthen organizational outcomes in other sectors (Aghel et al., 2024; Aghel and Azam, 2026). Addressing this gap is essential for policymakers, financial

institutions, and SME support agencies seeking to enhance SME competitiveness and economic resilience in fragile economic environments.

In light of these gaps, this study aims to examine how financial services influence SME performance in Libya and to determine the extent to which training skills enhance this relationship. Specifically, the study investigates the direct effects of financial services on both training skills and SME performance, the direct effect of training skills on performance, and the mediating role of training skills in the financial services performance pathway. By integrating human capital theory, the resource-based view, and dynamic capabilities theory, this study contributes to a deeper understanding of how internal capabilities enable SMEs in fragile contexts to transform financial inputs into performance outcomes. The findings offer valuable implications for policymakers, financial institutions, and SME owners, emphasizing the need to complement financial support programs with capability-building initiatives to promote sustainable enterprise growth.

Despite their critical role in economic diversification and private-sector development, small and medium enterprises (SMEs) in Libya continue to experience low productivity, weak competitiveness, and high failure rates. Although several financial services such as microfinance initiatives, bank lending schemes, and governmental SME support programs are available, evidence suggests that many Libyan SMEs are unable to utilize these services effectively to improve their organizational performance (Elsharie, 2021). The problem lies not only in the accessibility of financial instruments but in the capability of SME owners to understand, evaluate, and strategically apply these services to support business growth. Existing studies across developing economies demonstrate that financial skills and training significantly strengthen SMEs' ability to benefit from financial products (Graña-Álvarez et al., 2022; Abdallah et al., 2024). However, in Libya, structured financial training is limited, and SME owners frequently lack the financial capability required to make informed decisions. As a result, the relationship between financial services and organizational performance remains weak or inconsistent. This situation highlights a critical problem: financial services alone are insufficient to enhance SME performance unless accompanied by adequate training and skill development among entrepreneurs.

2. RESEARCH GAP AND HYPOTHESES DEVELOPMENT

Despite the growing global emphasis on financial literacy, managerial capability, and skill development as drivers of SMEs' effective use of financial services, the applicability of these insights to Libya remains insufficiently examined. A number of critical gaps persist.

First, empirical evidence from Libya is extremely limited. Existing studies predominantly analyses structural barriers, political instability, and financing difficulties (Elsharie, 2021), while overlooking how employee training and financial-management skills influence the utilization and performance outcomes of

financial services. This leaves a significant empirical void regarding the human-capital mechanisms that shape financial effectiveness in Libyan SMEs.

Second, the literature lacks moderation-based investigations. While international evidence shows that financial literacy strengthens the link between financial access and SME performance (Abdallah et al., 2024), no study in Libya has examined whether training skills similarly enhance the relationship between financial services and organisational performance. This represents a missed opportunity to understand boundary conditions in a context where capability constraints are pervasive.

Third, capability-oriented perspectives remain underexplored. Research in developing economies highlights persistent deficits in financial capability, weak internal controls, and limited managerial expertise (Abdallah et al., 2024). Yet, Libyan studies have not addressed how these capability gaps may influence the performance impact of financial services. Consequently, the capability performance pathway remains theoretically and empirically underdeveloped.

Finally, research in fragile and transitioning institutional environments is notably absent. Although studies in developing countries demonstrate that financial literacy and managerial capability enhance SME performance (Filli and Muhammad, 2024), evidence from fragile states remains scarce. Libya presents a unique institutional context characterized by regulatory volatility, weak financial-sector governance, and constrained administrative capacity. International assessments consistently classify Libya as facing structural fragility that impedes private-sector development (World Bank, 2023; IMF, 2023). The OECD (2020) emphasizes that such environments require context-specific empirical investigations, yet no study has examined whether training skills strengthen the financial-services performance relationship under these conditions. This omission highlights a critical and timely research gap.

Grounded in human capital theory and capability-based perspectives, financial services are expected to enhance SME performance by improving firms' ability to invest, expand operations, and manage working capital efficiently. However, the extent to which SMEs fully benefit from financial products depends heavily on their internal capabilities, particularly financial-management skills and training. Firms with stronger training foundations are better equipped to interpret financial information, select suitable financial tools, and make informed strategic decisions (Graña-Álvarez et al., 2022). Evidence from developing economies further shows that financial literacy strengthens the relationship between financial access and firm performance, reinforcing the expectation that training operates as an important capability-enhancing mechanism (Abdallah et al., 2024).

