The Role of SMEs in Rural Development: Access of SMEs to Finance as a Mediator

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Abstract

Small and Medium Enterprises (SMEs) are noted to be key players in rural development, especially with regard to their contribution in increasing access to financial services. Nevertheless, there is limited empirical evidence that can explain the mediating role of financial service access in rural development that is driven by SMEs in a South Asian setting. The article utilized cross-sectional survey data on 427 entrepreneurs in Gandaki Province, Nepal, and analyzed them using the Partial Least Squares Structural Equation Modeling (PLS-SEM). The main constructs to be used were SME activity, access to financial services (AFS), and rural development (RD), the reliability and validity were determined through confirmatory factor analysis. The model showed moderate levels of explanatory power on AFS (R2=0.401) and RD (R2=0.691). The output of the effect sizes showed a high indirect effect of the SMEs on rural development due to financial access (f2=1.159), and the direct impact of the SMEs on rural development was only significant (f2=0.014). The mediation analysis proved that the access to finance significantly mediates the effects of SMEs on rural development (b=0.490, t=15.308, p=0.001).

The results emphasize that the development in the rural setting led by the SMEs is predominantly done via the enhancement of access to financial services. A combination of comprehensive policy efforts to promote SME development and the growth of rural financial networks can be used to complement each other and increase economic opportunities and the well-being of communities. This paper highlights the need to implement concerted efforts to ensure inclusive and sustainable rural development.

Keywords: Stream of access to Finance, Small and Medium Enterprises, Rural Development, Nepal, PLS-SEM.

Introduction

Small and Medium Enterprises (SMEs) are widely recognized as economic growth engines, especially in developing countries' rural areas (Gherghina et al., 2020). These businesses, often run by farmers, shopkeepers, and young entrepreneurs, provide jobs and create opportunities for local communities. In many villages, SMEs contribute significantly to livelihoods by transforming the rural economy, helping families earn money, and offering essential services. However, a critical question arises: do the people operating these businesses possess adequate knowledge of financial matters, such as how to save, budget, or access loans safely? Understanding economic concepts is especially important for entrepreneurs and workers in rural regions, where access to financial education and formal banking services is often limited.

Financial literacy refers to making informed decisions about money, including managing savings, budgeting, understanding interest rates, and using banking products wisely (Katnic et al., 2024). When individuals lack financial literacy, they may experience challenges such as difficulty saving for emergencies, limited access to credit, or vulnerability to debt. In rural settings, where economic opportunities are closely linked to the health of small enterprises, low financial literacy can hinder not only personal financial well-being but also the success and growth of SMEs (Kuutol et al., 2024).

Rural development is another vital element that shapes how individuals and businesses interact with financial systems. It includes improvements in infrastructure such as roads, electricity, and communication, access to education and healthcare, and programs designed to strengthen local economies. Hu and Liu (2025) find that better rural development can offer more opportunities for training, greater access to financial institutions, and information that helps people make better financial decisions. Czech et al. (2024) show that the relationship between rural development and financial literacy is complex; improvements in infrastructure and services may help people learn about financial management or use banking services for the first time.

Despite the growing recognition of the importance of SMEs and rural development, few studies have explored how small businesses can directly enhance financial literacy among rural populations. Even fewer have examined how the rural development process may influence this connection. In Nepal's Gandaki Province, many individuals work hard in SMEs, yet often lack the knowledge to manage money effectively. Recent data suggest that many SMEs in rural Gandaki still struggle with basic concepts such as saving, budgeting, and safe use of loans, which can result in missed opportunities for business growth or financial security. So, this study pushes this problem faced by SMEs.

According to the United Nations and the World Bank, SMEs were popularized during the 1970s as a driver of economic development and poverty reduction. Ellis and Biggs (2001), rural development as a formal

policy focus became prominent in the 1950s and 1960s, shaped by the work of development economists and institutions aiming to improve the quality of life for communities in remote areas. Financial literacy, meanwhile, has gained importance since the 1990s as researchers and policymakers recognized the need for people to understand and manage financial resources. Early studies by Noctor and Stradling (1992) defined financial literacy as the ability to make informed decisions about financial matters, laying the foundation for later research and policy initiatives (Yuning, 2023).

In Gandaki Province and other rural areas, significant barriers remain. Many entrepreneurs and residents do not use banks regularly, lack awareness of interest and loan conditions, and may find it difficult to save for the future. These challenges limit the potential benefits of both SME growth and rural development efforts. For instance, without basic financial knowledge, business owners may borrow too much or at unfavorable rates, fail to plan for future investments, or be unable to take advantage of new opportunities that arise through improved infrastructure. The effectiveness of rural development programs is also diminished when communities are not equipped to use new financial resources or services wisely.

There is a gap in research on how SMEs contribute to financial literacy in rural areas and the potential role rural development might play as a bridge between business activities and financial education. Most previous studies have emphasized the overall economic contribution of SMEs or described individual experiences with financial products, but have not examined how these elements interact. In particular, the mediating effect of rural development, how improvements in roads, schools, or communication may support financial knowledge and skills, has received limited attention.

