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Article

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MANAGEMENT | RESEARCH ARTICLE

Entrepreneurial financial literacy - small business sustainability nexus in Ethiopia

Hayelom Abrha Meressa^{1*}

Abstract: This study empirically examined the relationship between entrepreneurial financial literacy, access to credit, and the sustainability of small businesses in Ethiopia. The study used cross-sectional data collected from 293 owner-managers of small businesses through a survey questionnaire in 2022. It used structural equation modelling to analyze the results. Therefore, the paper's empirical evidence revealed that entrepreneurial financial literacy contributes to small business sustainability. The findings also show that access to formal credit financing mediates entrepreneurial financial literacy- small business sustainability nexus. In this regard, the paper contributes to the literature on small businesses by demonstrating the importance of entrepreneurial financial literacy and access to formal credit financing for the sustainability of small businesses in Ethiopia, considering the knowledge-resource-based view.

Subjects: Small Business Management; Entrepreneurial Finance; Sustainability

Keywords: Ethiopia; finance; literacy; small business; sustainability

1. Introduction

The small business sector promotes countries' economic growth by distributing wealth, generating employment, advancing technology, alleviating poverty, empowering women, and fostering entrepreneurship (Agyei, 2018; Hossain et al., 2020). In Ethiopia, small businesses contribute to employment creation much more than medium and large enterprises (Weldeslassie et al., 2019). Despite their contribution to employment, the operational environment of small businesses is intricate, and many owner-managers encounter numerous challenges when making financial decisions to run their businesses (Hossain et al., 2020). Entrepreneurial financial literacy poses a challenge, although it is a prerequisite for managing business operations (Agyapong & Attram, 2019; Hossain et al., 2020; Widiyati et al., 2018). In line with this, entrepreneurs have dedicated significant effort and attention to acquiring financial literacy, recognizing its crucial role in the success and image of businesses. Empirical evidence demonstrated that financial literacy positively affects businesses' performance, including revenue increment, savings, and access to funds for operational expenses (Ali et al., 2018). Therefore, people believe that the ability of small businesses to manage financial matters is crucial for their success. The greater the level of entrepreneurial financial literacy, the more effective the financial management is likely to be (Widiyati et al., 2018) as long as one should base decision-making soundly on rationality (Eniola & Entebang, 2016).

In the literature, according to the resource-based view, enterprises' competitive edge and success are contingent upon intangible and tangible resources (T. K. Das & Teng, 2000). However, the

importance of knowledge-based resources on small business performance has little attention (Zhao, 2019). According to the knowledge base view, financial literacy is among the intangible resources determining small business sustainability (Jappelli & Padula, 2013). In this regard, there is a belief that knowledge-based resources have a more significant impact than tangible resources in driving growth to pursue an entrepreneurial-oriented strategy and explain how firms can create and maintain capabilities and advantages that give a competitive edge (Zhao, 2019). However, combining these resources sustains a competitive advantage over time (Putra et al., 2021).

Globally, financial literacy is now acknowledged as a significant factor in determining small business sustainability (Eniola & Entebang, 2016) through its contribution to decision-making, including access to financial services (Okello et al., 2017; Ye & Kulathunga, 2019a). In this regard, the recent development in financing for small businesses has made entrepreneurial financial literacy an indispensable survival tool since a deficiency in financial knowledge can result in unsound financial choices and decisions (Eniola & Entebang, 2017; Refera et al., 2016). On the one side, people believe that owner-managers limited financial literacy may pose challenges to small businesses in obtaining formal credit, which can hinder their ability to generate accurate and high-quality financial reports (Buchdadi et al., 2020). On the other side, however, most empirical studies have concentrated on examining the availability of credit and managerial abilities and paid less attention to enhancing financial literacy, although acknowledging it as one of the significant factors that boost business growth (Agyapong & Attram, 2019; Azmi et al., 2020).