In the Libyan context, findings on financial access and SME performance remain mixed. Zarook et al. (2013) reported that traditional financial indicators such as profitability ratios and return on assets do not significantly influence access to finance for Libyan SMEs, while managerial experience and education positively affect financial access. Subsequent studies highlight that the retail

sector, representing nearly half of SMEs in Northwestern Libya, continues to face financial access constraints that impede business growth. More recent work by Momen and Samikon (2021) demonstrates that access to finance, alongside business information and infrastructure, contributes to performance outcomes through improvements in operational efficiency. These inconsistencies suggest that financial access alone may be insufficient unless complemented by internal skills and training capabilities.

A substantial body of empirical evidence underscores the performance-enhancing role of training. In financial institutions, multidimensional training programs strategic, social, and sustainability-oriented significantly improve long-term performance (Archana and Angello Gerald, 2024). Effective skills-management practices, including needs assessment and employee development, are also positively associated with job performance (Mugasa et al., 2022). Among SMEs, financial management training demonstrably improves owners' knowledge of record keeping, profitability assessment, and working capital decisions (Kirsten, 2013), while life-skills financial training produces long-lasting behavioral improvements (Grimes et al., 2022). Together, these findings consistently affirm the positive impact of training on financial capability and firm performance.

Similarly, extensive cross-country evidence confirms that training is a critical determinant of SME success. Large-scale UK data reveal that combined on-the-job and off-the-job training yields stronger performance outcomes than either form alone (Idris et al., 2023). Studies in Malaysia, Jordan, and South Africa also report significant positive effects of training on profitability, revenue growth, employment expansion, and overall business performance (Yahya et al., 2012; Magableh et al., 2011; Chinomona, 2013). These findings suggest that training constitutes a fundamental human-capital mechanism through which SMEs accumulate capabilities that support sustainable performance.

Beyond its direct effects, training may also shape the pathway through which financial services contribute to performance. Prior research demonstrates that training and capability development can mediate financial or investment-related relationships. For example, Chi et al. (2008) found that training partially mediated the link between foreign investment and SME performance, while Shamudeen et al. (2015) showed that microfinance access mediated the relationship between financial awareness, self-efficacy, and performance. Haider et al. (2017) further confirmed that trained business owners outperform untrained ones across multiple performance dimensions. Mabula and Ping (2018) demonstrated that the utilization not merely availability of financial services mediates their performance impact, highlighting the importance of capability in transforming financial inputs into outcomes. Collectively, these studies suggest that training may enhance SMEs' ability to convert financial access into tangible performance improvements an issue that remains unexamined in Libya's fragile institutional environment.

Based on this reasoning, the following hypotheses are proposed:

- H_1 : Ability to receive financial services has a positive and significant effect on SME performance

- H₂: Financial services have a positive and significant influence on the training skills of SMEs
- H₃: Training skills have a positive and significant effect on SME performance
- H₄: Training mediates the relationship between access to financial services and SME performance.

3. METHODOLOGY AND DATA COLLECTION

This study adopts a quantitative research design to examine the impact of financial services on SME performance, with training skills incorporated as a mediating factor. A quantitative approach is appropriate because the study aims to test theoretically derived hypotheses and assess statistical relationships among constructs.

The population comprises SMEs operating across Libya, a sector that plays a central role in the national economy. According to Kamel (2012), approximately 80% of Libyan SMEs are individually owned, 16% are classified as small corporations, and the remainder consist of family-owned businesses. With an estimated 106,970 SMEs nationwide, the minimum required sample size following Sekaran’s (2003) guidelines is 384 respondents. Data were collected through a self-administered questionnaire using stratified random sampling, ensuring proportional representation from both small and medium-sized enterprises. A total of 530 questionnaires were distributed, and 392 were completed and returned, resulting in a 74% response rate, which is considered strong for survey-based organizational research.

Primary data were gathered using a structured questionnaire consisting of two major sections. The first section captured demographic details such as organization name, respondent age, position, gender, educational background, and years of experience (Hair, 2010). The second section measured the study constructs using validated instruments adopted from established literature, ensuring content validity and reliability. SME performance was assessed using four items adapted from Kuzilwa (2005) and Ekpe (2011). The financial services construct, treated as the independent variable, was measured through two dimensions: loan size (five items) and loan utilization (seven items), drawing on the measurement frameworks by De Haan and Lakwo (2007) and Ekpe (2011). Training, included as the mediating variable, was measured through four items adapted from Mustafa et al. (2024) to capture the extent to which training enhances the effective use of financial resources. Individual characteristics were incorporated as a control variable, measured using four items adapted from Francisco and Yi-Wen (2006), to account for personal factors that may influence SME performance.