Addressing this research gap, the present study investigates how SME growth affects financial literacy in rural municipalities of Gandaki Province, Nepal, focusing on the mediating effect of rural development. The study seeks to answer the following key questions: How do SMEs influence financial literacy among rural individuals?, does rural development mediate the relationship between SME growth and financial literacy? and what policy and practical implications arise from these relationships for enhancing financial inclusion and strengthening rural economies?

By exploring these questions, this research aims to illuminate pathways through which SME activity and rural development can jointly promote financial literacy, thereby supporting sustainable economic growth and improved well-being for rural families and communities

Literature Review

The Global and Local Importance of SMEs

Small and Medium Enterprises (SMEs) are recognized as vital contributors to economic development in developing countries. In the global context, SMEs create jobs, generate income, and are essential

for local economic resilience. In Nepal, for example, SMEs contribute about 22 percent to the national Gross Domestic Product (GDP) and provide employment for millions, including many women and young people (Sharma & Paudel, 2025). In rural regions, the impact of SMEs is even more pronounced; they often serve as the backbone of the local economy, supporting livelihoods for farmers, shopkeepers, and small-scale entrepreneurs.

SMEs' role in rural development has been widely documented. Kaiser and Barstow (2022). Studies confirm that small business growth is closely linked to improvements in local infrastructure, access to services, and overall quality of life in rural communities. As SMEs expand, they help reduce poverty by creating new job opportunities and encouraging money circulation within villages (Manzoor et al., 2021). This process strengthens local markets and supports the development of essential services such as education, healthcare, and transportation.

While the economic contributions of SMEs are well established, less attention has been paid to how these businesses influence the financial knowledge and skills of people in rural areas. As the rural economy grows, the need for sound economic decision-making becomes more urgent, yet financial literacy remains a persistent challenge in many regions.

Understanding Financial Literacy in Rural Contexts

Financial literacy is understanding and using financial skills, including budgeting, saving, investing, and borrowing wisely. Financial literacy is critical in rural areas because many people rely on informal economic activities and may have limited access to banks or formal financial education (Hasan et al., 2021). For example, rural residents may lack basic knowledge about interest rates, loan agreements, or the benefits of saving in a bank. This can lead to weak financial decisions, like borrowing from informal lenders at high interest rates or failing to save for emergencies.

Research from Nepal and similar countries shows that financial literacy rates in rural areas are typically lower than in urban areas. In Gandaki Province, for instance, financial literacy is about 62 percent, which, while higher than in some other provinces, still indicates that a significant part of the population lacks essential financial knowledge (Sharma & Vyas, 2022). This gap is especially concerning because rural communities often face greater economic risks, including crop failure, health emergencies, and limited access to credit.

Despite these challenges, some studies have shown that improving financial literacy can have substantial benefits. For example, financial knowledge helps rural families manage their money better, save for the future, and avoid debt traps. It also increases the likelihood that people will use formal banking services instead of relying on informal lenders. This shift can protect families from exploitation and create more stable, sustainable rural economies.

The Relationship between SMEs and Financial Literacy

Most research on SMEs has focused on their direct economic impact, job creation, income generation, and poverty reduction. Less attention has been paid to how SMEs might indirectly influence financial literacy. There are reasons to believe that SMEs could enhance financial knowledge in rural communities. For example, SME owners and employees may gain practical experience with money management, budgeting, and dealing with banks as part of their daily business activities (Quarshie et al., 2025). Over time, these experiences could translate into improved financial literacy at the household and community levels.

However, evidence for this connection is limited, and few studies have directly examined whether SME growth leads to higher levels of financial literacy in rural areas. Most existing research focuses on urban contexts or financial education programs delivered through schools or government initiatives, rather than business activity (Kyeyune & Ntayi, 2025)aiming for inclusive growth, the 2024 UNDP trend report casts a shadow with its findings that the world remains off-course for achieving Sustainable Development Goal 1 (SDG1. This represents a clear gap in the literature, particularly for regions like Gandaki Province, where SMEs are a significant part of the rural economy.

The Role of Rural Development as a Mediator

Rural development refers to improving the quality of life in rural areas by investing in infrastructure, education, healthcare, and economic opportunities (Nguyen-Dinh & Zhang, 2025). These improvements can create a more supportive environment for SMEs to grow and for individuals to access financial services and education.

Several studies have explored the relationship between SME growth and rural development. For instance, Garg et al. (2025) found that South Asian research on SME expansion positively links to rural development, especially when businesses have better access to finance. Improved infrastructure, such as better roads and communication networks, can make it easier for SMEs to reach markets and for customers to access financial services (Mugano & Dorasamy, 2024). Similarly, investments in education and health can increase the overall capacity of rural residents to learn about and manage money.

Interestingly, some studies suggest that rural development may mediate between SME activity and financial literacy. In other words, the growth of SMEs can lead to improvements in local development, which can enhance individuals' financial knowledge and behavior (Abdallah et al., 2024). For example, when a village gains better access to banking services, more people may open accounts, save money, and learn about financial products. Likewise, improved education systems can provide financial training and awareness opportunities (Zickafoose et al., 2024).

