

Toward increasing financial inclusion and sustainability of indigenous microenterprises in Africa in the presence of financial literacy

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Abstract

Purpose – The main objective of this paper is to explore the link between financial inclusion and the sustainability of indigenous micro, small and medium-sized enterprises (MSMEs) in Africa in the presence of financial literacy.

Design/methodology/approach – This study applied a semi-structured questionnaire to gather data to provide an answer to the set main objective.

Findings – The results reveal a positive link between financial inclusion and the sustainability of indigenous MSMEs in Africa in the presence of financial literacy, grounded in consumer socialization and social learning theories.

Research limitations/implications – This study collected data at a single time period. Forthcoming studies could benefit from using experimental design to capture changes in the long run.

Practical implications – This study offers direction for designing financial literacy curricula aimed at addressing the gaps in financial literacy among MSMEs in Africa. Specialized modules can be developed to equip MSME owners with the ability to make better loan choices and investment judgments, ultimately enhancing business sustainability.

Originality/value – This study applies consumer socialization and social learning theories to explore the link between financial inclusion, financial literacy and the sustainability of indigenous MSMEs in Africa. This is lacking in most past studies and literature.

Keywords Consumer socialization theory, Social learning theory, Indigenous MSMEs, Business sustainability, Rural Uganda, Access to finance

Paper type Research paper

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1. Introduction

Entrepreneurship and small businesses are key drivers of economic development (Gu *et al.*, 2021). Moreover, entrepreneurship significantly contributes to economic development, regardless of a country's level of development (Kasseeh and Thoplan, 2012). According to Dasaraju and Tambunan (2023), micro, small and medium-sized enterprises (MSMEs) act as the core contributor to economic growth and source of opportunities for employment, playing a vital role globally. Socially, MSMEs contribute to poverty reduction and improved living standards. Accordingly, MSMEs are considered a remedy for improving living standards in underdeveloped societies plagued by poverty, especially in developing economies such as Uganda (Endris and Kassegn, 2022).

The most important way finance promotes growth is by providing credit to the most deserving firms. Studies by Love (2003) and Wurgler (2000) showed that financial development positively impacts firm growth, particularly for those requiring external funding. Indeed, finance helps firms overcome liquidity constraints needed for investments.

Pfeifer and Sarlija (2010) found that the role of MSMEs in economic development is stronger in developed economies and weaker in less developed countries or regions.

According to Sautet (2013), this disparity cannot be fully explained by the predominance of unproductive entrepreneurial activities over productive ones in developing countries, as described in Baumol (1990), nor by the predominance of necessity entrepreneurship activities over opportunity entrepreneurship, as found in studies using Global Entrepreneurship Monitor (GEM) data, such as Koster and Rai (2008). Instead, Sautet (2013) attributes this situation to three factors: the focus on local communities, which hinders economies of scale; the absence or the low level of systemic entrepreneurship, preventing the exploitation of opportunities beyond the local level and the dominance of direct networks limited to local ties rather than extended impersonal networks based on indirect ties. These factors, according to Sautet, may be linked to institutional or other factors. Contrarily, he asserts that "more empirical research needs to be done" to identify these factors. Lusardi and Mitchell (2014) identified the costs associated with financial illiteracy among both youths and adults, and they described the challenges involved in addressing it.

The sustainability of MSMEs is a critical concern, as they contribute highly to the size of any economy and economic growth worldwide (Quaye *et al.*, 2014). Therefore, financial inclusion is crucial for the progression and expansion of MSMEs. Despite their substantial contribution to economic growth, formal financial intermediaries, such as banks in developing countries, often fail to serve MSMEs. This is primarily due to high transaction costs, the absence of traditional collateral, extensive documentation requirements and geographical isolation (International Finance Corporation, 2022).

Deficiency in the ability to make sound financial judgments and options has been a major obstacle for MSME owners and managers, preventing them from navigating the complex financial system and directing funds toward the most productive ventures (Kaiser and Lusardi, 2024).