4. ANALYSIS AND RESULTS

4.1. Normality Test

Following the guidelines of Hair et al. (2014), skewness and kurtosis values were examined against the recommended cut-off of ± 2.58 . As shown in Table 1, all constructs fall well within the acceptable range, indicating that the data exhibit an approximately

normal distribution. Skewness values range from -0.175 to -0.598 , while kurtosis values fall between -0.003 and -1.093 . These results confirm that the dataset does not violate normality assumptions and is suitable for subsequent multivariate analyses.

4.2. Multicollinearity Test

Multicollinearity was assessed using tolerance and variance inflation factor (VIF) values (Hair, 1998). As shown in Table 2, all tolerance values exceed 0.20 (ranging from 0.680 to 0.891), and all VIF values are well below the threshold of 5 (ranging from 1.421 to 1.448). These results indicate the absence of harmful multicollinearity among the predictor variables, confirming that financial services and training skills do not excessively overlap in explaining SME performance.

4.3. Descriptive Statistics for Variables

A five-point Likert scale was used to measure all constructs. Table 3 reports the means and standard deviations. Training skills recorded the highest mean score ($M = 3.508$, 70%), followed by organizational performance ($M = 3.406$, 68%). Loan using recorded the lowest mean ($M = 3.213$, 64%). The overall mean score across all constructs is 3.388 (67%), indicating moderately positive perceptions among respondents. Standard deviations range from 0.862 to 1.144, reflecting acceptable variability within the dataset.

4.4. Assessment of PLS-SEM Results

The measurement model was evaluated using convergent and discriminant validity procedures following the two-stage approach recommended by Hair et al. (2014). Convergent validity was assessed through factor loadings, Cronbach’s alpha, and composite reliability (CR) (Kline, 2005).

4.4.1. Convergent validity

All item loadings exceeded the recommended threshold of 0.50 (Hair et al., 2006) and ranged from 0.616 to 0.876, indicating acceptable indicator reliability. Cronbach’s alpha values ranged from 0.817 to 0.886, demonstrating strong internal consistency. Composite reliability values ranged from 0.867 to 0.917, exceeding the recommended minimum of 0.70. These results confirm satisfactory convergent validity for all reflective constructs, as illustrated in Table 4.

Table 1: Skewness and kurtosis for variables

Variables	Skewness		Kurtosis	
	Statistic	Standard error	Statistic	Standard error
Loan using	-0.278	0.0123	-1.093	0.246
Loan size	-0.175	0.123	-1.066	0.246
Financial services	-0.242	0.123	-1.028	0.246
Training skills	-0.598	0.123	0.003	0.246
Organization performance	-0.454	0.123	-0.810	0.246

Source: SPSS output

Table 2: Multicollinearity test

Variables	Code	Tolerance	VIF
Financial services	FS	0.680	1.421
Training skills	TS	0.691	1.448

Table 3: Descriptive statistics for all variables

Variables	Code	No. item	Min.	Max.	Mean	Percentage	Standard deviation
Loan using	LUS	7	1.25	5.00	3.2133	64	1.144
Loan size	LSZ	5	1.00	5.00	3.2872	65	1.052
Financial services	FS	4	1.00	5.00	3.2503	65	0.9461
Training skills	TS	6	1.00	5.00	3.5085	70	0.8623
Orginzation performance	OP	4			3.4063	68	1.069
Overall		18	1.08	5.00	3.3883	67	0.7896

Table 4: Cronbach’s alpha, composite reliability (CR) and factor loading

Variables	Code	loading	Cronbach’s alpha	CR
Loan using	LUS1	0.764	0.886	0.917
	LUS2	0.876		
	LUS3	0.868		
	LUS4	0.849		
	LUS5	0.786		
Loan size	LSZ1	0.796	0.845	0.886
	LSZ2	0.806		
	LSZ3	0.797		
	LSZ4	0.717		
	LSZ5	0.714		
	LSZ6	0.668		
Training skills	TS1	0.616	0.817	0.867
	TS2	0.789		
	TS3	0.668		
	TS4	0.748		
	TS5	0.751		
	TS6	0.750		
Organization performance	OP1	0.791	0.827	0.885
	OP2	0.848		
	OP3	0.823		
	OP4	0.783		

