



THE IMPACT OF RISK MANAGEMENT, BUSINESS CREATIVITY, AND BUSINESS COLLABORATION ON BUSINESS GROWTH THROUGH FINANCIAL MANAGEMENT QUALITY: A STUDY ON MSMEs

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Abstract: *MSMEs play a vital role in driving urban economic growth but continue to face challenges in managing risks, fostering innovation, and building effective collaboration. In a competitive environment such as DKI Jakarta, sound financial management and the ability to convert internal capabilities into measurable performance are essential. This study analyzes the influence of risk management, business creativity, and business collaboration on MSME growth with financial management quality as a mediating variable. Using a quantitative approach and SEM-PLS analysis on 100 purposively selected MSME respondents, the findings indicate that risk management and business creativity significantly enhance growth, whereas collaboration does not. Financial management quality also indicates a strong direct and mediating effect between risk management and creativity on business growth. The study reinforces the Resource-Based View and Enterprise Risk Management Theory, emphasizing that robust financial governance strengthens innovation-based performance. Future research should expand regional coverage and explore mediators such as digital literacy or market orientation.*

Keywords : Business Collaboration, Business Creativity, Business Growth, Financial Management Quality, Risk Management

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INTRODUCTION

In an increasingly dynamic and uncertain global economic landscape, the ability of business actors—particularly those in the Micro, Small, and Medium Enterprises (MSME) sector—to manage risks, foster innovation, and establish effective collaborations has become a critical requirement for ensuring business continuity and growth. As the backbone of the economy in many countries, MSMEs must adopt adaptive and precise management strategies to navigate complex business challenges. Within this context, risk management, business creativity, and strategic collaboration act as catalysts for sustainable growth. However, the role of financial management quality as a mediating variable within this relationship remains underexplored, particularly since this aspect is often the weakest link for most MSMEs in developing countries, including Indonesia.

Globally, approximately 40% of formal MSMEs in developing countries—representing 65 million businesses—face an unmet financing need of roughly US\$5.2 trillion annually, underscoring their weak financial management and risk mitigation capacities (World Bank, 2019). While surviving MSMEs often demonstrate creativity in product adaptation and a capacity to build cross-sector networks, studies in Southeast Asia, including Vietnam and the Philippines, reveal that MSMEs with proactive risk management and structured financial systems achieve more stable and sustainable performance (Arif et al., 2020). However, the lack of integration among creativity, collaboration, and risk management within robust financial systems continues to constrain business

growth. In Indonesia, where MSMEs contribute over 60% to GDP and absorb 97% of the workforce, structural inefficiencies persist, as only 46% separate business and personal finances, and 77% rely on manual bookkeeping (Ribka, 2024). Consequently, despite their creativity and market adaptability, many Indonesian MSMEs struggle to translate these advantages into tangible growth due to poor financial documentation and limited strategic collaboration, creating a paradox where innovation coexists with weak financial discipline that restricts access to financing and scalability.

In Jakarta, the core of Indonesia's economy (MSMEs), particularly in the culinary and creative industries, experience high business failure rates despite operating in a vast and dynamic market of over 1.2 million active units. According to the Jakarta Provincial Office for Industry, Trade, Cooperatives, and MSMEs (2023–2026), growth remains volatile, with many businesses facing stagnation over the past two years, particularly in the post-pandemic period. The main challenges include a lack of structured risk management, declining creativity beyond the startup phase, and weak cross-business collaboration. However, initiatives such as Jakpreneur, supported by the Jakarta Provincial Government, provide integrated programs such as app-based financial reporting, entrepreneurship training, and stakeholder collaboration involving universities, digital platforms, and financial institutions (CNN Indonesia, 2022). These initiatives underscore the strategic role of financial management quality as a crucial link between managerial capabilities and MSME business growth in Jakarta.