Few recent studies have investigated the nexus between entrepreneurial financial literacy and small business sustainability in the empirical literature (Agyapong & Attram, 2019; Eniola & Entebang, 2016; Ye & Kulathunga, 2019a). However, these studies ignore the mediation role of formal credit access in the nexus between owner-managers' financial literacy and small business sustainability in developing economies. Therefore, the primary purpose of this paper was to investigate the nexus between entrepreneurial literacy and the sustainability of small businesses in Ethiopia. In this regard, the research adds to the existing body of knowledge on financial literacy and sustainability of small businesses in the following ways. First, it draws on a resource-based view and knowledge-based framework to explain the significance of access to formal credit and entrepreneurial financial literacy in the small business sector. Second, unlike other studies, the research contributes to small business literature by applying structural equation modelling. Third, the paper empirically examined entrepreneurial financial literacy among small business owner-managers, which has received limited attention in developing nations like Ethiopia. Lastly, the empirical findings of the article could initiate policy-makers to design programs to improve entrepreneurial financial literacy in Ethiopia. Regarding the structure of the paper, section two deals with a literature survey and hypothesis development; section three explains materials and methods; the fourth section outlines the econometric results and discussion; the fifth section provides the concluding remarks; finally, section six deals with study limitations and directions for future research.

2. Literature survey and hypotheses development

The literature on small businesses well documents the role of entrepreneurial financial literacy and access to credit on firms' sustainability. The issue of sustainability, moreover, has become a mantra to date (Dyllick & Hockerts, 2002). Viewing sustainability as a strategy for business and investing aims to utilize the most effective business methods to fulfil and harmonize the requirements of both present and future stakeholders (Al-Abbadi & Rumman, 2023; Artiach et al., 2010; Chang et al., 2017; Dyllick & Hockerts, 2002; Ismail, 2022; Latifah & Soewarno, 2023). In this regard, firms should manage their resources, including financial capital, other tangible capital, and intangible resources, to bring economic sustainability (Dyllick & Hockerts, 2002) among others, for the fact that resources are inputs that enable enterprises to carry out their activities (Wernerfelt, 1984). In this vein, the resource-based perspective regards a firm as a distinct collection of resources and abilities, with the primary responsibility of its management being to increase value by utilizing current resources and skills in the best possible way while also expanding the resource base for the future (Grant, 1996).

In resource-based theory, an enterprise's resources and capabilities within a firm are the primary factors of its sustainable competitive edge (Madhani, 2010). In addition, knowledge-based theorists argued that linking knowledge and enterprise performance should be one critical aspect since knowledge is the basis for explaining the difference (Kaplan et al., 2001). People believe that the knowledge-based view derives from the resource-based theory, which suggests that any form of knowledge is an intangible resource (Grant, 1996) that is appropriability and used to make quality decisions by owner-managers as well as new solutions to enterprise problems (Grant, 1996; Nickerson & Zenger, 2004). Therefore, an enterprise's competitiveness and sustainable performance are dependent on intangible and tangible resources (Conner & Prahalad, 1996; T. K. Das & Teng, 2000), and a combination of knowledge and other resources give an enterprise the capacity to produce better products and services (Kaplan et al., 2001). Evidence also shows that knowledge and other enterprise-specific resources like finance are essential in determining success and sustainable competitive advantage (Owusu et al., 2019; Putra et al., 2021). Therefore, resource and knowledge-based views complement each other and explain better creation and sustainability of enterprises' competitive advantage (Theriou et al., 2009). In this regard, recent literature favouring knowledge and resource-based views well documents the role of access to formal credit and entrepreneurial financial literacy in promoting small business sustainability (Wachira & Kihiu, 2012; Ye & Kulathunga, 2019a).

According to the knowledge base view, entrepreneurial financial literacy is a body of knowledge instrumental in generating value and achieving lasting success for small businesses (Jappelli & Padula, 2013). Operationally defining, one can define entrepreneurial financial literacy as small business owner-managers understanding of basic economic concepts, knowledge of suitable financing decisions for the business, and familiarity with legal and regulatory frameworks (S. Das, 2016; USAID, 2009). Moreover, in the modern economy, small business also requires adequate finance to operate efficiently. However, financial literacy is crucial for small businesses to maintain a competitive edge and remain viable from a resource-based view (Hussain et al., 2018).

In the literature on small business, the direct impact of owner-managers literacy of finance on enterprises' sustainability is documented (Eniola & Entebang, 2016; Kimunduu et al., 2016; Kizza, 2019). In the same vein, the direct impact of entrepreneurial literacy of finance on access to credit (Dewi et al., 2018) and the direct outcome of access to formal credit finance on the sustainability of small businesses run by entrepreneurs (Kalaieesan, 2021; Patrick et al., 2021) are also well studied. Therefore, one could argue that entrepreneurial literacy, directly and indirectly, impact enterprises' sustainability, although limited evidence exists (Ye & Kulathunga, 2019a).

