



Financial Inclusion, Risk Management Practices, and SME Performance: A Mixed Methods Study of Mediation Effects in Emerging Economies

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Abstrak

Penelitian ini bertujuan untuk menganalisis hubungan antara inklusi keuangan, praktik manajemen risiko, dan kinerja keuangan UKM dengan menggunakan pendekatan mixed methods tipe explanatory sequential. Data kuantitatif dikumpulkan dari 140 pelaku UKM di Makassar dan Balikpapan serta dianalisis menggunakan Partial Least Squares Structural Equation Modelling (PLS-SEM), kemudian dilanjutkan dengan wawancara kualitatif untuk memperdalam hasil penelitian. Hasil penelitian menunjukkan bahwa inklusi keuangan tidak berpengaruh langsung terhadap kinerja keuangan UKM. Namun, inklusi keuangan berpengaruh positif dan signifikan terhadap praktik manajemen risiko, yang selanjutnya berpengaruh signifikan terhadap kinerja keuangan. Selain itu, praktik manajemen risiko terbukti memediasi secara penuh hubungan antara inklusi keuangan dan kinerja UKM. Temuan kualitatif mendukung hasil tersebut dengan menunjukkan bahwa akses terhadap layanan keuangan saja tidak cukup untuk meningkatkan kinerja tanpa didukung kemampuan dalam mengelola risiko. Penelitian ini berkontribusi dengan mengintegrasikan Resource-Based View dan Dynamic Capability Theory, serta menegaskan pentingnya kapabilitas internal dalam memanfaatkan sumber daya eksternal. Secara praktis, hasil penelitian ini menyarankan perlunya integrasi program inklusi keuangan dengan penguatan kapasitas manajemen risiko bagi UKM.

Kata kunci: Inklusi Keuangan; Manajemen Risiko; Kinerja UMKM; Mixed Methods; Ekonomi Berkembang.

Abstract

This study examines the relationship between financial inclusion, risk management practices, and SME financial performance using an explanatory sequential mixed methods approach. Quantitative data were collected from 140 SME owners in Makassar and Balikpapan and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), followed by qualitative interviews to provide deeper insights into the findings. The results reveal that financial inclusion does not have a significant direct effect on SME financial performance. However, it has a strong positive effect on risk management practices, which in turn significantly improve financial performance. Furthermore, risk management practices fully mediate the relationship between financial inclusion and SME performance. Qualitative findings support these results, indicating that access to financial services alone is insufficient to enhance performance without adequate managerial capabilities in managing financial risks. The study contributes to the literature by integrating the Resource-Based View and Dynamic Capability Theory, highlighting the importance of internal capabilities in leveraging external financial resources. Practically, the findings suggest that policymakers should complement financial inclusion initiatives with capacity-building programmes in risk management to achieve sustainable SME performance.

Keywords: Financial Inclusion, Risk Management Practices, SME Performance, Mixed Methods, Emerging Economies.

INTRODUCTION

Small and Medium-sized Enterprises (SMEs) play a pivotal role in driving economic growth, employment generation, and poverty reduction, particularly in emerging economies. In many developing countries, SMEs contribute more than 90% of total businesses and account for a significant share of employment ([Halik et al., 2026](#); [HALIK et al., 2023](#)). Despite their strategic importance, SMEs continue to face substantial financial constraints, which limit their ability to grow and sustain their operations ([Tandigau et al., 2024](#)). One of the key policy responses to address this issue has been the promotion of financial inclusion, defined as the accessibility and usage of formal financial services such as banking, credit, insurance, and digital financial platforms ([Hilmawati & Kusumaningtias, 2021](#); [Indrayani & Nurlia, 2024](#)).

Over the past decade, financial inclusion has been widely acknowledged as a critical enabler of SME performance ([Irdawati & Nurlia, 2025](#)). Empirical studies suggest that access to financial services enhances firms' investment capacity, liquidity management, and overall financial stability ([Okello Candiya Bongomin et al., 2017](#); [Susiati et al., 2024](#)). However, emerging evidence indicates that financial inclusion does not always translate into improved financial performance. In some cases, increased access to finance may expose SMEs to higher financial risks, such as over-indebtedness, poor cash flow management, and vulnerability to market fluctuations ([BECK et al., 2005](#); [Zetzsche et al., 2020](#)).

This inconsistency highlights the need to explore the underlying mechanisms through which financial inclusion influences SME performance. One potential explanatory factor is risk management practices, which refer to the processes by which firms identify, assess, and mitigate financial and operational risks. Recent studies emphasise that SMEs often lack structured risk management capabilities, making them more susceptible to financial shocks despite having access to financial resources ([Ferreira de Araújo Lima et al., 2020](#); [Verbano & Venturini, 2013](#)). In this context, risk management may serve as a critical mediating variable that determines whether financial inclusion leads to positive or negative outcomes.

Furthermore, the existing literature has largely relied on quantitative approaches, focusing on direct relationships between financial inclusion

and firm performance, while overlooking the contextual and behavioural dimensions of SME decision-making. This creates a significant research gap, as the effectiveness of financial inclusion may depend on how SME owners perceive and implement risk management strategies in practice. Therefore, integrating quantitative and qualitative approaches through a mixed methods design can provide a more comprehensive understanding of this phenomenon.

Empirical Phenomena and Research Context

To further illustrate the urgency of this issue, the following table presents selected empirical findings related to financial inclusion, risk exposure, and SME performance in emerging economies:

Table 1. Empirical Evidence on Financial Inclusion, Risk Exposure, and SME Performance

Aspect	Empirical Evidence	Implication
Financial Inclusion Growth	Over 76% of adults globally have access to financial accounts (Demirgüç-Kunt et al., 2022)	Access does not guarantee effective utilisation
SME Financing Gap	SMEs face a global financing gap of USD 5.2 trillion (International Finance Corporation (IFC), 2017)	High dependency on external finance
Risk Exposure	Increased credit access may lead to higher default risk without proper management (Giné & Karlan, 2014 ; Stiglitz & Weiss, 1981)	Financial inclusion may increase vulnerability
Risk Management Practices	SMEs tend to apply informal and reactive risk management (Ferreira de Araújo Lima et al., 2020)	Lack of structured capability
Performance Variability	Mixed findings on financial inclusion–performance relationship (Okello Candiya Bongomin et al., 2017)	Indicates mediating mechanism needed

Source: Compiled from recent literature (2026)

The urgency of this research lies in addressing the paradox that financial inclusion,

while intended to empower SMEs, may simultaneously expose them to greater financial risks in the absence of adequate risk management practices. In emerging economies, where institutional support and financial literacy levels are often limited, understanding the mechanisms through which financial inclusion translates into performance outcomes becomes critically important. This study is therefore essential to provide both theoretical and practical insights into how SMEs can effectively leverage financial access while mitigating associated risks, ultimately contributing to more sustainable economic development.