Lusardi and Mitchell (2014) affirmed that "econometric models and experiments have done much to confirm the causal impact of financial literacy on economic decision-making." Therefore, we posit that improving the financial literacy of MSME owners could positively impact the development of their economies. This assumption is reinforced by the findings of Fort *et al.* (2016), who discovered that the presence of a banking consortium in Italy increased financial literacy by about 10%. However, little is known about this phenomenon in developing economies, particularly in Africa. A prior study by Claessens (2006) in 71 developing countries found that general skills, including financial skills, were a major constraint faced by MSMEs.

The Organization for Economic Cooperation and Development (2020) suggests that financial literacy can help MSME owners and managers to become familiar with financial products offered by banks to make superior judgments and worthy financial options.

Lusardi and Mitchell (2014) contended that financial literacy, which fosters consumer awareness, can help MSME owners and managers develop the skills needed to compare and select the most suitable financial products for their investment needs. MSME owners and

managers with better financial skills can manage their finances wisely, especially regarding debts (Okello Candiya Bongomin *et al.*, 2020a, b, c).

This paper explores the link between financial inclusion and the sustainability of indigenous MSMEs in Africa in the presence of financial literacy, drawing on consumer socialization and social learning theories.

This study will address the following research questions: What is the impact of financial inclusion on the sustainability of indigenous MSMEs in Africa in the presence of financial literacy, especially in rural Uganda? What is the effect of financial literacy on the sustainability of indigenous MSMEs in Africa, particularly in rural Uganda? What is the impact of financial inclusion on the sustainability of indigenous MSMEs in Africa, especially in rural Uganda?

2. Theoretical background

2.1 Consumer socialization and social learning theoretical paradigms

Consumer socialization theory argues that young adults get the understanding and abilities essential for functioning in society, such as consumption, from various sources within the social structures (Ward, 1974; Moschis and Churchill, 1978). Social learning theory postulates that individuals, as social entities, acquire knowledge and skills by observing the behaviors and actions of others whom they perceive as credible and knowledgeable models (Bandura and Walters, 1977). Through this process, they gain the necessary knowledge and skills to adapt their behaviors and solve daily challenges (Ramsden, 1992). For MSME owners and managers, social interaction plays a key role in helping them develop values, knowledge and attitudes about finances. This learning allows them to make intelligent judgments and investment options, eventually generating income and ensuring business sustainability. Succinctly, both theories converge in emphasizing that individuals learn financial skills from their social environment, adopting the knowledge and behaviors of those around them to make sound financial decisions. Notably, many financial literacy activities entail interactive learning, where participants apply newly acquired financial skills to real-world financial decisions.

These theories suggest that the interplay between cognitive, affective, biological and socio-structural aspects are key influence in the learning process. Therefore, MSME owners and managers can get valuable understanding about finances through interactive learning, which can be leveraged toward effective financial judgments and investment options, finally generating revenue and ensuring business sustainability.

3. Literature review and hypothesis formulation

3.1 Financial inclusion and sustainability of indigenous MSMEs in the presence of financial literacy

Balatti and Black (2011) argued that the knowledge to make better financial judgments and options often develops within social links and is partially reliant on gaining access to specific types of social links. The effectiveness of cooperation within these social links is shaped by their shared purpose, available resources and the norms and values guiding interactions. Resources within these social links can include intangible and tangible resources as well as connections to other social links.

Therefore, socialization structures, such as community social links, act as important channels for promoting knowledge to make better financial judgments and options. This enables the MSME owners and managers to acquire the knowledge and skills necessary to make optimal financial decisions and investment selections.

Drexler *et al.* (2014) found that basic financial accounting training and simpler rules of thumb training have a large effect on savings, financial planning and management among MSME owners in the Dominican Republic.