According to the resource-based view, access to financial resources is crucial for the growth and progress of small enterprises (Kalaieesan, 2021). Regarding this view, the sustainable success of small businesses heavily relies on their ability to obtain financial support. Financial resources allow small enterprises to explore novel strategies, create innovative ventures, and increase their readiness to seize new prospects (Dewi et al., 2018). Small businesses must have financial access to function well (Asad et al., 2016). Access to credit finance ensures small enterprises' financial stability and sustainability while boosting their profitability and growth (Nzibonera & Waggumbulizi, 2020). Access to credit helps small businesses see opportunities because any entrepreneur can only look for new opportunities since the availability of funds enhance their performance and make them more sustainable in the market (Civelek, 2021; Haider et al., 2017). In addition, entrepreneurs can maintain the longevity of their businesses by obtaining financing and ensuring a steady cash flow. Without proper access to funding for their operations, small businesses can face hindrances in their sustainability. Hence, enterprises receiving external debt grew better than those constrained businesses, and the success of these enterprises is hard without access to financing. It is, therefore, believed that access to finance significantly affects the sustainability of small business enterprises (Patrick et al., 2021).

In the knowledge-based economy, a firm grasp of financial literacy as an entrepreneur can enhance the availability of financial services for managing businesses (Dewi et al., 2018). In this regard, it is widely supposed that increased entrepreneurial financial literacy could help entrepreneurs make informed decisions regarding financial services and increase the probability of financial access (Wachira & Kihiu, 2012). Conversely, small businesses with inadequate financial literacy face challenges in obtaining external debt as they may struggle with producing accurate financial reports (Buchdadi et al., 2020). Therefore, small business owner-managers poor economic and managerial knowledge affects their credit access from financial institutions (Valverde et al., 2016). Accordingly, advisors suggest that small business owner-managers enhance their culture of financial literacy to improve the accessibility of finance and reduce the perception of risk associated with their businesses (Owusu et al., 2021). Documentation shows that financial literacy levels increase the demand for financial products and raise financial inclusion (Khan et al., 2022). Financing decisions and achieving economic well-being require financial literacy (Pangestu & Karnadi, 2020). Financially literate entrepreneurs have more access to external debt and attract more investors (Sulistianingsih & Santi, 2023).

According to the knowledge-based view, recognizing it as a vital skill set, entrepreneurship depends on an entrepreneur's ability to comprehend financial matters for initiating, handling, and prospering small businesses (Kimunduu et al., 2016). In this view, entrepreneurs who possess financial literacy and comprehend fundamental economic principles such as bookkeeping, interest rates, and debt management manage micro and small enterprises with higher success levels (Lusimbo & Muturi, 2016). Documentation also indicates that entrepreneurs with knowledge and skills in managing finance can enhance the sustainable performance of their businesses (Dewi et al., 2018). Moreover, owner-managers financial literacy is widely acknowledged worldwide as a significant factor affecting small businesses' economic and financial stability and growth (Eniola & Entebang, 2016; Prakash & Singla, 2022). It enables owner-managers of small businesses to assess and understand their need and make financial decisions to improve sustainable performance (Agyapong & Attram, 2019; Kizza, 2019; Usama & Yusoff, 2019). Literature also shows that owner-managers' perception can significantly influence the sustainability of enterprises through proficiency in basic business management skills, leadership development, capacity-building, and networking on financial literacy (Eniola & Entebang, 2017). Evidence shows that financial literacy knowledge and practice enhance sustainability in small business operations (Babajide et al., 2021; Grana-Alvarez et al., 2022). Therefore, as depicted in figure 1, the study can hypothesize that:

H1: Entrepreneurial financial literacy affects the sustainability of small businesses.

H2: Small businesses' credit financing influences their sustainability.

H3: Entrepreneurial financial literacy influences small businesses' access to credit.

H4: Access to credit plays a mediating role between financial literacy and the sustainability of small businesses.

Figure 1. Conceptual framework.