This study aims to fill three key gaps in the literature. First, it moves beyond the direct relationship between financial inclusion and SME performance by introducing risk management practices as a mediating variable. Second, it adopts a mixed methods approach to capture both statistical relationships and contextual insights, thereby enhancing the robustness of the findings. Third, it focuses on SMEs in emerging economies, where the interplay between financial access and risk management is particularly complex and underexplored.

Research Question

Based on the research background and identified gaps, this study formulates two sets of research questions corresponding to the explanatory sequential mixed methods design.

The quantitative phase aims to examine the structural relationships among financial inclusion, risk management practices, and SME financial performance:

1. To what extent does financial inclusion influence SME financial performance?
2. How does financial inclusion affect risk management practices among SMEs?
3. What is the impact of risk management practices on SME financial performance?
4. Does risk management mediate the relationship between financial inclusion and SME performance?

The qualitative phase is designed to explain and enrich the quantitative findings by exploring the lived experiences and managerial practices of SME owners:

5. How do SME owners perceive and utilise financial inclusion in managing their business operations?

6. How are risk management practices implemented by SMEs in the context of increased financial access?
7. What challenges do SMEs face in managing financial risks after gaining access to formal financial services?
8. Why does financial inclusion not always lead to improved financial performance among SMEs?

To ensure coherence between both phases, the study also addresses the following integrative question:

9. How do qualitative insights explain and contextualise the quantitative relationships between financial inclusion, risk management practices, and SME financial performance?

LITERATURE REVIEW

Grand Theoretical Foundation: Resource-Based View (RBV) and Dynamic Capability Theory

This study is grounded in the *Resource-Based View (RBV)* and *Dynamic Capability Theory*, which provide a strong theoretical foundation for explaining how firms utilise internal and external resources to achieve superior performance.

The Resource-Based View posits that firm performance is determined by the effective utilisation of valuable, rare, inimitable, and non-substitutable resources (Teece, 2018). In the context of SMEs, financial inclusion can be considered an external resource that provides access to financial capital, while risk management practices represent an internal capability that enables firms to manage uncertainties effectively. Prior studies have demonstrated that financial resources alone are insufficient to enhance performance unless they are supported by managerial capabilities (Barney, 1991; Helfat & Martin, 2015).

Complementing RBV, Dynamic Capability Theory emphasises the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece, 2018). Risk management practices can thus be conceptualised as a dynamic capability that allows SMEs to adapt to financial uncertainties and market volatility. Recent literature highlights that SMEs lacking structured risk management capabilities are more vulnerable

to financial distress despite having access to financial resources ([Ferreira de Araújo Lima et al., 2020](#); [Yakob et al., 2019](#)).

Financial Inclusion

Financial inclusion refers to the accessibility, availability, and usage of formal financial services by individuals and businesses, including banking, credit, insurance, and digital financial platforms ([Su et al., 2025](#); [Susiati et al., 2024](#)). It is widely recognised as a key driver of economic development and business growth.

Recent studies indicate that financial inclusion enhances SMEs' ability to invest, manage liquidity, and expand operations ([Tandigau et al., 2024](#)). Furthermore, the rapid development of financial technology (fintech) has significantly expanded financial access, particularly in emerging economies, by lowering transaction costs and increasing service accessibility ([Daud et al., 2023](#)).

However, the literature also reveals mixed findings. While financial inclusion generally improves SME performance, its impact is not always positive due to issues such as over-indebtedness and inefficient financial management ([Demirgüç-Kunt et al., 2022](#); [Klapper et al., 2020](#)). This suggests that financial inclusion alone may not guarantee improved financial outcomes.

Risk Management Practices

Risk management practices refer to the systematic processes through which firms identify, assess, and mitigate potential risks that may affect their operations and financial stability ([Gunawan, 2024](#)). In SMEs, risk management is often informal and reactive rather than strategic and structured ([Yakob et al., 2019](#)).

Recent research emphasises that SMEs face various financial risks, including liquidity risk, credit risk, and market uncertainty, which can significantly affect their sustainability ([Aoun, 2024](#)). Moreover, studies indicate that effective risk management practices can enhance firm resilience and improve financial performance by reducing uncertainty and improving decision-making ([Ferreira de Araújo Lima et al., 2020](#)).

Despite its importance, many SMEs lack the knowledge and capability to implement formal risk management systems, particularly in emerging economies. This limitation creates a gap between financial access and actual performance outcomes.

SME Financial Performance

SME financial performance refers to the firm's ability to generate profits, sustain growth, and maintain financial stability. Common indicators include profitability, revenue growth, and financial resilience ([Mongan et al., 2025](#)).

Empirical studies show that SME performance is influenced by multiple factors, including financial access, financial literacy, innovation, and strategic management capabilities ([Halik & Halik, 2024](#); [Mongan et al., 2025](#); [Tandigau et al., 2024](#)). Additionally, financial inclusion has been found to positively influence SME performance, although the strength and direction of this relationship vary depending on contextual factors ([Pabane et al., 2025](#); [Pammai et al., 2025](#)).

Conceptual Relationship and Hypotheses Development

Financial Inclusion and SME Performance. Financial inclusion provides SMEs with access to capital, enabling them to invest in productive activities, improve cash flow, and expand their business operations. Empirical evidence suggests a positive relationship between financial inclusion and SME performance ([Golda et al., 2024](#); [Mongan et al., 2025](#); [Pabane et al., 2025](#)).

H1: Financial inclusion has a positive effect on SME financial performance.