Despite these connections, little research examines explicitly the mediating role of rural development between SMEs

and financial literacy. Most studies treat SME growth, rural development, and financial literacy as separate issues, rather than exploring how they interact. This is a significant gap, because understanding these relationships could help policymakers design more effective interventions to boost economic growth and financial well-being in rural areas.

Financial Literacy, Rural Development, and Inclusive Growth

The benefits of financial literacy extend beyond individual households to the broader community (Glory et al., 2024). When more people understand how to manage money, the village can become more resilient to economic shocks. For example, increased savings and better access to credit can help families invest in education, health, and small businesses, creating a positive growth cycle.

However, achieving these benefits requires more than just the presence of SMEs or development programs. It also requires targeted efforts to improve financial education and access to financial services. Research by Rujitoningtyas et al. (2025)Small, and Medium Enterprises (MSMEs shows that financial literacy programs tailored to rural contexts can be effective, especially when they incorporate local knowledge and use accessible teaching methods. For example, training that focuses on practical skills, such as opening a bank account, applying for a loan, or saving for emergencies, can significantly impact participants' behavior.

At the same time, barriers remain. Many people in rural areas still lack access to formal financial institutions, and financial education programs are not always available or well-adapted to local needs. In some cases, distrust of banks or lack of awareness about financial services also limits participation. Overcoming these obstacles will require coordinated efforts from governments, NGOs, and the private sector.

Theoretical Framework and Hypothesis

The theory of Financial Literacy explains how individuals acquire the knowledge and skills necessary to make informed and effective financial decisions, which is central to understanding the financial behaviors of SME operators in rural areas. The theory of Rural Development emphasizes the importance of improving infrastructure, education, and economic opportunities in rural communities to promote overall well-being and economic growth. Together, these theories help explain how SMEs can influence financial literacy directly and through the broader process of rural development, providing a comprehensive framework for examining their interconnected roles in improving financial knowledge in rural Gandaki Province.

Small and Medium Enterprises (SMEs) are widely recognized as important contributors to local economic growth. They create jobs, raise household incomes, and improve access to basic services, particularly in rural areas (Edobor & Sambo-Magaji, 2025). In Nepal, especially in Gandaki Province, SMEs are closely tied to village life and economic activities. When these enterprises grow, they increase the demand for goods and services, provide employment, and support

improvements in health, education, and infrastructure (Hasan et al., 2024). This leads to the following hypothesis:

H_1: SME growth positively influences rural development.

Rural development also helps expand financial opportunities. When roads, schools, and banking services are improved, families are more likely to engage with formal financial institutions and gain practical knowledge about saving and credit (Guo et al., 2025). People living in developed rural areas typically have greater financial literacy and access to formal finance compared to those in underdeveloped regions. This relationship suggests the following hypothesis:

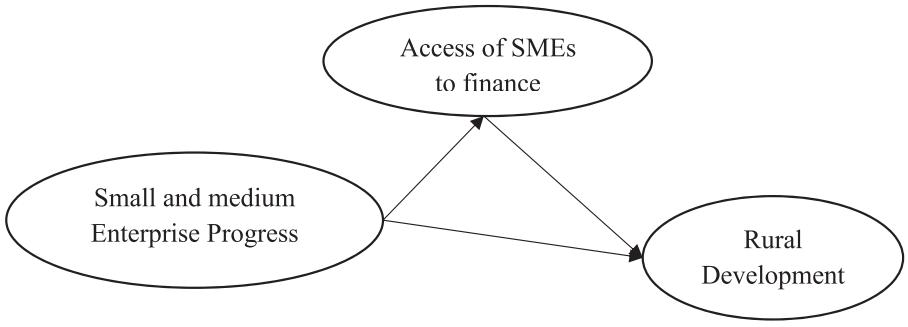
H_2: There is a positive relationship between rural development and access of SMEs to finance.

At the same time, SMEs themselves can directly promote financial access. Business owners and workers often interact with banking systems, keep records, and manage cash as part of their daily activities. These practices increase their financial skills and frequently influence household decision-making as well (Raby & Chowdhury, 2025). As such, SME activity is expected to contribute to economic participation. This leads to the third hypothesis:

H_3: Access to finance has a positive relationship with the growth of SME.

Singh et al. (2024)Small and Medium Enterprises (MSMEs suggest that rural development may act as a bridge between SME growth and access to finance. When SMEs contribute to community improvements such as better infrastructure, training opportunities, and banking services, they indirectly increase financial participation among local families (Lontchi et al., 2023). This implies that the impact of SMEs on access to finance may partly occur through the pathway of rural development. Accordingly, the final hypothesis is proposed as follows:

H_4: "Access of SMEs to finance" mediates the relationship between SME's progress and rural development.