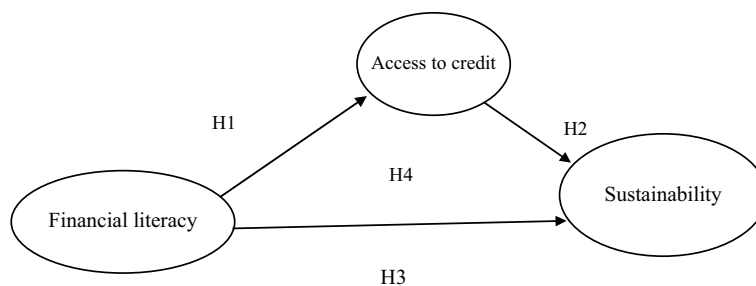


Figure 2. Map of the study area.



3. Materials and methods

3.1. Study area description

This study was conducted in Benishangul Gumuz, located in northwest Ethiopia. Figure 2 highlights the location of the fieldwork.

3.2. Research design and approach

Researchers are anticipated to choose an appropriate foundational premise for their research and carefully and tactically design their methodology to conduct investigations effectively and efficiently manage data. In this regard, researchers can break down the research design process into three stages: choosing a research paradigm, selecting an approach, and picking a methodology (Sarantakos, 1998). Hence, it is essential to emphasize the significance of examining presuppositions related to understanding and acquiring knowledge before deciding on the research approach (Creswell, 2014). Therefore, the study is within the positivist paradigm, emphasizing measurable variables, hypothesis testing, and making inferences about a larger population based on sample data (Bhattacharje, 2012). In addition, selecting the research approach is a matter of no choice following the paradigm.

The suitability of the research approach relies on the underlying research paradigms. A quantitative approach to research is likely to be associated with a deductive approach to evaluate a theory using numbers and, therefore, a positivist view (Greener, 2008). In other words, the quantitative research approach involves collecting information that researchers can represent using graphs, charts, and tables, and they can analyze it using statistical techniques (Creswell, 2014). This study employed a quantitative approach to quantify relationships between entrepreneurial financial literacy, access to credit financing, and sustainability.

3.3. Sample design and data

Sampling is the process of selecting enough participants from a particular population to infer the characteristics of the entire population (Sekaran & Bougie, 2010). In sampling procedures, a target population is a specific group of individuals a researcher wishes to study or investigate. Therefore, the target population of the current study consists of the number of micro and small businesses in the Assosa Zone. Regarding sample size determination, the growing need for empirical research

has generated a necessity for a professional approach to determining the sample size required to represent a particular population accurately. This study, therefore, used the (Krejcie & Morgan, 1970) formula to select sample size.

$$\text{sample size} = \frac{(1.96)^2 * \text{Population} * 0.5(1 - 0.5)}{(0.05)^2 * (\text{Population} - 1) + (1.96)^2 * 0.5(1 - 0.5)}$$

Accordingly, using stratified random sampling, the study selected 293 enterprises from 1,230 active enterprises. This study collected the data used through a structured questionnaire in 2022. The survey questionnaire consisted of only closed-ended questions since the investigation is quantitative.

3.4. Construct development and measurement

The primary constructs of the study are sustainability, entrepreneurial financial literacy, and credit financing of small enterprises in Ethiopia. The study assessed the constructs using a proper standardized five-point Likert scale, with one representing “strongly disagree” and five representing “strongly agree.” It adopted previous studies and conducted a comprehensive literature review to inform our approach. The questionnaire consisted of four primary sections, with the initial section focusing on the participants’ background information and the characteristics of their businesses. In the second section, ten items were adapted to assess entrepreneurial financial literacy from literature (Rahman et al., 2021; Ratnawati et al., 2021; Susan, 2020; Ye & Kulathunga, 2019a). The study evaluated behaviour, attitude, knowledge, and skills to measure financial literacy among owner-managers. In the third section, the study appraised access to credit finance for enterprises using ten questions from existing literature on small businesses (Buchdadi et al., 2020; Lusimbo & Muturi, 2016; Potrich et al., 2015; Ye & Kulathunga, 2019a). The study measured the constructs of financial literacy and access to credit finance for enterprises. It evaluated the behaviour, attitude, knowledge, and skills of owner-managers to measure financial literacy. It appraised access to credit finance using ten questions from existing literature on small businesses. Accordingly, the study measured credit financing access based on the welfare, quality, usage, and accessibility of external debt. Lastly, it used eight items from the literature to measure the sustainability of enterprises (Buchdadi et al., 2020; Ratnawati et al., 2021; Susan, 2020; Ye & Kulathunga, 2019a). The study identified the latent variables of sustainability, entrepreneurial financial literacy, and credit financing. It developed twenty-eight observable items from the reviewed literature to address the objective.