According to Albaity and Rahman (2019), the acquisition of knowledge to make better financial judgments, which is rooted in Shariah-based socialization, can help individuals to acquire the understanding to make ideal financial decisions and investment selections. Rahim

et al. (2016) contend that financial knowledge empowers micro-entrepreneurs to gain skills to evaluate and analyze financial information from Islamic banks following Shariah law.

Financially literate MSME owners and managers are more likely to succeed in both their businesses and personal lives, fostering long-term savings and investments that contribute to the long-term sustainability of MSMEs. Here, the hypothesis below is generated that:

- H1. There is a positive link between financial inclusion and the sustainability of indigenous MSMEs in the presence of financial literacy in Africa, especially in rural Uganda.

3.2 Financial literacy and sustainability of indigenous MSMEs

Drexler *et al.* (2014) stated that MSME owners often do not have the necessary skills to make superior financial judgments while managing their businesses. Okello Candiya Bongomin *et al.* (2024) suggested that the acquisition of knowledge to understand and make better financial judgments can significantly enhance the financial and entrepreneurial skills of MSME owners and managers.

Okello Candiya Bongomin *et al.* (2020) observed that MSME owners and managers, who aim to become confident in managing finances, should be well-informed and equipped with adequate financial knowledge and skills. Financial literacy, when combined with other business skills, becomes necessary for MSME owners and managers to confidently run their businesses.

Osinde *et al.* (2013) found that over 83% of entrepreneurs in Kenya who attended financial literacy and business training recorded improvement in sales growth and profitability in their businesses. Most recently, Agyapong and Attram (2019) discovered that there is a positive impact of financial literacy on the financial performance of SMEs in Cape Coast Metropolis, Ghana. On the contrary, Lusimbo and Muturi (2016) reported that MSME managers who were financially literate experienced no business growth in Kakamega Sub-County, Kenya. Here, the hypothesis below is generated that:

- H2. Financial literacy significantly affects the sustainability of indigenous MSMEs in Africa, especially in rural Uganda.

3.3 Financial inclusion and sustainability of indigenous MSMEs

Coad and Tamvada (2012) indicated that limited access to finance is an obstacle in achieving business goals for entrepreneurs. Consequently, Okello Candiya Bongomin *et al.* (2024a, b) argue that financial inclusion acts as a major ingredient in the development and success of MSMEs.

According to Okello Candiya Bongomin *et al.* (2020a, b, c), financial inclusion is crucial for achieving business objectives and success among MSMEs. Access to finance enables MSMEs to expand, increase output and create employment opportunities.

Recent literature by Anthanasius and Opperman (2023) showed that financial inclusion, through access to formal bank accounts, saving and informal saving mechanisms, can help MSMEs generate returns and ensure sustainability.

Saifurrahman and Kassim (2023) revealed that improved credit risk assessment procedures, particularly by Islamic banks, can mitigate issues such as non-repayment and delinquency in lending, thereby increasing the inclusion of MSMEs by Islamic banks. This boosts their performance and earnings, contributing to sustainability. Here, the following hypothesis is generated that:

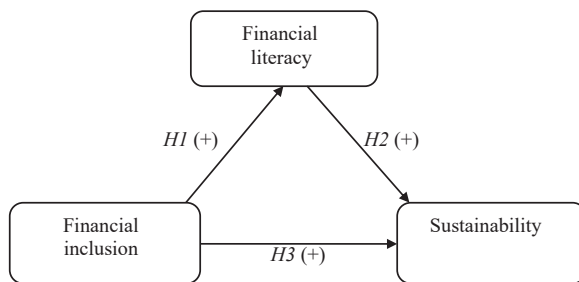
- H3. Financial inclusion significantly affects the sustainability of indigenous MSMEs in Africa, especially in rural Uganda.

The conceptual framework shown in Figure 1 is used to guide the current study.