Sources: Manzoor et al. (2021)

Methodology

This research is conducted in the Syangja district of Gandaki Province, Nepal. These sites were selected for their mix of rural and semi-urban characteristics and their significant involvement in SME operations. By examining these municipalities, the study aims to provide insights into the relationship between Small and Medium Enterprises (SMEs), rural development, and access to finance in a real-world setting representative of Nepal's hill region. To test quadratic effects, the relevant variables were mean-centered before squaring in order to reduce multicollinearity and improve model estimation. The data analysis employed structural equation modeling (SEM) using advanced software such as SPSS and SMART PLS to evaluate measurement reliability, validity, and test the hypothesized relationships between variables. In addition, confirmatory factor analysis was conducted to assess factor loadings and discriminant validity of constructs, ensuring robust statistical support for the model's findings

A structured questionnaire is used as the primary tool for data collection. The following steps outline the sampling process: Specifically, Syangja district rural area SMEs business were chosen for their active SME sectors and regional relevance.

In this study, we used a multi-stage sampling method. First, we chose wards and study locations on purpose because they had active SMEs in rural areas. After selecting these places, we randomly picked respondents from each ward to make sure the sample was fair. To be included in the study, respondents had to be SME owners, working in the selected wards, and operating their business for at least one year.

The questionnaire was initially designed in English and then translated into Nepali for clarity and ease of participation. It covers basic information about the business, the owner's financial knowledge and practices, and their perception of rural development in their community. Participation was voluntary, and all respondents provided informed consent. To protect privacy, no personal details that could identify individuals are included in the analysis or reporting.

Measurement of Variables

SME Progress: Assessed using five items adapted from Vijaya kumar's doctoral research, focusing on indicators such as annual growth, profitability, business evolution, profit margin, and risk management. An example item is: "I am satisfied with the business profit annually."

Access to Finance: Measured with an 11-item scale from Ikasari and Sumransat, which evaluates the affordability and availability of financial services for SMEs. An example item is, "The loan interest is affordable."

Rural Development: Evaluated using 10 items, adapted from Vijaya kumar, capturing economic improvements and quality-of-life changes associated with SME activities. For example, "The quality of my life improved due to this business."

Ethical Consideration

This study strictly adheres to ethical standards to protect the rights and welfare of all participants. Informed consent is obtained from each respondent before data collection, ensuring that participation is voluntary and based on a complete understanding of the research purpose. All personal information is to be kept confidential, and data is to be anonymized to prevent the identification of individuals or businesses. The research design and procedures comply with institutional ethical guidelines and national research ethics policies in Nepal. Furthermore, efforts are being made to respect cultural norms and local values throughout the study process, promoting integrity and transparency in all research activities.

Results

We used SPSS and SMART PLS software to analyze the data. The results showed that access to finance helps small and medium businesses (SMEs) grow and support rural development. The analysis also found that when SMEs can get financial support, they are better able to create jobs and improve the local economy. Both tools confirmed that finance is important in linking SMEs and rural progress.

Demographic characteristics

This study provides an overview of specific demographic characteristics associated with entrepreneur status and profiles, as demonstrated. Table 1 shows entrepreneurs' sex, age, qualification, time frame of business, and the region or location. The demographic profile 427 entrepreneurs reveals several important characteristics. The sample shows balanced gender participation with males comprising 53.86 percent and females 46.14 percent of respondents. Young entrepreneurs dominate the sector, with 38.17 percent under 29 years and 26.23 percent aged 30-39. Educational levels are relatively high, as 46.14 percent hold graduate degrees and 23.89 percent completed secondary education. Most SMEs 40.28 percent have been operating for 5-9 years, indicating a mature but not yet fully established business environment. Geographically, 24.12 percent of enterprises are concentrated in Waling Municipality. The majority operate as sole proprietorships, 72.37 percent, with nearly equal distribution between small, 49.18 percent, and medium-sized, 50.82 percent enterprises. Business types are diverse, with meat products at 18.50 percent, agriculture firms at 14.75 percent, and fancy/tailor/cosmetics at 14.52 percent being the most common sectors. This profile demonstrates a vibrant SME ecosystem characterized by youth engagement, educational achievement, and sectoral diversity.

The demographic table presents key information about small and medium enterprises (SMEs) operating in rural areas. It highlights the number of businesses, the age and gender of business owners, and the industries they belong to. The data also shows how many SMEs have access to finance and how this varies among different demographic groups. This information helps us understand the background of rural entrepreneurs and the challenges they face in securing financial

support. By analyzing these demographics, we can see how access to finance acts as a bridge, enabling more SMEs to grow and contribution.