Source: PLS-SEM outputs (measurement model)

Table 5: Collinearity (VIF) test

Outer VIF			
Item	VIF	Item	VIF
LSZ1	2.370	OP1	1.672
LSZ2	2.384	OP2	2.084
LSZ3	2.108	OP3	1.939
LSZ4	1.774	OP4	1.660
LSZ5	1.790	TS1	1.467
LSZ6	1.633	TS2	1.872
LUS1	1.823	TS3	1.403
LUS2	2.748	TS4	1.772
LUS3	2.597	TS5	1.814
LUS4	2.429	TS6	1.695
LUS5	1.893		

4.4.2. Collinearity test -varainve inflation factors (VIF)

Hair et al. (2013) emphasise that VIF values exceeding 5 (or in some stricter guidelines, 10) may indicate problematic multicollinearity. Table 5 presents the outer VIF values assessing collinearity among the measurement items. The results reveal that the highest outer VIF is 2.748 (LUS2), while the lowest is 1.403 (TS3). All VIF values are substantially below the recommended thresholds, confirming that no multicollinearity concern exists within the measurement model.

4.4.3. Determination coefficient for R²

The coefficient of determination (R²) reflects the proportion of variance in an endogenous construct that is explained by its predictors. In this study, the structural model shows R² values of 0.433 for organisational performance and 0.227 for training skills, as illustrated in Figure 1. This means that financial services and training skills collectively explain 43.3% of the variance in organisational performance, while financial services alone account for 22.7% of the variance in training skills.

As summarized in Table 6, these R² values fall within the acceptable to substantial range according to the criteria proposed by Hair et al. (2017), Cohen (1988), Schumacher et al. (2004) and Chin (1998), indicating that the model demonstrates meaningful explanatory power.

4.4.4. Assessment of effect size (f²)

The effect size (f²) assesses the individual contribution of each exogenous variable to the R² of the endogenous variable (Chin, 1998). According to Cohen (1988), f² values of 0.02, 0.15, and 0.35 are interpreted as small, medium, and large effects, respectively. The findings indicate that financial services have a large effect on organisational performance (f² = 0.410) and a medium effect on training skills (f² = 0.294). In contrast, training skills exert a small effect on organisational performance (f² = 0.047). These results demonstrate the meaningful contribution of the predictor variables in explaining the endogenous constructs, as illustrated in Figure 2 and summarised in Table 7.

4.4.5. Direct hypotheses results

The results indicate that financial services have a statistically significant and positive effect on organisational performance (β = 0.549; t = 11.970; P < 0.001), supporting Hypothesis H₁. Additionally, financial services exert a significant positive influence on training skills, confirming Hypothesis H₂ (β = 0.477; t = 13.703; P < 0.001). Finally, training skills positively and significantly impact organisational performance (β = 0.186; t = 3.510; P < 0.001), thereby supporting Hypothesis H₃. The detailed results of the direct effects in the structural model are presented in Table 8 and illustrated in Figure 3.

4.4.6. Results of mediating effect (indirect hypothesis result)

The mediation analysis was conducted using the bootstrapping method within the PLS-SEM framework, which is widely accepted in management, leadership, and marketing research (Hiu et al., 2014; Fornell & Larcker 1981). Bootstrapping is particularly advantageous because it does not assume any specific distribution

Table 6: Determination coefficient result (R²)

Exogenous construct	Endogenous construct	R ²	Hair et al. (2017)	Cohen (1988)	Chin (1998)
Financial services and training skills	Organization performance	0.433	Acceptable	Substantial	Moderate
Financial services	Training skills	0.227	weak	Acceptable	Acceptable

Source: Output of PLS-SEM (measurement model)

Table 7: Effect size of variables

Variable	Effect size (f ²)			Rating
	Organization performance	Rating	Training skills	
Financial services	0.410	Large	0.294	Medium
Training skills	0.047	Small	--	