Previous studies have not comprehensively examined the interrelationship among business creativity, risk management, collaboration, and financial management, thereby revealing a research gap. Soetjipto et al. (2023) found that business creativity positively affects marketing performance in East Java's fashion MSMEs, particularly in innovation and market responsiveness. However, the study only examined creativity, without integrating risk management or collaboration, thus lacking a holistic view of sustainable growth. Similarly, Putri et al. (2023) emphasized that collaboration enhances competitiveness among Bandung's culinary MSMEs through partnerships that improve market visibility and resource access. Their research, however, excluded financial management as an intervening factor, leaving the relationship between collaboration and growth through structured financial mechanisms unexamined. Meanwhile, Judijanto et al. (2024) demonstrated that effective risk management strengthens financial recordkeeping and decision-making, thereby improving operational stability in West Java's manufacturing MSMEs. However, the study overlooked the roles of creativity and collaboration as complementary factors in enhancing adaptability. Furthermore, its geographically limited focus excluded the dynamic MSME ecosystem of major urban areas such as Jakarta, underscoring the need for a more integrated and broader contextual analysis.

A notable research gap persists in understanding how risk management, business creativity, and business collaboration collectively affect MSME business growth, with the mediating role of financial management quality. Previous studies have not integrated these four variables into a single comprehensive model, particularly within the context of urban MSMEs such as those in Jakarta, encountering unique complexities and opportunities compared to those in other regions. To address this gap, the present study aims to analyze and examine the effects of risk management, creativity, and collaboration on MSME growth in Jakarta by identifying the mediating function of financial management quality. The findings are expected to provide both theoretical contributions to entrepreneurship and small business management literature as well as practical insights for developing more effective managerial strategies to enhance MSME competitiveness amid ongoing disruption.

THEORETICAL FRAMEWORK AND HYPOTHESES

Resource-Based View (RBV) Theory

This study is grounded in the RBV theory by Barney (1991), which posits that a sustainable competitive advantage arises from valuable, rare, inimitable, and non-substitutable internal resources. For MSMEs, these resources include effective risk management, creativity in innovation, and strategic business collaboration—all intangible assets that strengthen competitiveness. When combined with high-quality financial management, these capabilities enhance decision-making efficiency and long-term growth. RBV underscores that financial management acts as an enabler, converting internal strengths into measurable competitive advantages that drive MSME performance and sustainable business expansion.

Enterprise Risk Management (ERM) Theory

Enterprise Risk Management Theory emphasizes that integrated (holistic) risk management is a prerequisite for organizations to navigate environmental uncertainties (Lam, 2014). This theory posits that risk management should be not merely reactive, but rather a continuous strategic process that encompasses risk identification, risk assessment, prioritization of mitigation strategies, and ongoing monitoring. Within the context of MSMEs, this

approach is essential because small businesses often have limited resources and are more vulnerable to market disruptions. Therefore, effective risk management implementation enables MSMEs to safeguard operational stability and optimize their financial management practices.

Componential Theory of Creativity

The Componential Theory of Creativity posits that business creativity is a function of three key components: domain-relevant skills, intrinsic task motivation, and creative thinking processes supported by the organizational environment (Amabile, 1996). Creativity denotes the capacity to solve problems innovatively, respond to market changes, and align business strategies with emerging opportunities. For MSMEs, creativity is a vital driving force for maintaining product relevance, capturing new market segments, and fostering business growth. However, this creativity must be supported by sound financial management systems to ensure that innovative ideas can be implemented in a realistic and measurable manner.

The Relationship between Research Variables

Anchored in Enterprise Risk Management Theory (Lam, 2014) and the Componential Theory of Creativity (Amabile, 1996), this study hypothesizes that both risk management and business creativity has a positive and significant effect on MSME business growth. Effective risk management enables MSMEs to systematically identify, assess, and mitigate potential losses, thereby enhancing resilience, sustaining operations, and fostering investor confidence (Gupta et al., 2024). Meanwhile, creativity—driven by expertise, creative thinking, and intrinsic motivation—empowers MSMEs to innovate by developing new products, services, or processes that strengthen market differentiation and customer loyalty. Empirical evidence from MSMEs in sectors such as fashion and culinary industries supports this view, demonstrating that creativity leads to sales stability and long-term growth (Sudirjo et al., 2023).

Hypothesis 1: Risk management has a positive and significant effect on business growth.

Hypothesis 2: Business creativity has a positive and significant effect on business growth.