Table 1

Demographic Characteristics

S. N.	Profile an Entrepreneur	Number	Percentage
1	Gander		
	Male	230	53.86
	Female	197	46.14
	Total	427	100
2	Age		
	Below – 29	163	38.17
	30 – 39	112	26.23
	40 - 49	67	15.69
	50 – 60	54	12.65
	Above 60	31	7.26
	Total	427	100
3	Qualification		
	Illiterate Level	23	5.39
	Primary Level	58	13.58
	Secondary Level	102	23.89
	Graduate Level	197	46.14
	Post Graduate Level	47	11.01
	Total	427	100
4	Length of Time Operated SMEs		
	01 - 04 Years	83	19.44
	05 - 09 Years	172	40.28
	10 - 14 Years	103	24.12
	15 - 19 Years	41	9.6
	More Than 20 Years	28	6.56
	Total	427	100
5	Region		

S. N.	Profile an Entrepreneur	Number	Percentage
	Biruwa RMCP	46	10.77
	Kaligandaki RMCP	62	14.52
	Waling MCP	103	24.12
	Galyang MCP	99	23.19
	Chapakot MCP	67	15.69
	Bhirkot MCP	50	11.71
	Total	427	100
6	Profile of Enterprise		
	Sole Proprietor	309	72.37
	Partnership	118	27.63
	Total	427	100
7	Nature of Business		
	Small	210	49.18
	Medium	217	50.82
	Total	427	100
8	Types of Enterprise		
	Mart (Daily Consumption Goods)	52	12.18
	Metal Industries	36	8.43
	Agriculture Firm	63	14.75
	Meat Product	79	18.5
	Wood and Wood Product	43	10.07
	Fancy, Tailor & Cosmetics Product	62	14.52
	Beauty Parlor	30	7.03
	Hardware & Construction	23	5.39
	Diary, Poultry and Fisheries	39	9.13
	Total	427	100

Table 2

Descriptive Statistics and Correlation

N=427	Mean	S.D	AVE	Correlation		
				1	2	3
AFS	3.9217	0.6578	0.709	1		
RD	3.9045	0.6725	0.674	.820**	1	
SMEP	3.0113	0.6253	0.800	.703**	.818**	1

Table 2 demonstrates the descriptive statistics, correlation among the variables, and average variance extracted (AVE). This table is also used to indicate the correlation between access to SME to finance (AFS) ($r = 0.820$, $p < 0.01$), rural development (RD) ($r = 0.703$, $p < 0.01$), and the small and medium enterprise progress (SMEP) to rural development ($r = 0.818$, $p < 0.01$). The table represents the mean and standard deviation of the study variables; the value of AVE satisfies the 0.5 minimum value of convergent validity (Yusoff et al., 2020). The discriminant validity is shown in the same table in the diagonal values.

Measurement Model

The measurement was tested to assess the relationship between the model developed based on our study variables, standardized factor loading, Cronbach's alpha, and composite reliability (CR), as described in Table 3. The alpha values of all variables are greater than the minimum acceptance criteria, 0.70 (Tüzün et al., 2005). Similarly, standardized factor loading values are also described in this table. Data meet the minimum threshold criteria, ranges are 0.72 to 0.90, Shrestha (2021) factor loadings greater than 0.5 are considered significant, hence the loadings provide a significant contribution for each construct. Also, the value of composite reliability is higher than the cutoff at 0.60.

Confirmatory factor analysis

The confirmatory factor analysis table 3 presents strong evidence for the reliability and validity of the measurement model across three key constructs in this study. The "Access to Finance for SMEs" construct includes 11 survey items with factor loadings ranging from 0.799 to 0.875, demonstrating that all items strongly represent this underlying concept. The "Rural Development" construct contains 10 items with factor loadings between 0.726 and 0.874, while the "Small and Medium Enterprises" construct has five items with the highest factor loadings, ranging from 0.880 to 0.906. All factor loadings exceed the minimum threshold of 0.50 and surpass the preferred threshold of 0.70, indicating excellent item performance (Ramezani & Mostafavi, 2025.

Table 3

Factor Loading of Indicators, VIF, and Reliability.

Factors	No	Items	CA	FL	VIF	CR
Access to Finance for SMES	11	AFS1	0.959	0.844	3.075	0.964
		AFS10		0.828	3.342	
		AFS11		0.799	3.065	
		AFS2		0.855	3.874	
		AFS3		0.856	3.678	
		AFS4		0.823	2.961	
		AFS5		0.867	3.979	
		AFS6		0.851	3.599	
		AFS7		0.875	4.575	
		AFS8		0.827	3.184	
		AFS9		0.832	3.645	
Rural Development	10	RD1	0.946	0.726	3.008	0.954
		RD10		0.863	4.860	
		RD2		0.735	3.096	
		RD3		0.751	3.280	
		RD4		0.839	4.127	
		RD5		0.850	4.343	
		RD6		0.851	3.995	
		RD7		0.858	4.658	
		RD8		0.842	4.566	
		RD9		0.874	4.97	
Small and Medium Enterprises	5	SME1	0.937	0.906	3.591	0.952
		SME2		0.885	3.087	
		SME3		0.904	3.569	
		SME4		0.897	3.326	
		SME5		0.880	2.945	

Bagozzi et al. (1991) defined discriminant validity as how distinct measures are. If two or more concepts are unique, their valid measures should not correlate too much. Indicator loadings should be greater than cross-loadings (Marcoulides, 2013). Multicollinearity is not a problem if VIF is below 5 (Jr. et al., 2017). Since VIF is below 5, there is no multicollinearity. The issue validity of the higher-order construct is both reliable and valid. The reliability and validity of higher-order constructs have been established. All other constructs demonstrate acceptable reliability (> 0.70) and convergent validity (> 0.50). The F&L higher-order discriminant validity requirement has been met. The square root of the AVE shown in bold exceeds its correlation with other model constructs (Fornell & Larcker, 1981).