4. Research methodology

4.1 Research strategy and data collection

This study applied a cross-sectional research strategy, with data collected as a spot check. This strategy was chosen because more data can be obtained in a shorter time period. However, it



Source(s): Created by authors

Figure 1. Summary of the mediation model

may not be ideal for determining cause-and-effect relationships (Wang and Cheng, 2020). The questionnaires were administered directly to the selected participants by research assistants. Each participant was given a unique identifier during the data collection exercise. This process resulted in a response rate of 96%. Under the direct supervision of the corresponding author, the research assistants ensured that all responses were collected from the selected participants.

4.2 Testing for mediation effect using structural equation modeling

The mediation test was determined by building the measurement model and the main structural equation model (SEM) in the Analysis of Moment Structures to answer the key objective of this study. The measurement model focused on determining the relationships between the manifest variables and latent constructs. The SEM intended to test the link between financial inclusion and the sustainability of indigenous MSMEs in the presence of financial literacy as a third variable based on the rules set by Hayes and Preacher (2010), Hair et al. (2014) and Hair et al. (2016).

5. Findings

5.1 Regression analysis

The results reveal that the control variables and main variables together explain 30% of the variation in the sustainability of indigenous MSMEs in Africa, especially in rural Uganda, as presented in Table 1.

5.2 Measurement model assessment

The results of the measurement model showed that relationships existed between the manifest variables and latent constructs of the key variables as determined by the factor loadings, convergent validity, Cronbach's alpha, composite reliability (CR), average variance extracted (AVE) and discriminant validity.

The results showed that all the above indicators were significant and tenable based on the rules for the mediation effect test set by Hayes and Preacher (2010), Hair et al. (2014) and Hair et al. (2016) as illustrated in Figures 2–4 and Tables 2 and 3.

5.3 Structural equation model analysis

The results from the SEM analysis showed that there is a significant link between financial inclusion and the sustainability of indigenous MSMEs in the presence of financial literacy based on the rules set by Hayes and Preacher (2010), Hair et al. (2014) and Hair et al. (2016) as presented in Tables 4–6, and Figure 5.

5.3.1 Financial inclusion and sustainability of indigenous MSMEs in the presence of financial literacy. The SEM analysis results show that there is a positive link between financial inclusion and the sustainability of indigenous MSMEs in the presence of financial literacy in

Table 1. Hierarchical regression analysis

Predictor	Model 1 β	Model 2 β	Model 3 β	Tolerance	VIF
Constant	4.449	2.972	2.121	n/a	n/a
<i>Control variables</i>					
Age group	-0.031**	-0.016**	-0.010**	n/a	n/a
Education level	-0.120**	-0.135**	-0.129**	n/a	n/a
Marital status	-0.064**	-0.085*	-0.003*	n/a	n/a
Home ownership	-0.142*	-0.190**	-0.085**	n/a	n/a
Duration in business operation	-0.254**	-0.080**	-0.165*	n/a	n/a
<i>Main variables</i>					
Financial inclusion		0.369*	0.258*	0.696	1.561
Financial literacy			0.340*	0.854	1.171
R^2	0.106	0.201	0.300		
Adj. R^2	0.005	0.089	0.183		
ΔR^2	0.106	0.095	0.099		
ΔF	1.045	5.094	5.935		

Note(s): $n = 379$; significance level: ** $p < 0.01$ and * $p < 0.05$

Source(s): Created by authors

Africa, especially in rural Uganda ($\beta = 0.435, p < 0.0001$) with a standardized indirect effect of 0.088 at a 99% confidence interval, and lower limit and upper limit ranging from -0.017 to 0.102 . This offers support to **H1** generated in this study. The acquisition of knowledge to make better financial judgments and investment selections, enhances access to financial services, which improves the sustainability of indigenous MSMEs by 9% through a full mediation effect in this context.

5.3.2 Financial literacy and sustainability of indigenous MSMEs. The SEM analysis results also reveal that financial literacy significantly affects the sustainability of indigenous MSMEs in Africa, especially in rural Uganda ($\beta = 0.321, p < 0.005$). This offers support to **H2** generated in this study.