3.5. Data analysis techniques

The research utilized a statistical method called structural equation modelling, a multivariate technique that combines factor analysis and regression (Hair et al., 2010). The research employed a two-step approach and performed data analysis using STATA 14. In the first phase, the study evaluated the reliability and validity of the constructs using confirmatory factor analysis with maximum likelihood before proceeding to verify the hypothesis. The study used structural equation modelling to investigate the proposed causal relationships concerning entrepreneurial financial literacy, credit financing, and sustainability based on the evidence collected.

4. Empirical result and discussion

4.1. Measurement model: CFA

All items in Table 1 had statistically significant standardized factor loadings and were well above the cut-off criterion >0.50 except items FL2 and FL10, as suggested by (Pituch & Stevens, 2016). The study computed Cronbach’s alpha and composite reliability to validate the measurement model and assess the reliability and validity of the constructs. The results indicate that all values of Cronbach’s alpha are above 0.7, which is an acceptable range (Fornell & Larcker, 1981). Concerning composite reliability, the results are more than the recommended threshold value of 0.70, suggesting that there is the reliability of constructs (Insert Table 1) (Hair et al., 2010). The

Table 1. Reliability of Instruments and Confirmatory Factor Loading

Construct	Item	Alpha of Items	Alpha of Constructs	Standardized Loading	Status	Composite Reliability
Sustainability 8 Items	S1	0.8860	0.9015	.7774748	Retained	0.898815812
	S2	0.8911		.7024659	Retained	
	S3	0.8801		.841443	Retained	
	S4	0.8886		.7269271	Retained	
	S5	0.8892		.7171854	Retained	
	S6	0.8921		.6815385	Retained	
	S7	0.8894		.7191916	Retained	
	S8	0.8950		.6860262	Retained	
Access to Finance 10 Items	AF1	0.9070	0.9135	.6710583	Retained	0.914532064
	AF2	0.8989		.8213903	Retained	
	AF3	0.9060		.6994507	Retained	
	AF4	0.9093		.6318447	Retained	
	AF5	0.8985		.8473718	Retained	
	AF6	0.9017		.7826648	Retained	
	AF7	0.9059		.6910538	Retained	
	AF8	0.9084		.6381442	Retained	
	AF9	0.9042		.7347245	Retained	
	AF10	0.9075		.6528276	Retained	
Financial literacy 10 Items	FL1	0.8448	0.8606	.6625117	Retained	0.895905579
	FL2	0.8701		.2836807	Deleted	

(Continued)

Table 1. (Continued)

Construct	Item	Alpha of Items	Alpha of Constructs	Standardized Loading	Status	Composite Reliability
	FL3	0.8473		.6313947	Retained	
	FL4	0.8468		.6491407	Retained	
	FL5	0.8469		.6128482	Retained	
	FL6	0.8402		.7095349	Retained	
	FL7	0.8298		.8210887	Retained	
	FL8	0.8344		.8213096	Retained	
	FL9	0.8308		.8214742	Retained	
	FL10	0.8752		.2071347	Deleted	
Total items 28			0.8984			