Financial Inclusion and Risk Management Practices. Access to financial services may encourage SMEs to adopt more structured financial management and risk mitigation strategies. Financial inclusion can enhance financial awareness and enable firms to better manage risks associated with borrowing and investment ([Demirgüç-Kunt et al., 2022](#); [Okello Candiya Bongomin et al., 2017](#)).

H2: Financial inclusion has a positive effect on risk management practices.

Risk Management Practices and SME Performance. Effective risk management reduces uncertainty and enhances decision-making, thereby improving financial outcomes. SMEs with strong risk management capabilities are more resilient and better positioned to achieve sustainable performance ([Aoun, 2024](#); [Yakob et al., 2019](#)).

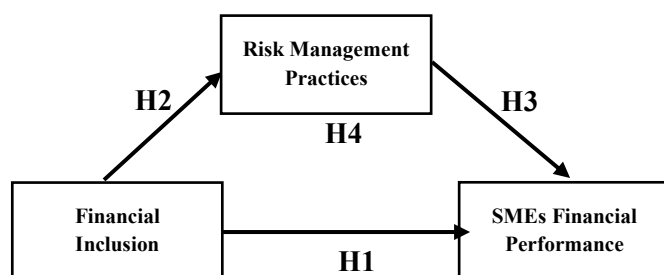
H3: Risk management practices have a positive effect on SME financial performance.

Mediating Role of Risk Management Practices. While financial inclusion provides access to financial resources, its impact on performance depends on how effectively these resources are managed. Risk management practices serve as a mechanism through which financial inclusion translates into improved performance.

Previous studies have highlighted the importance of mediating variables such as social capital and risk attitude in explaining SME performance ([Kraus et al., 2020](#); [Okello Candiya Bongomin et al., 2017](#)).

H4: Risk management practices mediate the relationship between financial inclusion and SME financial performance.

Based on the developed hypotheses, this study proposes a conceptual framework, as illustrated in **Figure 1**.



Source: Author's thought (2026)

Figure 1. Research Conceptual Framework

Conceptual Perspective for Qualitative Phase

In addition to the quantitative framework, this study adopts a contextual and behavioural perspective to understand how SME owners interpret and implement financial inclusion and risk management practices.

The qualitative phase is guided by the assumption that:

- SME decision-making is influenced by experience, perception, and contextual constraints
- Financial inclusion may be perceived differently across business actors
- Risk management practices are often informal and shaped by real-world challenges

This perspective allows the study to capture deeper insights into:

- how SMEs translate financial access into strategic actions
- why financial inclusion does not always lead to improved performance

RESEARCH METHODOLOGY

Research Design

This study employs an explanatory sequential mixed methods design, in which quantitative data are collected and analysed in the first phase, followed by qualitative data to explain and elaborate on the quantitative findings. This design is particularly appropriate for studies aiming to examine causal relationships while also capturing contextual and behavioural insights (Creswell & Poth, 2018; [Tashakkori & Teddlie, 2010](#)).

The quantitative phase focuses on testing the hypothesised relationships among financial inclusion, risk management practices, and SME financial performance using a structural equation modelling approach. The qualitative phase subsequently explores how SME owners interpret financial inclusion and implement risk management practices in real business contexts, thereby providing deeper explanations for the statistical results.

Research Location and Time

This study is conducted across two major islands in Indonesia, namely Kalimantan and Sulawesi, with specific research locations in Balikpapan City and Makassar City. These cities were purposively selected due to their strategic roles as regional economic hubs with a high concentration of SMEs and active financial inclusion initiatives. In addition, both cities represent diverse economic characteristics and levels of financial accessibility, making them suitable contexts for examining the relationship between financial inclusion, risk management practices, and SME performance in emerging economies.

The data collection process was carried out over a period of three months, from January to March 2026. The quantitative phase was conducted during the initial stage, followed by the qualitative phase after preliminary analysis of the survey data had been completed.

Population, Sample, and Sampling Technique

The population of this study consists of Small and Medium-sized Enterprises (SMEs) operating in the selected research areas. SMEs are defined based on national criteria, including business size, asset ownership, and annual turnover.

The quantitative phase of this study involved 140 SME respondents, consisting of business owners or managers who have experience in accessing formal financial services.

The sample size of 140 respondents is considered adequate and appropriate for this study based on several methodological considerations.

First, according to Partial Least Squares Structural Equation Modelling (PLS-SEM) guidelines, the minimum sample size should follow the “10-times rule”, which suggests that the sample size must be at least ten times the maximum number of structural paths directed at a particular construct ([Hair et al., 2021](#)). In this study, the maximum number of arrows pointing to an endogenous construct (SME financial performance) is two, indicating a minimum sample requirement of 20 respondents. Therefore, the sample size of 140 significantly exceeds this minimum threshold ([Memon et al., 2025](#)).

Second, recent methodological literature recommends that PLS-SEM studies achieve a sample size of at least 100–150 observations to ensure statistical power and stability of parameter estimates ([Hair et al., 2021](#)). Hence, the use of 140 respondents falls within the acceptable and recommended range for robust analysis.

Third, considering the mixed methods design, the sample size is also sufficient to allow for the selection of a subset of respondents for the qualitative phase. From the 140 respondents, a smaller group of informants (14 respondents) can be purposively selected to represent diverse characteristics, thereby enhancing the depth and explanatory power of the study.

Overall, the selected sample size ensures both statistical adequacy for quantitative analysis and flexibility for qualitative exploration, making it suitable for the explanatory sequential mixed methods design employed in this study.

For the qualitative phase, a subset of 14 informants is selected from the survey respondents using purposeful sampling, based on their responses in the quantitative phase (e.g., high vs low performance, high vs low financial inclusion). This approach allows for a more in-depth exploration of contrasting cases.

The study employs a purposive sampling technique, whereby respondents are selected based on specific criteria, including:

- SMEs that have accessed formal financial services
- Business owners or managers actively involved in financial decision-making
- SMEs operating for at least two years

This technique ensures that respondents possess relevant experience and knowledge related to the research variables.

Data Collection Methods

In line with the explanatory sequential mixed methods design, this study employs both quantitative and qualitative data collection techniques to obtain a comprehensive understanding of the research problem.