Table 4

Fornell Larcker

	AFS	RD	SME
AFS	0.842		
RD	0.828	0.821	
SME	0.633	0.576	0.894

Table 5

HTMT Ratio

	AFS	RD	SME
AFS			
RD	0.843		
SME	0.665	0.591	

The Fornell-Larcker criterion falls within the threshold 0.90, and the square root of the AVE is greater than the model's correlation (Fornell & Larcker, 1981). HTMT is a recent method for testing discriminant validity in PLS-SEM. HTMT estimates construct correlation. Karami (2018) recommended 0.85 all paired HTMT ratios are smaller than 0.85. The studied model demonstrates discriminant validity. HTMT for discriminant validity confirms this. All paired HTMT ratios below 0.85 are smaller than 0.85. The analyzed model demonstrates discriminant validity for higher-order constructs.

Table 6

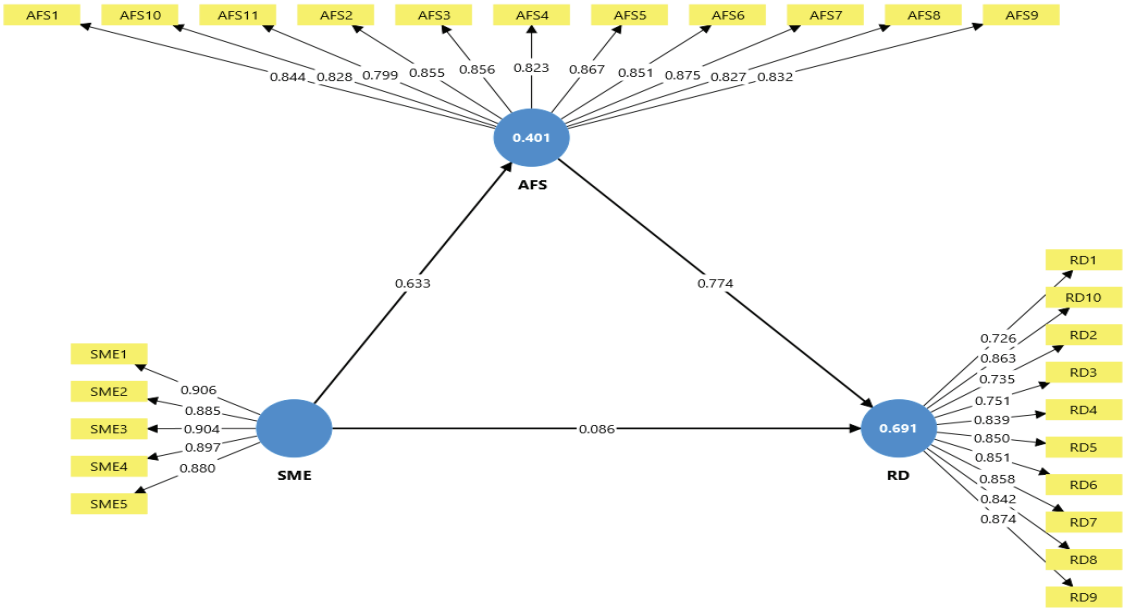
Model Fit

	Saturated model	Estimated model
SRMR	0.076	0.076
NFI	0.801	0.801

The Model Fit Test allows the researchers to judge how well the model fits the observed data or how much difference is considerable (Scherer et al., 2019) "title-short":"The technology acceptance model (TAM. The study often evaluates the model fit using the standardized root mean square (SRMR). The value of SRMR should be smaller than 0.085 or 0.12 (Shi et al., 2018). This model has an SRMR value of 0.076, which is less than 0.08; it can be said that the model fits. Most importantly, the NFI value was 0.801, close to 1 and well above the standard threshold of 0.80, suggesting that the model adequately explains the observed data (Hulland, 1999).

Figure 2

Path Analysis



The structural model presented in Figure 2 demonstrates the relationships among three core constructs: Small and Medium Enterprises (SME), Access to Financial Services (AFS), and Rural Development (RD). Each latent variable is measured by multiple observed indicators, all of which have strong factor loadings ranging from 0.799 to 0.906 for AFS and SME, and 0.726 to 0.874 for RD, indicating robust measurement reliability and validity. The model reveals that SME has a substantial positive effect on the AFS path coefficient = 0.633 and a small direct positive impact RD (0.086). AFS, in turn, has a significant positive impact on RD (0.774). The explained variance is notable, with the model accounting for 40.1 percent of the variance in AFS and 69.1 percent in RD, as indicated by the R^2 values within the diagram. These findings suggest that the influence of SMEs on rural development operates both directly, though weakly, and indirectly, primarily through improvements in access to financial services. The results provide empirical support for the hypothesized mediating role of financial services in linking SME activity to overall rural development, aligning with the study's conceptual framework.