Source: Output of PLS-SEM

Figure 1: Measurement model for factor loading and path coefficient

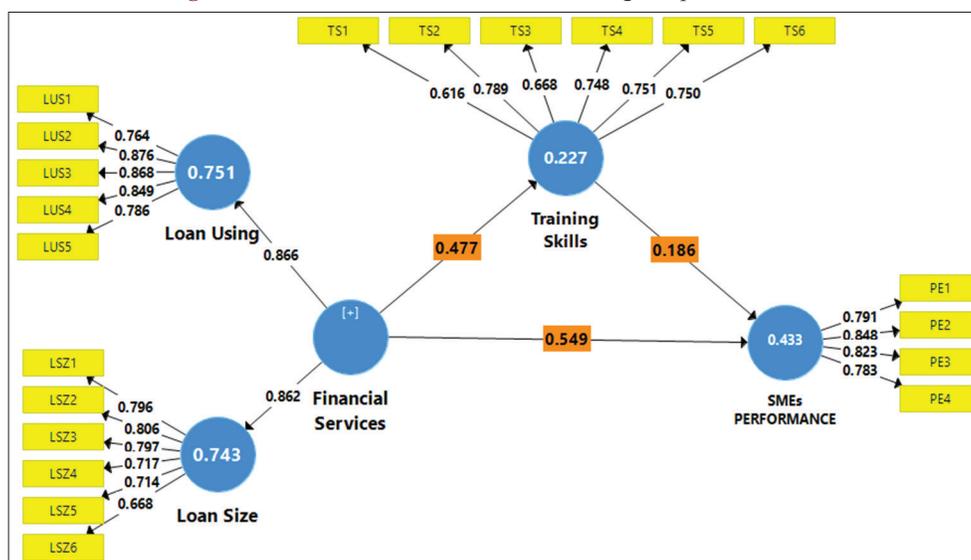
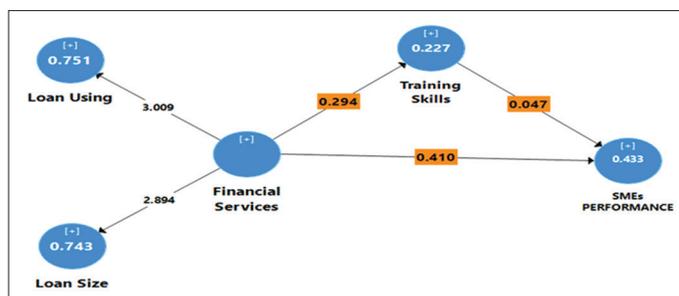


Figure 2: Measurement model with (f²) and (R²) for variables



for the sampling statistics or the underlying variables, making it suitable for small sample sizes and ideal for PLS-SEM applications (Hair et al., 2013; Preacher and Hayes, 2008).

The results in Table 9 indicate that training skills (TS) significantly mediate the relationship between financial services and organisational performance ($\beta = 0.090$; $t = 3.394$; $P = 0.001$). Therefore, the indirect effect hypothesis (H_4) is supported. The mediation effect is also illustrated in Figure 3.

5. DISCUSSION AND CONCLUSION

5.1. Summary of Findings

This study examined the impact of financial services on SME

performance in Libya, with training skills as a mediating mechanism. The findings provide robust evidence that access to financial resources alone is insufficient for improving SME outcomes; the ability to effectively utilize these resources through training significantly enhances performance.

Financial services positively influence SME performance, confirming Hypothesis H_1 . This aligns with human capital theory and capability-based perspectives, which suggest that SMEs with adequate financial resources are better positioned to invest, expand operations, and manage working capital efficiently (Graña-Álvarez et al., 2022; Abdallah et al., 2024). However, financial access only translates into improved performance when firms possess the internal capabilities to deploy resources effectively.

Financial services also significantly impact training skills (H_2), highlighting that access to finance enables SMEs to invest in employee development and managerial competencies. This supports prior research emphasizing the critical role of human capital in transforming financial inputs into tangible organizational outcomes (Becker, 1965; Kirsten, 2013).