The quantitative data were collected through a structured questionnaire administered to SME owners or managers who met the predefined sampling criteria. The questionnaire was designed using a five-point Likert scale, ranging from strongly disagree to strongly agree, in order to capture respondents’ perceptions of financial inclusion, risk management practices, and SME financial performance. To ensure the validity and reliability of the instrument, the measurement items were adapted from established studies in the existing literature and refined to suit the context of SMEs in emerging economies.

Following the quantitative phase, qualitative data were gathered through semi-structured interviews with selected participants. This approach provided flexibility for respondents to elaborate on their experiences while still maintaining alignment with the research objectives ([Miles et al., 2021](#)). The interviews explored several key themes, including the utilisation of financial services, the implementation of risk management practices, the challenges encountered in managing financial risks, and the participants’ perceptions of their business performance. All interviews were conducted with prior consent, recorded, and subsequently transcribed for systematic analysis.

Data Analysis Techniques

In accordance with the explanatory sequential mixed methods design, the data analysis in this study is conducted in three interconnected stages, encompassing quantitative analysis, qualitative analysis, and the integration of findings.

The quantitative data are analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with the assistance of Smart-PLS software. This approach is particularly suitable for analysing complex research models involving mediating relationships and does not require strict assumptions of data normality ([Hair et al., 2021](#)). The analysis is carried out in two main stages. The first stage involves the evaluation of the measurement model to ensure the validity and reliability of the constructs. This includes assessing convergent validity through outer loadings and Average Variance Extracted (AVE), discriminant validity using the Heterotrait–Monotrait (HTMT) criterion, and internal consistency reliability through Cronbach’s alpha and composite reliability ([Hair et al., 2019](#); [Henseler et al., 2015](#)). The second stage focuses on the evaluation of the structural model, which examines the hypothesised relationships among variables. This includes analysing path coefficients, the coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2) ([Hair et al., 2019](#)). Furthermore, the mediating effect of risk management practices is assessed using the bootstrapping procedure, which provides more robust and reliable estimates compared to conventional methods ([Hair et al., 2021](#)).

Following the quantitative analysis, the qualitative data are examined using thematic analysis, as proposed by [Braun and Clarke \(2019\)](#). This method allows for a systematic and flexible exploration of participants’ experiences and perspectives. The analysis begins with data familiarisation, in which interview transcripts are carefully reviewed to gain an initial understanding of the content. This is followed by the generation of initial codes, which are then organised into potential themes. These themes are subsequently reviewed and refined to ensure coherence and relevance to the research objectives. The final stage involves the interpretation of themes to generate meaningful insights into SME behaviour, particularly in relation to financial inclusion and risk management practices.

The final stage of analysis involves the integration of quantitative and qualitative findings. This integration is conducted at the interpretation stage, where qualitative insights are used to explain and contextualise the statistical results obtained from the quantitative phase. By combining both forms of evidence, the study not only identifies significant relationships among

variables but also provides a deeper understanding of the mechanisms underlying these relationships. This integrative approach enhances the overall validity and richness of the research findings, particularly within the context of SMEs in emerging economies.

Ethical Considerations

This study ensures that all participants provide informed consent prior to data collection. Confidentiality and anonymity are maintained throughout the research process, and all data are used solely for academic purposes.

Measurement of Variables

The variables employed in this study are operationalised as latent constructs, each measured using multiple reflective indicators adapted from prior validated studies. This approach ensures that the constructs are both theoretically grounded and empirically reliable. All measurement items are assessed using a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), allowing respondents to express their perceptions regarding financial inclusion, risk management practices, and SME financial performance.

Financial inclusion is conceptualised as the degree to which SMEs have access to and actively utilise formal financial services, including banking, credit, and digital financial platforms. The measurement of this construct is adapted from studies that emphasise both access and usage dimensions of financial services ([Demirgüç-Kunt et al., 2022](#); [Okello Candiya Bongomin et al., 2017](#)).

Risk management practices are defined as the extent to which SMEs systematically identify, assess, and mitigate financial risks in their business operations. The indicators reflect key aspects of risk management processes commonly discussed in SME literature, including risk identification, evaluation, and mitigation strategies ([Aoun, 2024](#); [Ferreira de Araújo Lima et al., 2020](#)).

SME financial performance refers to the firm’s ability to achieve favourable financial outcomes, including profitability, growth, and financial stability. The measurement items are adapted from prior studies that assess subjective financial performance based on managerial perceptions, which is particularly appropriate for SMEs where objective financial data are often

limited ([Pabane et al., 2025](#); [Susiati et al., 2024](#); [Tandigau et al., 2024](#)).

Table 2. Measurement Items

Variable	Code	Measurement Item	Source
Financial Inclusion	FI1	The business has access to formal banking services	(Demirgüç-Kunt et al., 2022; Okello Candiya Bongomin et al., 2017)
	FI2	The business actively uses financial products such as loans or credit	
	FI3	The business utilises digital financial services (e.g., mobile banking, e-wallets)	
	FI4	The owner has adequate knowledge of financial products and services	
	RM1	The business regularly identifies potential financial risks	
	RM2	The business evaluates risks before making financial decisions	
Risk Management Practices	RM3	The business implements strategies to mitigate financial risks	(Aoun, 2024; Ferreira de Araújo Lima et al., 2020)
	RM4	The business monitors financial risks on a continuous basis	
	RM5	The business prepares contingency plans for potential financial problems	
	SFP1	The business has experienced an	

Variable	Code	Measurement Item	Source
SME Financial Performance		increase in profitability	Susiati et al., 2024 ;
	SFP2	The business has achieved revenue growth over time	Tandigau et al., 2024)
	SFP3	The business maintains stable financial conditions	
	SFP4	The business is able to meet its financial obligations on time	
	SFP5	The overall financial performance of the business is satisfactory	

Source: Adapted from previous literature (2026)

RESULTS AND DISCUSSION

Respondent Demographics

This section presents the demographic characteristics of the respondents involved in this study. A total of 140 SME owners or managers participated in the survey, representing two major urban centres in Indonesia, namely Makassar and Balikpapan. The inclusion of these two locations provides a balanced representation of SMEs across different regional economic contexts.