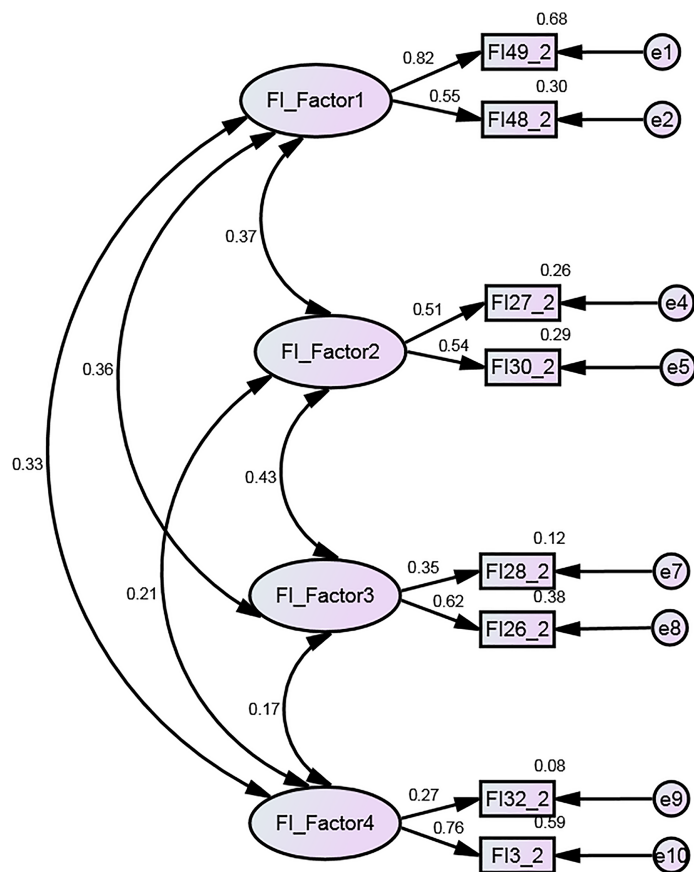
5.3.3 Financial inclusion and sustainability of indigenous MSMEs. The SEM analysis results further indicate that financial inclusion significantly affects the sustainability of indigenous MSMEs in Africa, especially in rural Uganda ($\beta = 0.296, p < 0.005$). This is consistent with **H3** generated in this study (See [Figure 5](#)).

6. Discussion

6.1 Financial inclusion and sustainability of indigenous MSMEs in the presence of financial literacy

The SEM analysis results demonstrate that there is a positive link between financial inclusion and the sustainability of indigenous MSMEs in the presence of financial literacy in Africa, especially in rural Uganda. This suggests that the acquisition of knowledge to make better financial judgments and investment selections, enhances access to financial services, which improves the sustainability of indigenous MSMEs.

Intangible resources like financial knowledge can flow through social links that can help the women owners and managers of MSMEs to make better financial judgments and investment selections ([Balatti and Black, 2011](#)). The community social links act as an important channel for promoting access to knowledge to make better financial judgments and options. This enables the MSME owners and managers to acquire the knowledge and skills necessary to make optimal financial decisions and investment selections.



Chi-square = 10.641; Degrees of freedom (Df) = 14; Probability (P) = 0.714
Incremental Fit Index (IFI) = 1.031; Tucker Lewis Index (TLI) = 1.071

Comparative Fit Index (CFI) = 1.000; Root Means Square Error of Approximation (RMSEA) = 0.000