Anchored in the RBV Theory (Barney, 1991), this study posits that both business collaboration and financial management quality serve as strategic resources that drive MSME business growth. Collaboration with external partners such as suppliers, financial institutions, and business communities enables MSMEs to access critical resources such as knowledge, technology, and markets, which in turn strengthen production capacity, distribution networks, and supply chain efficiency (Benhayoun et al., 2020). Similarly, financial management quality—reflected in accurate record-keeping, budgeting discipline, and data-driven decision-making—acts as a vital internal capability that supports cost control, profit optimization, and sustainable growth (Wati et al., 2024).

Hypothesis 3: Business collaboration has a positive and significant effect on business growth.

Hypothesis 4: Financial management quality has a positive and significant effect on business growth.

This study integrates Enterprise Risk Management Theory, the Componential Theory of Creativity, and RBV to propose that financial management quality mediates the relationship among risk management, creativity, and business collaboration toward MSME business growth. Effective risk management enhances financial discipline, stabilizes business processes, and supports measurable decision-making, thereby improving cash allocation and financial target achievement (van den Boom, 2020). Similarly, creativity supported by structured financial planning enables innovative ideas to generate sustainable profitability and expansion (Xie et al., 2022). Meanwhile, collaboration, as an external resource, becomes more productive when integrated with sound financial systems that ensure capital efficiency, coordinated budgeting, and transparent reporting, all of which strengthen business performance (Iheanachor & Umukoro, 2022).

Hypothesis 5: Risk management has a positive effect on business growth through financial management quality.

Hypothesis 6: Business creativity has a positive effect on business growth through financial management quality.

Hypothesis 7: Business collaboration has a positive effect on business growth through financial management quality.

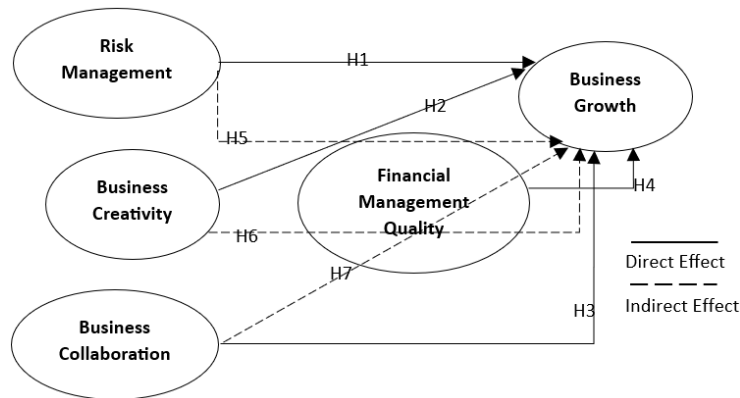


Figure 1. Research Model

RESEARCH METHODS

Research Design

This study employs a quantitative explanatory design to examine the causal relationships between risk management, business creativity, and business collaboration on MSME growth, both directly and indirectly through financial management quality as a mediating variable. Data were collected via an online questionnaire, distributed across all administrative regions of DKI Jakarta from May to July 2025, using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Each construct was measured using validated indicators: risk management (identification, evaluation, mitigation), business creativity (idea development, product and process innovation), business collaboration (networking, information exchange, strategic coordination), financial management quality (recordkeeping, cash control, budgeting), and business growth (revenue, customer base, market expansion). Research ethics were maintained through obtaining informed consent, maintaining data confidentiality, and ensuring that all information was used exclusively for academic purposes.

Research Sample

The study population comprised all active MSMEs in DKI Jakarta across the culinary, fashion, handicraft, service, and trade sectors, totaling over 150,000 enterprises (PPKUKM, 2023). Given the large and heterogeneous nature of this population, purposive sampling was applied based on criteria such as having operated for at least two years, maintaining basic financial records (manual or digital), engaging in formal or informal business partnerships, and having active owner or manager involvement in decision-making. Informal MSMEs lacking records or partnerships were excluded. In accordance with Hair et al. (2021), a minimum sample size of 5–10 responses per indicator was used, with 15 indicators, 100 MSME respondents were deemed adequate. A pilot test involving 30 MSMEs confirmed clarity and reliability, while the online questionnaire incorporated automatic validation, logical consistency checks, and phone verification to ensure accuracy and eliminate duplicate responses.