Training skills positively influence SME performance (H_3) and mediate the relationship between financial services and

Table 8: Results of direct hypotheses

H	Exogenous variables→Endogenous variables	Estimate (path coefficient) (β)	Standard deviation	C.R (t-value)	P-value	Hypothesis result
H ₁	Financial services→Organization performance	0.549	0.046	11.970	0.000	Supprted
H ₂	Financial services→Training skills	0.477	0.035	13.703	0.000	Supprted
H ₃	Training skills→Organization performance	0.186	0.053	3.510	0.000	Supprted

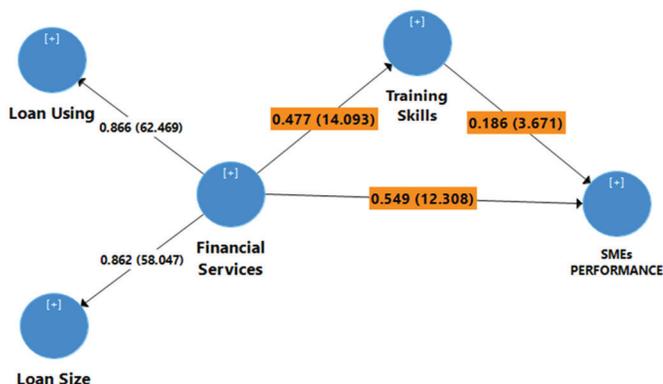
Source: Prepared by researcher using output of PLS-SEM (Structural Model)

Table 9: Indirect hypothesis result

Hypotheses	Relation	Original sample (β)	(Standard deviation)	T-value	P-value	Result
H ₄	FS->TS->OP	0.090	0.026	3.394	0.001	Supported

Source: Prepared by researcher using output of PLS-SEM (structural model). FS: Financial services, TS: Training skills, PE: SMEs performance

Figure 3: Results of direct hypotheses (bootstrapping)



performance (H₄). SMEs that invest in training improve employees’ technical and financial management skills, enhance strategic decision-making, and strengthen overall performance. These findings resonate with evidence from developing and emerging economies, where training consistently emerges as a critical driver of SME success (Idris et al., 2023; Chinomona, 2013; Grimes et al., 2022; Aghel et al., 2024).

5.2. Theoretical Implications

The study extends human capital and capability-based frameworks to fragile economies such as Libya. It highlights the critical interplay between financial access and training capabilities in determining SME performance. By demonstrating that training mediates the relationship between financial services and performance, the study addresses a notable gap in Libyan SME research and contributes to the broader literature on the role of internal capabilities in leveraging external financial resources.

5.3. Practical Implications

The findings provide valuable insights for policymakers, financial institutions, and SME managers. Policymakers and financial institutions are encouraged to design financial support programs that are complemented by targeted training and capacity-building initiatives. Such integrated approaches ensure that SMEs not only gain access to financial resources but also develop the skills necessary to use them effectively. For managers and SME owners, prioritizing continuous skill development is essential to maximize the benefits of financial services, sustain business growth, and

maintain a competitive advantage. Overall, these insights highlight that financial access and human capital development function as mutually reinforcing mechanisms that can significantly enhance SME performance, particularly in challenging institutional environments.

5.4. Conclusion

This study provides compelling evidence that financial services and training skills jointly drive SME performance in Libya. Training emerges as a vital capability-enhancing mechanism, enabling SMEs to transform financial access into tangible and sustainable performance outcomes. The key takeaway is that investing in human capital through training is as crucial as providing financial resources for achieving SME success, particularly in fragile institutional environments. Policymakers, managers, and researchers must recognize that financial support and skill development are inseparable drivers of SME growth, competitiveness, and long-term resilience.

5.5. Limitations and Future Research

Despite its contributions, this study has several limitations. It focuses exclusively on Libyan SMEs, which may limit the generalizability of the findings to other contexts. Future research could extend this investigation to SMEs in other fragile or emerging economies to validate and compare the results. Additionally, future studies may explore other mediating variables, such as innovation, digital adoption, or entrepreneurial orientation, which could influence the relationship between financial services and SME performance. Employing longitudinal designs in future research would also be beneficial to capture the dynamic effects of financial services and training on SME performance over time, providing a deeper understanding of causal relationships and long-term impacts.

REFERENCES

Abdallah, W., Harraf, A., Ghura, H., Abrar, M. (2024), Financial literacy and small and medium enterprises performance: The moderating role of financial access. *Journal of Financial Reporting and Accounting*, 24, 1345-1364.