Source(s): Created by authors

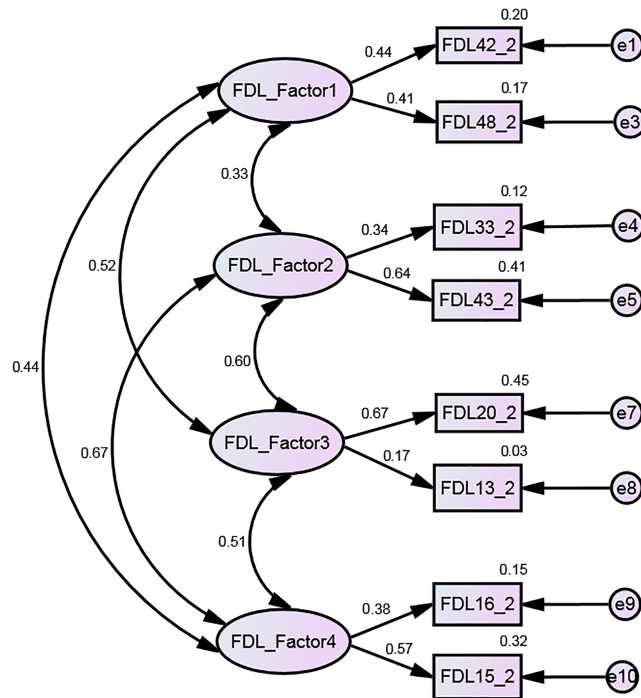
Figure 2. Measurement model for financial inclusion

Albaity and Rahman (2019) observed that the acquisition of knowledge to make better financial judgments, which is rooted in Shariah-based socialization, can help individuals to acquire the understanding to make ideal financial decisions and investment selections. Financial knowledge acquired through religious interaction empowers microentrepreneurs to gain skills to evaluate and analyze financial information within the framework of religious law (Rahim et al., 2016).

Similarly, Drexler et al. (2014) found that basic financial accounting training and simpler rules of thumb training improved savings, financial planning and management among MSME owners in the Dominican Republic.

6.2 Financial literacy and sustainability of indigenous MSMEs

The SEM analysis results also indicate that financial literacy significantly affects the sustainability of indigenous MSMEs in Africa, especially in rural Uganda.



Chi-square = 13.131; Degrees of freedom (Df) = 14; Probability (P) = 0.516
 Incremental Fit Index (IFI) = 1.011; Tucker Lewis Index (TLI) = 1.028
 Comparative Fit Index (CFI) = 1.000; Root Means Square Error of Approximation (RMSEA) = 0.000

Source(s): Created by authors

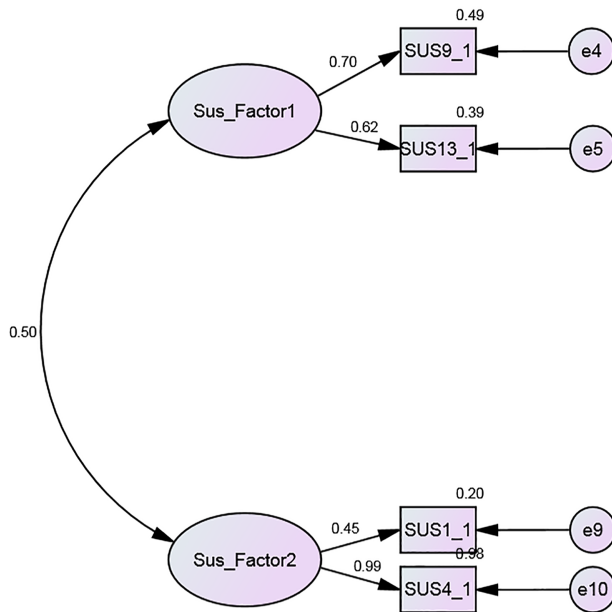
Figure 3. Measurement model for financial literacy

According to Okello Candiya Bongomin *et al.* (2024a, b), the acquisition of knowledge to understand and make better financial judgments can significantly enhance the financial and entrepreneurial skills of MSME owners and managers. MSME owners and managers, who aim to become confident in managing finances, should be well-informed and equipped with adequate financial knowledge and skills. Financial literacy, when combined with other business skills, becomes necessary for MSME owners and managers to confidently run their businesses (Okello Candiya Bongomin *et al.*, 2020a, b, c).