study evaluated the validity of the constructs alongside assessing their reliability. The instrument's validity refers to how well the measure represents the underlying construct it intends to measure. One can examine the content, construct, convergent, and discriminant validity to validate the instrument's validity accordingly (Bhattacharje, 2012; Kumari, 2021). Content validity can be determined by having experts in the relevant subject area review the constructs (Bhattacharje, 2012). Accounting and finance instructors and micro and small-scale agency officers initially evaluated the survey tool used in this research. After ensuring the appropriateness of the survey content, the study utilized it to investigate the construct validity (Babtain, 2021). In addition, construct validity comprises two components: convergent and discriminant. Convergent validity ensures the linkage between two interconnected factors of a construct, which researchers accomplish by observing significant correlations between all items in a measurement model and their corresponding latent constructs (Kock & Lynn, 2012). The current study assessed convergent validity by considering the average variance extracted and composite reliability (Hair et al., 2010). It is crucial to have an average variance extracted that is higher than 0.5 and composite reliability of the constructs that is higher than 0.70 to ensure that the constructs have convergent validity (Fornell & Larcker, 1981). The study calculated the average variance explained factor and composite reliability in this regard, providing confirmed evidence of convergent validity. All the criteria, therefore, indicated a good convergent validity for all the latent constructs. In addition, discriminant validity implies that the measurement model of a construct does not contain excessive or duplicate items. It assumes that items of a construct should have a higher correlation among them than the correlation with other construct items, which are hypothetical not to correlate (Ghadi et al., 2012; Zait & Berteau, 2011). Researchers can use the maximum and average shared square variance measures to assess discriminant validity. The shared variance represents the correlation between two constructs, and one can square it to determine the shared squared variance. Calculating a construct's average shared squared variance involves finding the mean of the squared correlations between that construct and all other constructs in the study. The maximum shared variance represents the highest squared correlation between a construct and any other construct in the model. For discriminant validity to be valid, the average variance extracted value should be greater than the maximum average shared variance values (Hair et al., 2010; Post & Molen, 2019; Safdari et al., 2022). The study calculated the maximum and average shared variance of constructs to assess the discriminant validity of the constructs. The results of this analysis, presented in Table 2, indicated that all values fell within the acceptable ranges, providing evidence that the constructs exhibit discriminant validity.

It is essential to compare the correlations between the constructs with the square root of average variance extracted for constructs to ensure discriminant validity. The diagonal values of each construct must be greater than the corresponding off-diagonal values (Fornell & Larcker, 1981; Zait & Berteau, 2011). The discriminant validity exists at the construct level if the square roots of the average variance extracted values are greater than the off-diagonal correlations (Osman, Mohamad, Mohamad, Mohamad, & Sulaiman, 2018). Moreover, correlation among latent variables should be less than 0.9 for good discriminant validity consistent with (Hair et al., 2010). Therefore, Table 3 shows the results of the discriminant validity analysis, which indicate that all the diagonal values for the constructs were higher than the corresponding off-diagonal values, which suggests that the measurement model has sufficient discriminant validity.

To evaluate the fitness of a model, researchers perform statistical tests such as the chi-square test, comparative fit index, Tucker-Lewis's index, and mean root square of error approximations to identify any discrepancies or misfits in the measurement and structural models. It is indispensable to note that a statistically significant chi-square test may not necessarily indicate poor model fit, as sample size can influence this test (Hair et al., 2010; Pituch & Stevens, 2016). In this regard, the output confirmed the fitness of the measurement model, which included values of $\chi^2/df = 1$, CFI = 0.919, TLI = 0.912, RMSEA = 0.057, SRMR = 0.05, and CD = 0.999 (Pituch & Stevens, 2016). The study then evaluated the full structural model. The results summarized in the table indicate a good fit for the model with $\chi^2/df = 0.93$, CFI = 0.928, TLI = 0.921, RMSEA = 0.058, SRMR = 0.049, CD = 0.91. The

Table 2. Discriminant and Convergent Validity Measures of Constructs

Constructs	Convergent validity			Discriminant validity		Status
	CR	AVE	Higher than 0.5	MSV	ASV	
	Higher than 0.7	Higher than 0.5		AVE > MSV	AVE > ASV	
Sustainability	0.90	0.56	Yes	0.105	0.074	Yes
Financial literacy	0.90	0.55	Yes	0.093	0.068	Yes
Access to Finance	0.91	0.52	Yes	0.105	0.099	Yes

Table 3. Correlation matrix of constructs based on AVE square root

Construct	Sustainability	Access to Finance	Financial Literacy	AVE
Sustainability	.75			.56
Access to Finance	.29	.72		.52
Financial Literacy	.18	.26	.74	.55

computed values confirmed that the measures are robust for this study since they met the recommended value as depicted in Table 4.

4.2. Discussion of empirical results

The initial step in examining the structural equation model involves assessing the fit indices that meet the recommended standards. In the second stage of SEM, researchers conducted path analysis to investigate the relationships among the study variables. The study drew a direct and an indirect path between entrepreneurial financial literacy and sustainability, considering credit financing as a mediator to analyze the mediation effect. The reasoning behind using mediating effects is that they help researchers comprehend the opaque processes behind intricate relationships, where the influence of an independent variable is conveyed to a dependent variable using a third intervening variable (Miller et al., 2007). The study used the causal step approach consistent with small business studies in the literature to test the mediating effect (Asad et al., 2018; Majali et al., 2022).