Data Analysis

The data were analyzed using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method with SmartPLS 3.0, as it is particularly suitable for complex models and relatively small sample sizes. The analysis comprised evaluations of outer and inner models. The outer model assessed indicator reliability (outer loading > 0.70), convergent validity (AVE > 0.50) and construct reliability (Composite Reliability and Cronbach's Alpha > 0.70). The inner model assessed R^2 and Q^2 values, as well as the path coefficients, to determine the strength and direction of the relationships. Statistical significance was tested via bootstrapping with 5,000 resamples, using the criteria of t -value > 1.96 and p -value < 0.05. Mediation was assessed by examining indirect and total effects, with the Sobel test used to confirm the mediating role of financial management quality. Cases with missing data below 5% were handled using mean substitution, while cases exceeding this threshold or identified as multivariate outliers were excluded from the analysis.

RESULTS AND DISCUSSION

Outer Model Evaluation

The outer model evaluation is the initial stage of PLS-SEM analysis, designed to ensure that the indicators accurately measure the intended latent constructs. The first step involves assessing the outer loading, measuring the correlation between each indicator and its corresponding construct. An indicator is considered to have adequate

reliability if it has a loading value greater than 0.70. This threshold indicates that the construct accounts for more than 70% of the variance in the indicator, with the remainder attributed to measurement error. If a loading value falls between 0.40 and 0.70, the decision to retain the indicator should be based on its contribution to the construct's validity and reliability.

Convergent Validity

Convergent validity is assessed by examining the Average Variance Extracted (AVE) value. AVE measures the average variance that a construct explains in its indicators. A construct is considered to have good convergent validity if its AVE is greater than 0.50, meaning that the construct captures more than 50% of the variance in the indicators. If the AVE is below 0.50, the construct does not adequately explain the variance of its indicators.

Construct Reliability

Construct reliability evaluates the internal consistency of a set of indicators representing a latent construct. The two main measures for this are Composite Reliability (CR) and Cronbach's Alpha (CA), both of which should exceed 0.70 to indicate reliable measurement. Composite Reliability is more commonly used in PLS-SEM as it does not assume equal indicator loadings (unlike Cronbach's Alpha), thereby offering a more accurate estimate of the construct's reliability.

Inner Model Evaluation

The inner model, or structural model, evaluation tests the relationships between latent constructs as hypothesized in the research model. This stage assesses the strength, direction, and significance of the causal relationships among constructs, as well as the model's overall predictive power. Key metrics evaluated in the inner model include R-Square (R^2), Q^2 value (predictive relevance), and the significance of the path coefficients, assessed via bootstrapping.

Model Explanatory and Predictive Power

The results indicate that the structural model demonstrates strong explanatory and predictive power. The R-Square (R^2) for Financial Management Quality is 0.598, indicating that 59.8% of its variance is explained by Risk Management, Business Creativity, and Business Collaboration, while the remaining variance is affected by external factors such as financial literacy and technological support. Similarly, the R^2 for Business Growth is 0.544, indicating that 54.4% of its variability is explained by all constructs in the model, including the mediating role of Financial Management Quality. According to Hair et al. (2021), R^2 values exceeding 0.50 indicate moderate to strong explanatory capacity, thereby confirming that the model effectively captures the determinants of MSME performance through financial management mechanisms. Furthermore, the Q-Square (Q^2) predictive relevance test, obtained via the blindfolding method, yields a Q^2 value of 0.8167, derived from the formula $Q^2 = 1 - (1 - 0.598)(1 - 0.544)$. A $Q^2 > 0$ confirms that the model possesses very high predictive relevance, thereby demonstrating its robustness and accuracy in explaining the observed variations among variables.

Path Coefficients and Significance

The final inner model evaluation used the bootstrapping method to test the significance of relationships between constructs by analyzing path coefficients, t-values, and p-values, where a t-value above 1.96 and a p-value below 0.05 indicate statistical significance. Of the seven hypotheses tested, four were accepted, indicating that risk management and business creativity have a direct positive and significant effect on business growth, while financial management quality not only improves MSME performance but also mediates the influence of business creativity, thereby supporting the notion that innovation and financial discipline are essential for sustainable MSME development.