Table 3. Demographic Profile of Respondents

Characteristic	Category	Frequency (n=140)	Percentage (%)
Region	Makassar	70	50.0%
	Balikpapan	70	50.0%
Gender	Male	82	58.6%
	Female	58	41.4%
Age	< 30 years	28	20.0%
	30–40 years	54	38.6%
	41–50 years	38	27.1%
	> 50 years	20	14.3%
Education Level	High School	46	32.9%
	Diploma	28	20.0%
	Bachelor	52	37.1%
	Postgraduate	14	10.0%
Business Sector	Trade	48	34.3%
	Services	52	37.1%
	Manufacturing	40	28.6%

Characteristic	Category	Frequency (n=140)	Percentage (%)
Business Age	< 3 years	36	25.7%
	3–5 years	50	35.7%
	> 5 years	54	38.6%

Source: Primary data (2026)

The demographic distribution indicates that the respondents are evenly divided between Makassar and Balikpapan, each contributing 50% of the total sample. This balanced representation enhances the comparability of findings across different regional contexts and strengthens the generalisability of the study within emerging urban economies.

In terms of gender, the majority of respondents are male (58.6%), while female respondents account for 41.4%. The age distribution shows that most SME owners fall within the 30–40 years category (38.6%), indicating that the sample is dominated by individuals in their productive and economically active years.

Regarding educational background, the majority of respondents hold a bachelor's degree (37.1%), suggesting a relatively adequate level of formal education among SME operators. In terms of business characteristics, most respondents operate in the service sector (37.1%), followed by trade and manufacturing. Furthermore, a substantial proportion of SMEs have been in operation for more than five years (38.6%), indicating a relatively experienced group of businesses.

Overall, these characteristics suggest that the respondents possess sufficient knowledge, experience, and exposure to financial services, making them well-suited to provide reliable information for analysing the relationships among financial inclusion, risk management practices, and SME financial performance.

Descriptive Statistical Analysis

Descriptive statistical analysis is conducted to provide an initial overview of the data distribution and the characteristics of each measurement item used in the study. This analysis plays a crucial role in identifying patterns, central tendencies, and variability within the dataset, thereby ensuring that the data are suitable for further statistical testing. According to Hair et al. (2021), descriptive statistics are essential in summarising the data and offering preliminary insights into respondents' perceptions before

proceeding to more complex analyses such as structural equation modelling.

Furthermore, descriptive statistics help assess whether the responses are relatively homogeneous or varied, as indicated by the mean and standard deviation values. This step is particularly important in survey-based research, where the interpretation of respondents' perceptions forms the basis for subsequent analysis (Sekaran & Bougie, 2017).

Table 4. Descriptive Statistical Analysis

Indicator	Mean	Median	Min	Max	Std. Deviation
FI1	3.864	4.000	2.000	5.000	1.070
FI2	3.929	4.000	2.000	5.000	1.163
FI3	3.707	4.000	1.000	5.000	1.086
FI4	3.543	4.000	2.000	5.000	0.951
RM1	3.814	4.000	2.000	5.000	0.899
RM2	3.729	4.000	1.000	5.000	0.984
RM3	3.921	4.000	1.000	5.000	1.063
RM4	4.064	4.000	1.000	5.000	1.016
RM5	4.007	4.000	1.000	5.000	1.011
FP1	3.421	3.000	2.000	5.000	0.919
FP2	3.800	4.000	1.000	5.000	1.135
FP3	3.350	3.000	1.000	5.000	0.948
FP4	3.429	4.000	2.000	5.000	0.950
FP5	3.343	3.000	2.000	5.000	0.984

Source: Smart-PLS output (2026)

The descriptive statistics presented in **Table 4** indicate that the mean values of all indicators range between 3.343 and 4.064, suggesting that respondents generally exhibit a moderate to high level of agreement with the statements in the questionnaire.

Referring to **Table 2 (Measurement Items)**, the indicators of Financial Inclusion (FI1–FI4) show relatively high mean values, particularly FI2 (mean = 3.929), which reflects that SMEs actively utilise financial products such as loans or credit. However, FI4 (mean = 3.543), which relates to financial knowledge, records a comparatively lower value. This suggests that although SMEs have access to financial services, their level of financial literacy may not be equally strong. This finding reinforces the earlier argument that financial inclusion does not automatically translate into optimal financial decision-making.

For Risk Management Practices (RM1–RM5), the mean values are consistently high, with

RM4 (mean = 4.064) and RM5 (mean = 4.007) being the highest. These indicators correspond to continuous monitoring of financial risks and the preparation of contingency plans. This implies that SMEs demonstrate a relatively strong awareness of risk management practices, although the standard deviation values indicate some variability in implementation across respondents.

In contrast, the indicators for SME Financial Performance (FP1–FP5) show comparatively lower mean values, particularly FP3 (mean = 3.350) and FP5 (mean = 3.343), which relate to financial stability and overall performance satisfaction. This suggests that while SMEs have access to financial services and demonstrate risk management awareness, these factors do not always translate into optimal financial performance outcomes.

Measurement Model Evaluation (Outer Model)

The evaluation of the measurement model is conducted to assess the validity and reliability of the constructs used in this study. This step is essential to ensure that the indicators adequately represent their respective latent variables. Following the guidelines of [Hair et al. \(2019\)](#), the measurement model is evaluated based on convergent validity, discriminant validity, and internal consistency reliability.

Table 5. Measurement Model Evaluation

Construct	Code	Loading Factor	Cronbach's Alpha	Composite Reliability (CR)	AVE	HTMT (Max)
Financial Inclusion	FI1	0.913	0.890	0.917	0.751	0.633
	FI2	0.916				
	FI3	0.832				
	FI4	0.800				
Risk Management Practices	RM1	0.752	0.860	0.877	0.644	0.633
	RM2	0.714				
	RM3	0.880				
	RM4	0.871				
	RM5	0.781				
SME Financial Performance	SFP1	0.829	0.890	0.893	0.695	0.610
	SFP2	0.863				
	SFP3	0.781				
	SFP4	0.825				
	SFP5	0.868				

Source: Smart-PLS output (2026)

Convergent validity is assessed using outer loadings and Average Variance Extracted (AVE).

As shown in **Table 5**, all indicator loadings exceed the recommended threshold of 0.70, indicating that each item has a strong correlation with its respective construct. Although RM2 (0.714) is relatively close to the threshold, it still meets the acceptable criterion.