Adato, A.A., Onsare, H. (2024), Financial management and its barriers on smes in selected developing countries: A systematic literature

- review approach. *International Journal of Finance and Banking Research*, 10(3), 53-63.
- Aghel, M., Azam, S.F. (2026), Exploring the role of knowledge management in the link between organizational culture and financial performance: Evidence from Libyan higher education institutions. *International Review of Management and Marketing*, 16(1), 92.
- Aghel, M., Azam, S.F., Kassim, M.A.A. (2024), Impact of intellectual capital and organizational culture on financial performance: Mediation by knowledge management in higher education institutions in Libya. *Journal of Business and Social Review in Emerging Economies*, 10(2), 193-202.
- Archana, P.V., Gerald, J. (2024), Exploring the link between emotional intelligence and training efficacy from supervisor's rated performance in the retail industry. *SDMIMD Journal of Management*, 15.
- Ahmuda, M.A., Yakhlf, M.A.Y. (2024), Global trends and insights in actuarial accounting for insurance companies: A bibliometric study. *Journal of Accounting and Finance in Emerging Economies*, 10(2), 155-164.
- Augier, M., Teece, D.J. (2007), Dynamic capabilities and multinational enterprise: Penrosean insights and omissions. *Management International Review*, 47(2), 175-192.
- Barney, J. (1991), Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Becker, (1965), A Theory of the Allocation of Time. *The Economic Journal*, 75, 493-508.
- Chi, N.W., Wu, C.Y., Lin, C.Y.Y. (2008), Does training facilitate SME's performance? *The International Journal of Human Resource Management*, 19(10), 1962-1975.
- Chin, W.W. (1998), Commentary: Issues and opinion on structural equation modeling. *MIS Quarterly*, 22, vii-xvi.
- Chinomona, R. (2013), Business owner's expertise, employee skills training and business performance: A small business perspective. *Journal of Applied Business Research*, 29, 1883-1896.
- Cohen, J. (1988), *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. Hillsdale, NJ: L. Erlbaum Associates.
- Cortelezzi, F., Ferrari, A., Limam, J. (Eds.). (2025), *Political, Social, Religious and Economic Challenges in the Middle East and North Africa: From Covid-19 to Agenda 2030*. London: Taylor and Francis.
- De Haan, L., Lakwo, A. (2010), Rethinking the impact of microfinance in Africa: Business change' or social emancipation. *The European Journal of Development Research*, 22(4), 529-545.
- Ekpe, I. (2011), Women entrepreneurs and economic development in Nigeria: Characteristics for success. *International Journal of Business and Social Science*, 2(1), 287.
- Eljamel, S.I. (2022), *The Role of Women in Establishing and Developing Small Business Projects, and their Participation in the Development Process: A Field Study of a Group of Small Business Projects in Libya* [Doctoral Dissertation, University of Huddersfield].
- Elsharie, A.M. (2021), *Investigating Barriers to Small and Medium Enterprises (SMEs) Growth and Development in Libya* University of Reading [MPhil Thesis].
- Esaudi, A.A., Smith, R., Scuotto, V. (2021), Entrepreneurial and SME activity in Libya: reviewing contextual obstacles and challenges leading to its fractured enterprise culture. In: *The Palgrave Handbook of African Entrepreneurship*. Cham: Springer International Publishing. p437-462.
- Filli, G.E., Muhammad, U.S. (2024), Financial literacy and performance of small and medium scale enterprises (SMEs) in Mubi North Local Government. *International Journal of Financial Research and Business Development*, 5(7), 463.
- Fornell, C., Larcker, D.F. (1981), Evaluating structural equation model with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Francisco, L., Yi-Wen, C. (2006), Testing the Entrepreneurial Intention Model on a Two-Country Sample. Departament d'Economia de VEmpresa; [Working Paper].
- Graña-Álvarez, R., Lopez-Valeiras, E., Gonzalez-Loureiro, M., Coronado, F. (2022), Financial literacy in SMEs: A systematic literature review and a framework for further inquiry. *Journal of Small Business Management*, 62(1), 331-380.
- Grimes, P.W., Lopus, J.S., Amidjono, D.S. (2022), Financial life-skills training and labor market outcomes in Indonesia. *International Review of Economics Education*, 41, 100255.
- Haider, S.H., Officer, C.S., Asad, M., Fatima, M., Abidin, R.Z.U. (2017), Microfinance and performance of micro and small enterprises: Does training have an impact. *Indicators*, 4(1), 1.
- Hair, J.F., Anderson, R.E., Black, W.B., Babin, B., Tatham, R.L. (2006), *Multivariate Data Analysis*. 7th ed. New Jersey: Upper Saddle River.
- Hair, J.F., Anderson, R.E., Black, W.B., Tatham, R.L. (2010), *Multivariate Data Analysis*. United States: Prentice Hall.
- Hair, J.F., Anderson, R.E., Tatham, R.L., Black, W.C. (1998), *Multivariate Data Analysis*. 5th ed. New Jersey: Prentice-Hall.
- Hair, J.F., Ringle, C.M., Sarstedt, M. (2013), Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1-2), 1-12.
- Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M. (2017), *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage Publications.
- Idris, B., Saridakis, G., Johnstone, S. (2023), Training and performance in SMEs: Empirical evidence from large-scale data from the UK. *Journal of Small Business Management*, 61(2), 769-801.
- IMF. (2023), *Libya: 2023 Article IV Consultation Staff Report*. International Monetary Fund. Available from: <https://www.imf.org/en/publications/cr/issues/2023/06/22/libya-2023-article-iv-consultation-staff-report-536222>
- Kamel, B. (2012), Strategies of small and medium enterprises with specificities of the Algerian case. *European Respiratory Review*, 14, 178.
- Kirsten, C.L. (2013), The impact of training courses on financial management skills of South African small-business owners. *The International Business Economics Research Journal (Online)*, 12(7), 825.
- Kline, R.B. (2005), *Principle and Practice of Structural Equation Modeling*. 2nd ed. New York: Guilford Press.
- Kuzilwa, J.A. (2005), The role of credit for small business success. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 14(2), 131-161.
- Lau, K.W., Lee, P.Y., Lau, H.F. (2014), Shopping experience 2.0: An exploration of how consumers are shopping in an immersive virtual reality. *Advances in Economics and Business*, 2, 99.
- Mabula, J.B., Han, D.P. (2018), Financial literacy of SME managers on access to finance and performance: The mediating role of financial service utilization. *International Journal of Advanced Computer Science and Applications*, 9(9), 32-41.
- Magableh, I.K., Kharabsheh, R.A., XAI-Zubi, K. (2011), Determinants and Impact of Training: The Case of SMEs in Jordan. *International Journal of Economics and Finance*, 3, 104.
- Momen, H.A., Samikon, S.A. (2021), Bridging the knowledge gap: towards establishing the impact of leadership styles on Libyan small medium enterprise performance. *Turkish Journal of Computer and Mathematics Education*, 12(14), 561-567.
- Mugasa, Y., Marwa, J.J., Oyaro, J., Moses, K. (2022), Influence of skills management on the job performance of employees: A study in financial institutions in Mwanza, Tanzania. *International Journal of New Technology and Research*, 8, 25-33.
- Mustafa, R.M., Restianto, Y., Dinanti, A., Krisnaesanti, A.,