DISCUSSION

The relationship between risk management and business growth

The study reveals that risk management has a positive and significant effect on MSME business growth, demonstrating that MSMEs capable of effectively identifying, assessing, and mitigating risks tend to achieve higher revenues, customer expansion, and market diversification. Consistent with Enterprise Risk Management (ERM) Theory and supported by Hudáková et al. (2023), structured risk management enhances financial efficiency, credit access, and adaptability to external shocks, thereby forming a strategic foundation for resilience and long-term value creation. In Jakarta's dynamic urban market, MSMEs face diverse risks, including operational (62%), financial (56%), market (48%), and legal (24%), underscoring the sector's vulnerability. The predominance of experienced entrepreneurs aged 30–40 and long-standing businesses further reinforces the role of experience in fostering risk awareness, particularly in the culinary and fashion sectors highly sensitive to consumer trends. Practically, MSMEs

should adopt ERM-based systems supported by digital monitoring and training, while theoretically, the findings affirm risk management as a key strategic resource essential for strengthening MSME competitiveness and promoting sustainable growth.

The relationship between business creativity and business growth

The study demonstrates that business creativity has a positive and significant effect on MSME business growth, indicating that creative idea generation, product or service innovation, and process improvements contribute to higher revenues, broader customer bases, and market expansion. Consistent with the Componential Theory of Creativity (Amabile, 1983), which posits that creativity arises from expertise, creative-thinking skills, and intrinsic motivation, this resource becomes a vital and inimitable asset for MSMEs seeking to differentiate themselves and sustain growth amid intense competition. In Jakarta, where most MSME owners are aged 30–40 (42%) and operate in sectors such as culinary (37%) and fashion (24%), creativity plays a crucial role in adapting to dynamic consumer trends. Practically, MSMEs should continuously cultivate creativity through innovation programs, digital workshops, and product experimentation, supported by government and institutional training initiatives. Theoretically, this study reinforces the Componential Theory and Resource-Based View by affirming creativity as a strategic internal capability and intangible asset that drives sustainable competitive advantage and long-term business growth.

The relationship between business collaboration and business growth

The results reveal that business collaboration has a negative and insignificant effect on MSME business growth in Jakarta, indicating that cooperative efforts such as networking, information sharing, and coordination have not led to tangible improvements in revenue, customer reach, or market expansion. Based on RBV Theory by Barney (1991), collaboration can act as a strategic resource capable of providing a competitive advantage. However, Jakarta's MSME partnerships remain too informal and weak to meet the Valuable, Rare, Inimitable, Non-substitutable criteria. Data reveal that 44% of MSMEs engage in informal collaborations, 39% in formal ones, and 17% do not engage in any collaboration, with most operating in competitive sectors such as culinary (37%) and fashion (24%) where trust-based, structured cooperation is minimal. This finding is consistent with Saputra et al. (2022), noting that MSME collaborations in Indonesia are often transactional and short-term. Thus, collaboration must be strengthened through government facilitation, incubator programs, and digital business clusters that foster trust and innovation. Theoretically, this finding emphasizes that collaboration enhances business growth only when it is strategically aligned, trust-based, and institutionally structured—conditions that are still lacking within Jakarta's MSME.

The relationship between financial management quality skills and business growth

The results reveal that financial management quality has a positive and significant effect on MSME business growth in Jakarta, indicating that MSMEs with accurate financial records, effective cash flow control, and disciplined budgeting achieve higher revenue growth, broader customer reach, and stronger market expansion. Based on the RBV Theory by Barney (1991), financial management quality represents a strategic internal resource fulfilling the VRIN criteria, providing MSMEs with sustainable competitive advantage. This finding is consistent with Muneer et al. (2017), whose research indicated that robust financial practices improve profitability, competitiveness, and access to external financing. The data reveal that 30% of MSMEs use Excel, 24% use BukuKas, and 12% use SME Accounting from OJK, indicating increased digital adoption for maintaining financial discipline. Most respondents are micro (46%) and small (44%) entrepreneurs, aged 30–40 years (42%) with over five years of experience (50%), demonstrating that managerial maturity supports the adoption of structured financial systems. Therefore, enhancing financial management, particularly in bookkeeping, budgeting, and cash flow monitoring, should be a priority for local governments and financial institutions through literacy and digitalization programs, reinforcing RBV's perspective that financial management quality is a core strategic asset for driving sustainable MSME growth.