Furthermore, the AVE values for all constructs are above 0.50, with Financial Inclusion (0.751), Risk Management Practices (0.644), and SME Financial Performance (0.695). These results confirm that the constructs explain more than 50% of the variance of their indicators, thereby establishing adequate convergent validity.

The reliability of the constructs is evaluated using Cronbach's Alpha and Composite Reliability (CR). The results indicate that all constructs have Cronbach's Alpha values above 0.70, namely Financial Inclusion (0.890), Risk Management Practices (0.860), and SME Financial Performance (0.890). Similarly, the CR values exceed the recommended threshold of 0.70. These findings demonstrate that the constructs exhibit a high level of internal consistency, indicating that the measurement items are reliable in capturing the underlying constructs.

Discriminant validity is assessed using the Heterotrait–Monotrait (HTMT) ratio. The results show that all HTMT values are below the conservative threshold of 0.85, with values ranging from 0.610 to 0.633. This indicates that each construct is empirically distinct from the others and that there is no issue of multicollinearity between constructs.

Collinearity Assessment (VIF)

Prior to evaluating the structural model, a collinearity assessment was conducted to ensure that multicollinearity among predictor constructs does not bias the regression results. In Partial Least Squares Structural Equation Modelling (PLS-SEM), multicollinearity is assessed using the Variance Inflation Factor (VIF). According to [Hair et al. \(2021\)](#), VIF values should be below the threshold of 5, while more conservative studies recommend a stricter threshold of 3.3 to also account for potential common method bias.

Table 6. Collinearity Statistics (VIF)

Construct Relationship	VIF Value
Financial Inclusion → SME Financial Performance	1.488
Financial Inclusion → Risk Management Practices	1.000

Construct Relationship	VIF Value
Risk Management Practices → SME Financial Performance	1.488

Criteria: VIF < 5 ([Hair et al., 2021](#)); VIF < 3.3

The results presented in **Table 6** indicate that all VIF values range between 1.000 and 1.488, which are well below the recommended threshold of 5. This suggests that there is no significant multicollinearity among the predictor constructs in the model.

Moreover, all VIF values are also below the more stringent threshold of 3.3, indicating that common method bias is unlikely to be a concern in this study. The relatively low VIF values further imply that each predictor construct contributes uniquely to the model without excessive overlap.

Specifically, the VIF value of 1.000 for the relationship between financial inclusion and risk management practices indicates an absence of collinearity, suggesting that financial inclusion independently explains variations in risk management practices. Similarly, the VIF values of 1.488 for the paths leading to SME financial performance confirm that both financial inclusion and risk management practices can be simultaneously included in the model without causing estimation bias. Overall, these findings confirm that the structural model satisfies the collinearity assumption and is suitable for further analysis, particularly for hypothesis testing and mediation analysis.

Structural Model Evaluation (Inner Model)

The structural model evaluation aims to examine the hypothesised relationships among constructs and to assess the model's predictive power. Following the guidelines of [Hair et al. \(2019\)](#), this evaluation includes the assessment of the coefficient of determination (R^2), predictive relevance (Q^2), and hypothesis testing using path coefficients obtained through the bootstrapping procedure.

Coefficient of Determination (R^2). The coefficient of determination (R^2) is used to evaluate the explanatory power of the model by indicating the proportion of variance in the endogenous constructs explained by their predictors ([Hair et al., 2019](#); Haryono, 2017).

Table 7. R-Square Results

Endogenous Construct	R^2 Value	R^2 Adjusted	Interpretation
Risk Management Practices	0.328	0.323	Moderate
SME Financial Performance	0.285	0.275	Weak to Moderate

Source: Smart-PLS output (2026)

The results presented in **Table 7** indicate that the model explains 32.8% of the variance in risk management practices, which can be categorised as moderate explanatory power. This suggests that financial inclusion plays a meaningful role in influencing how SMEs implement risk management practices.

Meanwhile, the R^2 value for SME financial performance is 0.285, indicating that 28.5% of the variance in financial performance is explained by financial inclusion and risk management practices. This value falls within the weak to moderate range, suggesting that while the model captures a significant portion of the variance, other external factors not included in the model may also influence SME performance.

Effect Size (f^2). Effect size (f^2) is assessed to evaluate the individual contribution of each exogenous construct to the endogenous constructs within the structural model. Unlike R^2 , which reflects the overall explanatory power, f^2 provides insight into the specific impact of each predictor variable when included in the model. According to [Hair et al. \(2021\)](#), f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively.

Table 8. Effect Size (f^2) Values

Variable	Financial Inclusion	Risk Management Practices	SME Financial Performance
Financial Inclusion	—	0.488	0.000
Risk Management Practices	—	—	0.268
SME Financial Performance	—	—	—

Source: Smart-PLS output (2026)

The results in **Table 8** reveal important insights into the relative influence of each predictor variable in the model.

First, financial inclusion demonstrates a large effect size ($f^2 = 0.488$) on risk management

practices, indicating that financial inclusion is a strong determinant of how SMEs adopt and implement risk management strategies. This finding suggests that access to and utilisation of financial services significantly enhance SMEs' ability to identify, assess, and mitigate financial risks.

However, financial inclusion shows no effect ($F^2 = 0.000$) on SME financial performance. This is a critical finding, as it implies that financial inclusion does not directly contribute to improved financial performance when risk management practices are included in the model. In other words, the impact of financial inclusion on performance appears to be indirect rather than direct.

In contrast, risk management practices exhibit a medium effect size ($F^2 = 0.268$) on SME financial performance. This indicates that risk management plays a substantial role in driving financial outcomes, reinforcing the importance of internal capabilities in translating external resources into performance gains.

Predictive Relevance (Q^2). Predictive relevance (Q^2) is assessed using the blindfolding procedure to evaluate the model's ability to predict the observed indicators of endogenous constructs. According to [Hair et al. \(2021\)](#), a Q^2 value greater than zero indicates that the model has predictive relevance, while values of 0.02, 0.15, and 0.35 represent small, medium, and large predictive relevance, respectively.