Table 7

Coefficient of Determination (R^2)

Indicator	Original sample (O)
AFS	0.401
RD	0.691

Table 7 shows that the model explains 40.1 percent of the variance in Access to Financial Services (AFS) and 69.1 percent in Rural Development (RD). According to standard interpretation guidelines for PLS-SEM, an R^2 value of around 0.25 is considered weak, 0.50 moderate, and 0.75 substantial. Based on these thresholds, the R^2 for AFS indicates a moderate level of explanatory power, while the R^2 for RD demonstrates a significant explanatory power (Yusif et al., 2020). These findings suggest that the predictor variables included in the model account for a meaningful proportion of the variation in both constructs, with extreme explanatory power for rural development. This supports the study's theoretical model and provides empirical evidence that SME-related factors and access to financial services are important drivers of rural development outcomes.

Table 8

Effect Size (f^2)

Indicator	Original sample (O)
AFS > RD	1.159
SME > AFS	0.668
SME > RD	0.014

Table 8 indicates that Access to Financial Services (AFS) significantly affects Rural Development (RD), with an f^2 value of 1.159, showing that improvements in financial services strongly drive rural development outcomes. The effect of Small and Medium Enterprises (SME) on AFS is also large $f^2 = 0.668$, suggesting that SME activities substantially enhance access to financial services or access to finance in the study area. In contrast, the direct effect of SME on RD is negligible $f^2 = 0.014$, implying that SMEs contribute to rural development mainly through the indirect pathway via AFS, rather than directly. Based on Cohen's (1988) guidelines, 0.02 small, 0.15 medium, and 0.35 large confirm the hypothesized mediating role of access to financial services between SME activity and rural development.

Table 9

Hypothesis

Relation	B	S.D	T-Value	P values	2.50%	97.50%	Decision
SME > RD	0.086	0.036	2.435	0.015	0.017	0.156	Accepted
AFS > RD	0.774	0.028	27.892	0.001	0.718	0.826	Accepted
SME > AFS	0.633	0.031	20.384	0.001	0.568	0.690	Accepted

The analysis shows that Small and Medium Enterprises (SMEs) have a positive and statistically significant direct effect on Rural Development (RD) ($\beta = 0.086$, $p = 0.015$). While the effect size is small, the confidence interval 0.017–0.156 confirms its reliability, suggesting that SME activity contributes modestly to improvements in infrastructure, jobs, and services in rural areas.

The relationship between AFS and RD is powerful ($\beta = 0.774$, $p < 0.001$), with a narrow confidence interval of 0.718–0.826, showing that improved access to financial services significantly enhances rural development outcomes, including better quality of life and economic opportunities. A strong positive relationship exists between SME activity and Access to Financial Services (AFS) ($\beta = 0.633$, $p < 0.001$), with the confidence interval 0.568–0.690 indicating a robust effect. This means active SMEs are key in increasing the use and availability of banking, credit, and savings facilities within local markets.

Overall, all three hypotheses were supported, confirming that SMEs directly and indirectly promote rural development, with the indirect pathway through access to financial services being far more influential. These results have important implications: in practice, policies that strengthen SME growth alongside financial inclusion programs may yield the most significant development gains, while, in academic terms, the findings reinforce the theoretical model highlighting the mediating role of financial services.

Table 10

Mediation Effect

Relation	β	S.D	T-value	P-value	2.50%	97.50%	Decision
ASF > SME > RD	0.49	0.032	15.308	0.001	0.428	0.553	Accepted

The mediation analysis shows that the indirect effect of access (AFS) of finance on Rural Development (RD) through Access to SMEs activity is both positive and highly significant ($\beta = 0.490$, $t = 15.308$, $p < 0.001$). The 95 percent confidence interval, 0.428 to 0.553, does not include zero, confirming the robustness of this effect. This indicates that a substantial portion of the total influence of SMEs on rural development operates through improvements in financial service access rather than direct effects alone. In practical terms, SME growth leads to increased use and availability of financial services, which strongly promote economic opportunities, infrastructure development, and overall community well-being. From an academic perspective, these findings provide strong empirical support for the hypothesized mediating role of financial access in the SME rural development relationship, aligning with inclusive growth and financial inclusion theories.

Robustness Check

Table 10

Quadratic Test

Indicator	P values	Decision
QE (AFS) > RD	0.578	Insignificant
QE (SME) > AFS	0.264	Insignificant
QE (SME) > RD	0.604	Insignificant

Table 10 presents the results of the quadratic effects (QE) test conducted to check for potential non-linear relationships among the study variables. All quadratic paths tested were found to be statistically insignificant. Specifically, the quadratic effect of Access to Financial Services (AFS) on Rural Development (RD) had a p-value of 0.578, the quadratic effect of Small and Medium Enterprises (SME) on AFS had a p-value of 0.264, and the quadratic effect of SME on RD had a p-value of 0.604. Since none of these p-values fall below the standard 0.05 significance threshold, the results suggest that non-linear curvilinear relationships are absent in the model. This finding supports the robustness of the original linear model specified in the study. It indicates that the effects of SMEs and financial access on rural development are best explained using a linear relationship.