According to the causal step approach, assessing mediation involves four key steps consistent with small business studies in the literature. Firstly, it is necessary to establish that the independent variable affects the dependent variable without a mediator (the total effect). Secondly, the study must demonstrate the influence of the independent variable on the mediator. Thirdly, establishing that the mediator affects the dependent variable is necessary. Lastly, confirming that the introduction of the mediator attenuates the previously statistically significant relationship between the explanatory variable and the dependent variable is essential, indicating an indirect effect (Baron & Kenny, 1986). In this regard, the research stated that entrepreneurial financial literacy significantly influences sustainability. The finding, therefore, implies that entrepreneurs with a strong understanding of financial concepts are more likely to generate higher profits than those lacking financial knowledge. Their financial literacy enables them to make better decisions and acquire more capital for reinvestment and business growth (Kimunduu et al., 2016).

According to the results presented in Table 5, the estimated coefficient for the relationship between entrepreneurial financial literacy and sustainability was 0.252, with a probability value of 0.002 for the total effect. Therefore, the result fulfils the initial condition for Baron and Kenny's mediation analysis, demonstrating a strong and statistically significant impact of financial literacy on business sustainability at a high confidence level (1%). The study's findings suggest that businesses with owner-managers who possess financial literacy are more sustainable than those with low financial literacy. Therefore, enhancing the financial literacy of entrepreneurs can lead to improved business performance by providing them with valuable knowledge that enables better decision-making and creates a competitive advantage (Agyapong & Attram, 2019). Therefore, owner-managers with limited financial literacy will encounter more difficulties in managing debt, saving, and obtaining credit and will be less likely to engage in future planning.

Conversely, individuals with greater financial literacy can manage their finances better, which may lead to enhanced sustainability. Entrepreneurs who possess a high level of financial literacy and have a comprehensive understanding of essential economic principles such as bookkeeping,

Table 4. Goodness of Fit Statistics

Indices	Measurement model	Structural model
Chi2_ms (347) p > chi2	679.399 .000	588.210 .000
Chi2_bs (378) p > chi2	4496.806 .000	4372.084 .000
comparative chi-square	1	.93
Root mean square of error approximation	.057 .033 Probability root mean square of error approximation <=.05	.058 .028 Probability root mean square of error approximation <=.05
Akaike information criterion	21610.833	19904.934
Bayesian information criterion	21931.008	20203.028
Comparative fit index	.919	.928
Tucker Lewis index	.912	.921
Standardized root mean squared residual	.050	.049
Coefficient of determination	.999	.910

interest rates, and debt management own small businesses that are more prosperous (Lusimbo & Muturi, 2016). Furthermore, the study found that entrepreneurial financial literacy significantly impacted access to credit finance without a mediator. The estimated coefficient for the relationship between owner-managers financial literacy and access to formal credit was 0.282, with a probability value of 0.000, indicating that entrepreneurial financial literacy significantly affects access to external debt finance at a 1% significance level.

On the one hand, businesses with highly financially literate owners are more likely to access formal credit from institutions. On the other hand, entrepreneurs lacking financial literacy struggle to make informed financial decisions, which limits their ability to access credit. Therefore, the findings suggest that improving owner-managers financial literacy, including their behaviour, attitude, skills, and knowledge regarding finance, can increase financial access (Susan, 2020).

Moreover, entrepreneurial financial literacy equips small business owner-managers with the financial knowledge and skills to develop a business plan, establish a savings plan, and make strategic investment decisions. In developing economies, owner-managers of small businesses should prioritize acquiring entrepreneurial financial literacy before accessing financial services such as bank loans. Doing this allows them to use borrowed money wisely and grow their businesses (Okello et al., 2017).