Table 9. Predictive Relevance (Q^2)

Endogenous Construct	Q^2 Value	Interpretation
Risk Management Practices	0.205	Medium
SME Financial Performance	0.172	Medium

Source: Smart-PLS output (2026)

The results presented in **Table 9** indicate that the Q^2 values for both endogenous constructs are above zero, confirming that the model has adequate predictive relevance. Specifically, the Q^2 value for risk management practices (0.205) suggests a moderate level of predictive capability, indicating that financial inclusion can reasonably predict how SMEs implement risk management practices.

Similarly, the Q^2 value for SME financial performance (0.172) also falls within the moderate

range, suggesting that the combined influence of financial inclusion and risk management practices provides a meaningful level of prediction for SME performance outcomes.

Hypothesis Testing

Hypothesis testing in this study was conducted using the bootstrapping procedure in PLS-SEM to evaluate the significance of the structural relationships among constructs ([Hair et al., 2019](#); Santosa, 2018). The results are presented in Table 10, including path coefficients, t-statistics, and p-values.

Table 10. Path Coefficient and Hypotheses Testing

Hyp	Path	Original Sample (β)	Mean	SD	T-Statistics	P-Values	Description
H1	FI $\rightarrow$ SFP	-0.000	-0.005	0.103	0.001	0.999	Not Supported
H2	FI $\rightarrow$ RM	0.573	0.579	0.069	8.286	0.000	Supported
H3	RM $\rightarrow$ SFP	0.534	0.544	0.093	5.712	0.000	Supported
H4	FI $\rightarrow$ RM $\rightarrow$ SFP	0.306	0.317	0.075	4.077	0.000	Supported

Note: FI = Financial Inclusion, RM = Risk Management Practices, SFP = SME Financial Performance

Source: Smart-PLS output (2026)

The results of the hypothesis testing reveal several important findings regarding the relationships among financial inclusion, risk management practices, and SME financial performance.

First, the direct effect of financial inclusion on SME financial performance (H1) is found to be not significant ($\beta = -0.000$, $t = 0.001$, $p = 0.999$). This indicates that financial inclusion does not directly influence SME financial performance. Therefore, **H1 is not supported**. This finding suggests that access to financial services alone is insufficient to enhance business performance without the presence of supporting internal mechanisms.

Second, financial inclusion has a positive and significant effect on risk management practices (H2) ($\beta = 0.573$, $t = 8.286$, $p < 0.001$). This result indicates that SMEs with greater access to financial services are more likely to adopt structured and effective risk management practices. Thus, **H2 is supported**.

Third, risk management practices are found to have a significant positive effect on SME financial performance (H3) ($\beta = 0.534$, $t = 5.712$, $p < 0.001$). This implies that SMEs that actively identify, assess, and manage risks tend to achieve better financial outcomes. Therefore, **H3 is supported**.

Finally, the indirect effect of financial inclusion on SME financial performance through risk management practices (H4) is also significant ($\beta = 0.306$, $t = 4.077$, $p < 0.001$). This confirms that risk management practices mediate the relationship between financial inclusion and SME performance. Hence, **H4 is supported**.

The findings indicate that risk management practices fully mediate the relationship between financial inclusion and SME financial performance. This suggests that financial inclusion does not directly translate into improved performance; instead, its impact is realised only when SMEs possess adequate capabilities to manage financial risks effectively.

Qualitative Findings

Overview of Qualitative Analysis.

Following the quantitative phase, qualitative data were collected through semi-structured interviews with selected SME owners and managers to provide deeper insights into the statistical findings. Thematic analysis was employed to identify recurring patterns and explain the relationships observed in the structural model.

The qualitative findings are organised into key themes that correspond to the main constructs of the study, namely financial inclusion, risk management practices, and SME financial performance.

Theme 1: Financial Access Does Not Guarantee Performance

A dominant theme emerging from the interviews is that access to financial services does not automatically lead to improved business performance.

Several respondents reported that although they have access to banking services and credit facilities, they often face difficulties in utilising these resources effectively.

“We can easily access loans, but sometimes we are not sure how to manage the funds properly, especially when the business is unstable.” (Respondent 3)

“Having access to financial services is helpful, but it does not directly increase our profit unless we manage it carefully.” (Respondent 7)

This finding provides a clear explanation for the quantitative result where financial inclusion does not significantly affect SME financial performance (H1).

Theme 2: Risk Management as a Critical Capability

Another key theme highlights the importance of risk management practices as an internal capability.

Respondents emphasised that identifying and managing risks such as fluctuating demand, cash flow issues, and debt obligations which is essential for sustaining business performance.

“We always try to calculate risks before making financial decisions, especially when taking loans.” (Respondent 5)

“Monitoring expenses and preparing backup plans is very important for keeping the business stable.” (Respondent 10)

This supports the quantitative finding that financial inclusion significantly influences risk management practices (H2).

Theme 3: Risk Management Drives Financial Performance

The interviews further reveal that SMEs with structured risk management practices tend to achieve better financial outcomes.

Respondents who actively manage risks reported improved financial stability and business growth.

“When we control risks properly, our business becomes more stable and profits are more predictable.” (Respondent 2)

“Risk management helps us avoid losses and maintain cash flow.” (Respondent 8)

This finding reinforces the quantitative result that risk management practices significantly affect SME financial performance (H3).

Theme 4: Financial Inclusion Works Through Risk Management

A crucial integrative theme emerging from the qualitative data is that financial inclusion contributes to performance only when supported by effective risk management.

Respondents indicated that access to financial services becomes beneficial only when they are able to manage financial risks appropriately.

“Access to finance helps, but if we do not manage risks, it can even harm the business.”
(Respondent 6)

“Loans can increase business growth, but only if we use them wisely and manage the risks.”
(Respondent 12)

This theme strongly supports the mediation finding (H4), indicating that risk management practices act as a key mechanism linking financial inclusion to SME performance.

The findings suggest that financial inclusion alone is insufficient to enhance SME performance. Instead, its effectiveness depends on the firm's internal capability to manage financial risks, highlighting the critical role of risk management practices as a mediating mechanism.

DISCUSSION

Does Financial Inclusion Directly Improve SME Financial Performance?

The findings reveal that financial inclusion does not have a significant direct effect on SME financial performance. This result contradicts a large body of literature suggesting that access to financial services enhances firm performance ([Demirgüç-Kunt et al., 2022](#); [Okello Candiya Bongomin et al., 2017](#)). However, more recent studies have begun to question this direct linkage, particularly in emerging economies where financial literacy and managerial capabilities remain uneven ([Pabane et al., 2025](#)).