This finding aligns with Agyapong and Attram (2019), who revealed that there is a positive impact of financial literacy on the financial performance of SMEs in Cape Coast Metropolis, Ghana. However, Lusimbo and Muturi (2016) reported that MSME managers who were financially literate experienced no business growth in Kakamega Sub-County, Kenya. This discrepancy could be attributed to differences in the delivery methods and approaches of financial literacy programs. There may be a need to translate financial literacy content and curricula into local languages and customize it to meet the specific needs of different MSME categories.

6.3 Financial inclusion and sustainability of indigenous MSMEs

The SEM analysis results further indicate that financial inclusion significantly affects the sustainability of indigenous MSMEs in Africa, especially in rural Uganda.



Chi-square = 1.493; Degrees of freedom (Df) = 1; Probability (P) = 0.222
 Incremental Fit Index (IFI) = 0.997; Tucker Lewis Index (TLI) = 0.979
 Comparative Fit Index (CFI) = 0.996; Root Mean Square Error of Approximation (RMSEA) = 0.045

Source(s): Created by authors

Figure 4. Measurement model for sustainability of indigenous MSMEs

Table 2. Convergent validity and composite reliability statistics

Variables	AVE	Cronbach's alpha	CR
Financial inclusion	0.765	0.848	0.766**
Financial literacy	0.669	0.907	0.853*
Sustainability	0.622	0.988	0.701**

Note(s): $n = 379$; significance level: ** $p < 0.01$ and * $p < 0.05$

Source(s): Created by authors

Table 3. Summary of discriminant validity

Variables			
Financial inclusion	0.823**		
Financial literacy	0.678**	0.806**	
Sustainability	0.585**	0.669*	0.882**

Note(s): $n = 379$; significance level: ** $p < 0.01$ and * $p < 0.05$

Source(s): Created by authors

Table 4. Structural equation model analysis for competing models

Variables	Direct effect model	Mediated model
Fin. literacy ← Financial inclusion	Not estimated	0.311***
Sustainability ← Financial inclusion	0.541***	0.435***
Sustainability ← Fin. literacy	0.144**	0.144**
CMIN	81.329	82.879
Degrees of freedom (Df)	58	64
Probability (P)	0.024	0.046
Incremental fit index (IFI)	0.981	0.990
Tucker–Lewis index (TLI)	0.978	0.992
Comparative fit index (CFI)	0.991	0.998
Normed fit index (NFI)	0.970	0.983
Root mean square error of approximation (RMSEA)	0.030	0.021
<i>Squared multiple correlations</i>		
Sustainability	0.253***	0.386***
Financial literacy	–	0.218***

Note(s): $n = 379$; significance level: *** $p < 0.0001$ and ** $p < 0.005$
 Fin. literacy – financial literacy
Source(s): Created by authors

Table 5. Total, direct, and indirect effects

Standardized total effects	Financial inclusion	Financial literacy
Financial literacy	0.311***	0.000
Sustainability	0.541***	0.144**
<i>Standardized direct effects</i>		
Financial literacy	0.311***	0.000
Sustainability	0.435***	0.144**
<i>Standardized indirect effects</i>		
Financial literacy	Financial inclusion	Financial literacy
Sustainability	0.000	0.000
Sustainability	0.088***	0.000

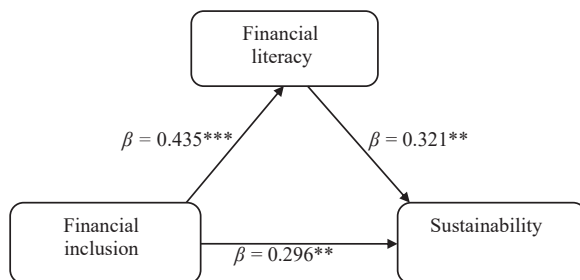
Note(s): $n = 379$; significance level: *** $p < 0.0001$ and ** $p < 0.005$
Source(s): Created by authors