Risk management and business growth through financial management quality

The findings reveal that risk management has a negative and insignificant effect on MSME business growth through financial management quality, indicating that financial management does not strengthen this relationship. Despite ERM Theory positing that structured risk management enhances financial control and performance, many Jakarta MSMEs fail to integrate risk identification and mitigation into effective budgeting, cash flow, or reporting systems. Consistent with Zuhroh et al. (2025), Indonesian MSMEs often lack the necessary documentation, integration, and financial literacy to link risk management with performance outcomes. Despite 62% facing operational risks and 56% financial risks, only 30% use Excel, 24% use BukuKas, and 16% rely on no digital tools, demonstrating weak financial institutionalization. This implies that risk management alone cannot drive growth without integration into structured financial systems connecting mitigation with planning and budgeting.

Consequently, MSMEs in volatile sectors such as culinary (37%) and fashion (24%) should therefore prioritize enhancing both risk management and financial literacy through government-supported digital programs. Theoretically, this study refines ERM Theory by emphasizing that the link between risk management, financial management, and business growth depends on the depth of integration and internal resource capability rather than simply the mere presence of risk control practices.

Business creativity and business growth through financial management quality

The findings reveal that business creativity significantly enhances MSME business growth through financial management quality, serving as a vital mediating mechanism that strengthens the creative impact on performance. Based on Amabile's (1983) Componential Theory of Creativity, creativity emerges from individual skills, intrinsic motivation, and supportive systems—represented here by effective financial management that translates innovation into measurable results. MSMEs combining product, service, and marketing creativity with structured budgeting, accurate record-keeping, and disciplined cash flow control achieve higher growth and sustainability, whereas those lacking financial discipline are unable to turn creativity into profitability. Supporting satpathy et al. (2025), the study indicates that creative MSMEs achieve stronger profitability when innovation aligns with systematic cost control and reinvestment strategies. Empirical data indicate high creativity among respondents, particularly in culinary (37%), fashion (24%), and crafts (12%) sectors, with over 60% launching new products and 52% using digital marketing platforms. However, the most significant growth is seen in those with strong financial systems. Thus, MSMEs must balance innovation and financial discipline through training in creativity, budgeting, and digital accounting, reinforcing Amabile's theory that financial management quality is the essential mechanism for converting creativity into sustainable business growth.

Business collaboration and business growth through financial management quality

The findings reveal that business collaboration has a negative and insignificant effect on MSME business growth through financial management quality, indicating that financial management does not strengthen and may even weaken the collaboration–growth relationship. Despite Barney (1991) RBV Theory suggesting that collaboration can serve as a valuable intangible resource for competitive advantage, MSME partnerships in Jakarta—primarily with suppliers, distributors, or peers—remain informal and lack financial integration, limiting their impact on business performance. Consistent with Iramani et al. (2018), the study indicates that collaborations without structured agreements or financial governance may improve resilience but fail to enhance profitability due to weak budgeting, reporting, and investment coordination. Data reveal that 68% of MSMEs operate independently, only 32% engage in formal partnerships, and merely 29% utilize shared budgeting or financial planning, demonstrating minimal financial synergy. Practically, MSMEs should transition toward structured, trust-based collaborations with transparent financial systems and shared governance mechanisms to generate tangible value. Theoretically, this study refines RBV Theory by asserting that collaboration alone cannot yield a competitive advantage without robust financial management integration, underscoring that the synergy between cooperative networks and financial discipline is vital for sustainable MSME growth.

CONCLUSION

This study concludes that risk management, business creativity, and financial management quality have a positive and significant effect on MSME business growth in Jakarta, with financial management quality being the most dominant factor due to its role in ensuring disciplined budgeting, proper transaction documentation, and effective cash flow control. Business creativity contributes effectively to growth when supported by sound financial governance, while business collaboration indicates no significant direct or indirect effect. This is mainly because most partnerships remain informal, short-term, and poorly integrated. These results suggest that risk management and collaboration alone cannot foster growth without the support of strong financial systems. Theoretically, the study reinforces the RBV, ERM Theory, and Componential Theory of Creativity by demonstrating that creativity and risk control generate competitive advantages only when they are mediated by robust financial management. Practically, it recommends MSMEs and policymakers should enhance financial literacy, adopt digital accounting tools, and integrate training programs that combine creativity, collaboration, and financial discipline to ensure sustainable growth. However, the study's limitations include its geographic focus on DKI Jakarta, potential self-report biases, and the exclusion of other potential mediating variables such as digital literacy or market access. Future research should broaden the regional scope, examine collaboration structures more deeply, and include variables such as technology engagement or digital readiness to better explain MSME growth dynamics.