From the perspective of the Resource-Based View (RBV), financial inclusion can be considered an external resource that provides firms with access to capital and financial services. However, RBV posits that resources alone are insufficient to generate competitive advantage unless they are effectively utilised and embedded within firm-specific capabilities ([Barney, 1991](#); [Kraus et al., 2020](#); [Teece, 2018](#)).

In this context, the absence of a direct effect suggests that SMEs may possess access to financial resources but lack the necessary internal capabilities to deploy these resources efficiently. This finding is further supported by the qualitative evidence, which indicates that many SME owners struggle to manage financial resources effectively despite having access to them.

Does Financial Inclusion Influence Risk Management Practices?

The results demonstrate that financial inclusion has a strong and significant positive effect on risk management practices. This finding aligns with prior research indicating that access to formal financial systems enhances managerial awareness and encourages more structured financial decision-making ([Okello Candiya Bongomin et al., 2017](#)).

From a Dynamic Capability Theory perspective, financial inclusion can be seen as an enabling factor that allows firms to develop capabilities for sensing, seizing, and transforming opportunities ([Teece, 2018](#)). Access to financial services exposes SMEs to formal financial systems, which in turn promotes better risk assessment and monitoring practices ([Yakob et al., 2019](#)).

This suggests that financial inclusion does not merely provide financial resources but also acts as a catalyst for developing organisational capabilities, particularly in managing uncertainty and risk.

Do Risk Management Practices Enhance SME Financial Performance?

The findings confirm that risk management practices have a significant positive effect on SME financial performance. This result is consistent with prior studies that highlight the importance of risk management in improving firm stability and long-term performance ([Aoun, 2024](#)).

From the perspective of RBV, risk management practices can be conceptualised as strategic organisational capabilities that enable firms to utilise resources efficiently and mitigate potential losses ([Gerhart & Feng, 2021](#)). Meanwhile, Dynamic Capability Theory emphasises that firms capable of continuously adapting to risks and uncertainties are more likely to achieve sustainable performance ([Teece, 2018](#)).

The qualitative findings further reinforce this argument by showing that SMEs with structured risk management practices are better

able to maintain financial stability and avoid significant losses.

Does Risk Management Mediate the Relationship between Financial Inclusion and SME Performance?

One of the most significant findings of this study is that risk management practices fully mediate the relationship between financial inclusion and SME financial performance. This indicates that financial inclusion influences performance only through the development of internal capabilities.

This finding provides a critical extension to both RBV and Dynamic Capability Theory. While RBV emphasises the importance of resources, and Dynamic Capability Theory highlights the role of capabilities, this study demonstrates how external resources (financial inclusion) are transformed into performance outcomes through internal processes (risk management practices).

This result also highlights the limitation of viewing financial inclusion as a direct driver of performance. Instead, it should be understood as an enabling condition that must be complemented by organisational capabilities.

Novelty of the Study

This study offers several important contributions to the existing literature.

First, it challenges the conventional assumption that financial inclusion directly improves SME performance by demonstrating that the relationship is indirect and mediated by risk management practices.

Second, it integrates RBV and Dynamic Capability Theory within the context of financial inclusion, providing a more comprehensive theoretical framework to explain SME performance in emerging economies.

Third, the use of a mixed methods approach adds depth to the analysis by combining statistical evidence with qualitative insights, thereby offering a more holistic understanding of SME behaviour.

Practical Implications

The findings of this study have important implications for policymakers and SME practitioners.

For policymakers, the results suggest that promoting financial inclusion alone is not sufficient. There is a need to complement financial inclusion initiatives with programmes that

enhance SMEs' capabilities in risk management and financial decision-making.

For SME owners, the findings highlight the importance of developing internal capabilities, particularly in identifying, assessing, and mitigating financial risks. Simply accessing financial services without proper risk management may not lead to improved performance and may even increase vulnerability.

Theoretical Implications

This study contributes to the literature by reinforcing the argument that the relationship between resources and performance is not direct but mediated by organisational capabilities. It extends the application of RBV by demonstrating that access to financial resources must be complemented by internal capabilities to generate performance outcomes.

Furthermore, the study supports Dynamic Capability Theory by showing that SMEs must develop adaptive capabilities, such as risk management practices, to effectively leverage external resources in dynamic and uncertain environments.

CONCLUSION

Three key findings emerge from this study.

(1) Financial inclusion does not directly enhance SME financial performance, indicating that access to financial services alone is insufficient to generate tangible business outcomes. **(2)** Financial inclusion significantly strengthens risk management practices, suggesting that access to formal financial systems plays a critical role in shaping how SMEs identify, assess, and manage financial risks. **(3)** Risk management practices fully mediate the relationship between financial inclusion and SME performance, demonstrating that internal capabilities are essential in transforming financial access into improved performance.

These findings underscore a crucial insight: the effectiveness of financial inclusion depends not merely on access, but on the firm's ability to deploy financial resources strategically through sound risk management practices.

Ultimately, this study highlights that financial inclusion should not be viewed as an end in itself, but as a means that must be complemented by strong internal capabilities. In increasingly uncertain and dynamic business environments, SMEs that are able to integrate financial access with effective risk management

practices are more likely to achieve sustainable and resilient performance.

Research Limitations. This study is not without limitations. First, the sample is limited to SMEs in two urban areas, which may restrict the generalizability of the findings to other regions with different economic characteristics. Second, the study relies on self-reported data, which may be subject to response bias and subjective interpretation. Third, the cross-sectional design limits the ability to capture dynamic changes in financial behaviour and performance over time. Additionally, while this study focuses on risk management as a mediating variable, other potential mechanisms influencing SME performance were not examined.

Directions for Future Research. Future research is encouraged to expand the geographical scope to include a more diverse range of regions and economic contexts. Longitudinal studies would be particularly valuable in capturing how financial inclusion and risk management practices evolve over time and influence performance in the long term. Moreover, future studies could incorporate additional mediating or moderating variables, such as financial literacy, digital capability, or entrepreneurial orientation, to develop a more comprehensive understanding of SME performance. Employing objective financial data alongside perceptual measures would also enhance the robustness of future findings.

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