The result also revealed that access to credit finance as a presumed mediator and sustainability have a significant relationship with a coefficient of 0.388 and a probability value of 0.000 in the direct effect output controlling entrepreneurial financial literacy. Furthermore, including credit access as a mediator in the model reduces the influence of owner-managers' financial literacy on sustainability. After introducing the mediating variable, the path coefficient value for financial literacy on sustainability decreased from 0.252 to 0.143, a reduction of 0.109. The result, therefore, revealed the existence of the mediation effect. In this regard, entrepreneurial financial literacy exerted its total influence on sustainability through access to formal credit finance as a mediating

Table 5. 2018SEM result

Path	Coef.	OIM Std. Err.	Z	P> z
Total effect				
Access to Finance – Sustainability	.388	.091	4.25	0.000
Literacy – Sustainability	.252	.081	3.10	0.002
Literacy – Access to Finance	.282	.062	4.52	0.000
Direct effect				
Literacy – Access to Finance	.282	.062	4.52	0.000
Access to Finance – Sustainability	.388	.091	4.25	0.000
Literacy – Sustainability	.143	.081	1.75	0.079
Indirect effect				
Literacy – Finance	0	No path		
Finance – Sustainability	0	No path		
Literacy – Sustainability	.109	.034	3.24	0.001

variable. The implication is that credit financing fully mediates the relationship between entrepreneurial financial literacy and the sustainability of small businesses.

5. Conclusion and implication

The article examined how formal credit access mediates the relationship between entrepreneurial financial literacy and the sustainability of small businesses in Ethiopia, specifically focusing on the Benishangul Gumuz regional state in line with knowledge-resource-based views. The study used cross-sectional data collected from 293 respondents in 2022 through a questionnaire. Accordingly, the study found full mediation by access to credit finance, indicating that entrepreneurial financial literacy exerted its total influence on the sustainability of enterprises through the mediating variable. In this regard, empirical evidence of the study has implications for practice, policy, and theory (Creswell, 2012).

Theoretically, findings make a theoretical contribution to the knowledge-resource-based view of the firm in the context of small businesses in the Benishangul Gumuz regional state by providing evidence on the mediating effect of access to credit financing in the relationship between entrepreneurial financial literacy and small business sustainability. The study, therefore, extends the existing literature on the mediating role of access to credit financing in the entrepreneurial financial literacy- small business sustainability nexus in light of the complement RBV-KBV views which are the most popular and contemporary management perspectives in entrepreneurship among others and explain better sustainability of competitive advantage (Pereira & Bamel, 2021; Theriou et al., 2009). In this regard, the study extends the existing literature on the mediating role of access to credit financing in the entrepreneurial financial literacy- small business sustainability nexus considering RBV-KBV views which are the most popular contemporary management perspectives in entrepreneurship, among others which complement each other and explain better sustainability of competitive advantage.

This study also has practical contributions for owner-managers of small businesses. The paper aims to persuade owner-managers to recognize the value of entrepreneurial financial literacy in accessing formal credit and boosting sustainability. The finding also encourages small business owner-managers to work closely with higher institutions since they are the key to gaining financial literacy through training. Moreover, for sustainability and a competitive economy, financial literacy is not a luxury for owner-managers of small businesses since it moderates information asymmetry when they seek formal credit from financial institutions. Therefore, overseeing the provision of entrepreneurial financial literacy education in formal educational institutions has the potential to enhance the operational capabilities of small businesses in a positive way (Hussain et al., 2018). Therefore, small business owner-managers should prioritize improving their financial literacy to make informed financial decisions and increase their chances of accessing formal credit financing. The development agency of micro and small enterprises of Ethiopia and financial institutions, on the other hand, should consider providing financial education programs to small business owners to increase their resource management capacity and improve their chances of accessing credit. Moreover, policymakers should consider implementing policies that promote financial literacy and increase access to formal credit financing for small businesses to enhance their sustainability.

6. Limitations and suggestions for future research

This study only uses access to formal credit and entrepreneurial financial literacy as resources to examine their impact on small firm sustainability, which may not apply to all types of resources. Moreover, the study only collected data from enterprises in the Benishangul Gumuz regional state of Ethiopia, which limits the generalizability of the findings to other enterprises outside the region. Future studies can examine the effects of other resources on sustainability and conduct research across different areas of Ethiopia to consider how demographic characteristics, social connections, perceptions of the environment, and decision-making styles can affect owner-managers behaviours, strategic choices, and enterprise performance to address limitations of the current study (Eniola & Entebang, 2017). Moreover, researchers can conduct longitudinal studies to investigate the causal relationship between financial literacy and sustainability. Disclosure statement No potential conflict of interest was reported by the author.

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