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APPENDICES

Appendix 1: Research Sample Criteria

No.	Sample Criteria (Inclusion Criteria)	Description
1	Operational Duration	MSMEs must have been operational for at least two years to ensure business stability and the availability of sufficient operational experience.
2	Financial Recordkeeping	MSMEs are required to maintain basic financial records, in either manual or digital form (e.g., BukuKas, Excel, or similar applications), to assess financial management quality.
3	Business Collaboration Involvement	MSMEs must have either a history of, or current involvement in, business partnerships, whether formal or informal, to demonstrate a capacity for collaboration.
4	Owner/Manager Involvement	The owner or manager must actively participate in operational and strategic decision-making, ensuring comprehensive understanding of the business.
5	Exclusion Criteria	MSMEs that lacked financial records, had no history of business collaboration, or were informal enterprises without a clear management structure were excluded from the sample frame.

Appendix 2: Demographic Characteristics of Respondents

Demographic Category	Sub-Category (n=100)	Percentage (%)
Gender	Male	43%
	Female	57%
Business Owner's Age	< 30 years	18%
	30–40 years	42%
	> 40 years	40%
Business Age	< 2 years	12%
	2–5 years	38%
	> 5 years	50%
Business Sector	Culinary	37%
	Fashion	24%
	Handicraft	15%
	Services	24%
Business Scale	Micro	46%
	Small	44%
	Medium	10%
Use of Digital Financial Recording Tools	Excel	30%
	BukuKas	24%
	SME Accounting by OJK	12%
	Mekari Jurnal	10%
	QuickBooks	8%
	No digital tools used	16%
Business Collaboration Activity	Never collaborated	17%
	Informal collaboration (e.g., shared vendors/suppliers, promotional cooperation)	44%
	Formal collaboration (written agreements, partnerships, joint products, etc.)	39%
Types of Risks Encountered	Operational risk	62%
	Financial risk	56%
	Market/demand risk	48%
	Legal/licensing risk	24%

Appendix 3: Outer Model Measurement Results

Construct	Indicator	Outer Loading	AVE	Composite Reliability	Cronbach's Alpha
Risk Management (RM)	RM1	0.803	0.654	0.850	0.742
	RM2	0.818			
	RM3	0.793			
Business Creativity (BC)	BC1	0.837	0.676	0.857	0.753
	BC2	0.829			
	BC3	0.799			
Business Collaboration (BCL)	BCL1	0.804	0.667	0.854	0.748
	BCL2	0.826			
	BCL3	0.812			
Business Growth (BG)	BG1	0.837	0.679	0.861	0.761
	BG2	0.842			
	BG3	0.808			
Financial Management Quality (FMQ)	FMQ1	0.813	0.667	0.854	0.749
	FMQ2	0.827			
	FMQ3	0.812			

Appendix 4: Model Explanatory and Predictive Power

Construct / Indicator	R ² Value	Description of Variance Explained	Predictive Relevance (Q ²)	Interpretation
Financial Management Quality	0.598	This model explains 59.8% of the variance in Financial Management Quality through Risk Management, Business Creativity, and Business Collaboration	0.8167	Demonstrates strong explanatory power (Hair et al., 2021)
Business Growth	0.544	This model explains 54.4% of the variance in Business Growth, as influenced by all constructs, including Financial Management Quality		Indicates a moderate to strong explanatory capacity
Overall Model Predictive Power				Suggests very high predictive relevance and model robustness

Appendix 5: Results of Hypothesis Testing

Hypothesis	Path Coefficient	t-value	p-value	Decision
H1	0.251	3.842	0.000	Accepted
H2	0.287	4.117	0.000	Accepted
H3	-0.042	0.873	0.383	Rejected
H4	0.326	5.021	0.000	Accepted
H5	-0.018	0.731	0.465	Rejected
H6	0.144	2.972	0.003	Accepted
H7	-0.063	1.051	0.294	Rejected