- Naufalin, L.R., Iskandar, D. (2024), Information technology dynamic: Potraying Indonesian SMEs for quality financial report. *International Journal of Economics Business and Management Research*, 8(02), 40-50.
- OECD. (2020), *States of Fragility 2020: Understanding Violence*. United States: Organization for Economic Co-operation and Development.
- Preacher, K.J., Hayes, A.F. (2008), Contemporary approaches to assessing mediation in communication research. In: Hayes, A.F., Slater, M.D., Snyder, L.B., editors. *The Sage Sourcebook of Advanced Data Analysis Methods for Communication Research*. London: Sage Publications. p13-54.
- Schumacher, R.E., Lomax, R.G. (2004), *A Beginner's Guide to Structural Equation Modeling*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Sekaran, U. (2003). *Research methods for business: A skill-building approach* (4th ed.). New Jersey, USA: John Wiley & Sons.
- Shamudeen, K., Ooi, Y.K., Hassan, H. (2015), Access to Microfinance as Potential Mediator on the Relationship between Microfinance Awareness and entrepreneurial self-efficacy on SME performance in Nigeria: An empirical study. In: *Conference on Business Management Research II (CBMR II 2015)* School of Business Management, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia, 22 December 2015.
- World Bank. (2023), *Libya Economic Monitor: Navigating Rising Uncertainty*. Washington, DC: World Bank Group. Available from: <https://documents.worldbank.org/en/publication/documents/reports/documentdetail/099062523091343442/p1823810474cf50c108210215657ea91d91>
- Yahya, A.Z., Othman, M.S., Shamsuri, A.L.S. (2012), The impact of training on small and medium enterprises (SMEs) performance. *Journal of Professional Management*, 2(1), 15-25.
- Zarook, T., Rahman, M.M., Khanam, R. (2013), Does the financial performance matter in accessing to finance for Libya's SMEs? *International Journal of Economics and Finance*, 5(6), 11-19.