Table 6. Structural equation model analysis results

Hypothesized paths	Point estimates	SE	Lower bounds	Upper bounds	p-value	Hypotheses
Financial incl ← Sustain	0.296**	0.019	–0.017	0.102	0.001	Supported
Financial lit ← Sustain	0.321**	0.047	–0.021	0.118	0.002	Supported

Note(s): $n = 379$; significance level: ** $p < 0.005$
 Legends: Financial incl – financial inclusion; Financial lit – financial literacy; Sustain – sustainability
Source(s): Created by authors

The sustainability of MSMEs depends on their access to better financing sources (Malki *et al.*, 2020; (Okello Candiya Bongomin *et al.*, 2024a, b). Financial inclusion is crucial for achieving business objectives and success among MSMEs. Access to finance enables MSMEs to expand, increase output and create employment opportunities.



Note(s): $n = 379$; significance level: $^{**}p < 0.005$; $^{***}p < 0.0001$

Source(s): Created by authors

Figure 5. Structural equation model (full mediation)

Anthanasius and Opperman (2023) highlighted that financial inclusion, through access to formal bank accounts and savings, combined with informal savings, can help MSMEs generate returns necessary for sustainability.

Anthanasius and Opperman (2023) discovered that access to formal and informal banking services had a positive impact on profits of MSMEs in the Eswatini Kingdom. In contrast, Nazir *et al.* (2021), using data from 30 Pakistani SMEs, pointed out that access to credit had negative effects on firm performance and profitability, which are key determinants of sustainability. The inconsistent findings, compared to the current study, may be due to regional differences in the role of social factors, which influence the level of interaction and resource flow among MSME owners and managers.

7. Conclusions

This study's results demonstrate that there is a positive link between financial inclusion and the sustainability of indigenous MSMEs in the presence of financial literacy in Africa, especially in rural Uganda.

The results also reveal that financial literacy significantly affects the sustainability of indigenous MSMEs in Africa, especially in rural Uganda.

The results further indicate that financial inclusion significantly affects the sustainability of indigenous MSMEs in Africa, especially in rural Uganda.

8. Policy implications

Policymakers across Africa, including Uganda, can utilize this study to design financial literacy curricula that address the knowledge gaps among MSMEs. Tailored financial literacy modules can be developed to equip MSME owners and managers with the skills necessary to make better judgments when selecting loan products and investing wisely to ensure long-term sustainability.

Governments across Africa, including Uganda, through financial sector regulators, can collaborate with commercial banks, microfinance institutions and other semi-formal financial entities to deliver financial literacy training to rural MSMEs. Financial institutions with rural branches in Africa, including Uganda, can offer training to MSME owners and managers, providing them with the basic financial knowledge and skills to make sound financial judgments and invest in high-return ventures for long-term sustainability.

Advocates of microenterprise development in Africa, including Uganda, can also involve grassroot organizations – such as Church groups, burial societies, voluntary savings and loans associations, youth groups and women groups – to deliver financial literacy training to

MSMEs. These training and business clinics can be conducted through community groups, helping MSMEs acquire the financial skills and knowledge to make optimal financial judgments and investment selections.

Managers of financial institutions can also provide short financial literacy training sessions to MSMEs' owners and managers before loan disbursements. This will ensure that the loans are used appropriately, leading to timely repayment and reducing default rates, thereby enhancing financial inclusion and sustainability among MSMEs.

This paper provides evidence on the role of sociological theories in fostering economic growth by promoting the acquisition of financial knowledge and skills through financial literacy. A combination of sociological and financial intermediation theories can enhance financial inclusion and promote the sustainability of indigenous MSMEs in Africa.

9. Limitations and further research

This study collected data at a single time period. Forthcoming studies could benefit from using experimental design to capture changes in the long run.

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Further reading

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