Discussion

This study investigated the influence of Small and Medium Enterprises (SMEs) on access to finance and rural development, focusing on the mediating role of access to financial services in rural areas. Using comprehensive data collected from entrepreneurs in Gandaki Province, Nepal, the results provide valuable insights into how SMEs contribute to rural economic progress and financial knowledge.

The findings demonstrate a significant positive direct relationship between SME growth and rural development, although the effect size is relatively modest. This suggests that while SMEs drive improvements in employment, income generation, and infrastructure, their direct impact on rural development is only one part of a broader mechanism. These results are consistent with prior research emphasizing SMEs as engines of local economic growth and poverty alleviation in rural settings (Straka et al., 2015; Tambunan, 2008). However, the relatively small direct effect size indicates that additional factors influence how SME growth translates into wider community benefits.

Notably, the study reveals a strong positive relationship between SMEs and access to financial services, which has a massive effect on rural development outcomes. The significant mediating role of access to financial services highlights that SMEs influence rural development primarily through enhancing financial inclusion, enabling entrepreneurs and households to access credit, savings, and other monetary tools critical for expanding businesses and improving livelihoods. This finding aligns with financial inclusion theories and empirical work showing that improved access to finance and services is essential for stimulating sustainable rural development (Ikasari & Sumransat, 2016; Deakins et al., 2010).

The mediation analysis confirms that access to financial services partially mediates the SMEs' rural development linkage, underscoring the importance of integrated policy interventions. Supporting SME growth while expanding financial infrastructure can create synergistic effects that accelerate rural economic advancement and improve community well-being. This interplay between entrepreneurship and financial access presents a promising route for inclusive development in resource-limited rural areas, consistent with findings from other developing country contexts (Manzoor et al., 2019; Quartey et al., 2017).

The study also contributes to the academic literature by empirically testing the mediating role of financial inclusion within the SME-development nexus in a rural South Asian setting, where research remains sparse. By demonstrating that access to finance and service access significantly enhance the developmental impact of SMEs, the findings provide a novel perspective that extends beyond the conventional focus on direct economic contributions.

Despite the robust methodology and significant findings, several limitations should be acknowledged. The study's cross-sectional nature limits causal inference; future longitudinal research would more definitively establish the directionality of these relationships. Moreover, the study was conducted in a specific region of Nepal, which may limit the generalizability of findings to other rural contexts with different socio-economic characteristics. Qualitative research could further unpack how SMEs influence access to finance and development. Finally, additional mediators and moderators such as education, government support, or technological access could be explored in subsequent studies to provide a more comprehensive model of rural development dynamics.

From a practical standpoint, the results emphasize the need for policymaking that simultaneously facilitates SME operations and improves rural access to formal financial services. Governments, financial institutions, and development agencies should collaborate to reduce barriers to credit access, financial education, and infrastructure, empowering rural entrepreneurs and strengthening the economic fabric of rural communities.

In conclusion, this study underscores that SMEs play a vital role in rural development, primarily by improving access to financial services that enhance access to finance and economic opportunities. These findings advocate for integrated approaches that couple SME support with financial inclusion initiatives, paving the way for more sustainable and inclusive rural development trajectories.

Implications

The results of the current research are practical and theoretical in nature. In actual sense, the findings depict that Small and Medium Enterprises (SMEs) are more effective in rural development when the access to financial services is enhanced. This suggests that policymakers and development agencies

should adopt integrated strategies promoting SME growth alongside programs that expand credit availability, banking facilities, and access to finance in rural areas. Such combined interventions can amplify job creation, enhance local income, and improve living standards. Theoretically, this research adds to the limited body of literature examining the mediating role of financial access in the SME rural development relationship, offering empirical evidence from a South Asian context. It supports inclusive growth and financial inclusion theories, demonstrating that the indirect effects of SMEs via financial access are often more substantial than direct effects.

Limitations

The research was conducted in a single province of Nepal, which may limit the generalizability of the findings to other regions with different economic, cultural, or policy environments. Second, using cross-sectional survey data restricts the ability to establish definitive cause-and-effect relationships between variables. Third, the study focused on a limited set of predictors and a single mediator, meaning other important factors such as education, infrastructure development, technological adoption, or policy support were not included. These limitations should be considered when interpreting the results and applying them to different rural contexts.

Future Directions

Future research could address these limitations by conducting longitudinal studies to explore how SME activity, financial access, and rural development interact over time. Expanding the study to multiple provinces or countries would allow for comparative analysis and improve the external validity of the findings. Additionally, researchers could incorporate multiple mediators and moderators, such as government support measures, digital finance adoption, or entrepreneurial skills, to create a more comprehensive understanding of the mechanisms linking SMEs and rural prosperity. Combining quantitative and qualitative approaches could also provide deeper insights into how community-specific factors shape the SME finance development nexus.

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