

Smart Financial Management for MSMEs: Assessing the Roles of Fintech, Cloud Accounting, and Digital Literacy in Deli Serdang Regency

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ABSTRACT

The adoption of digital financial technologies has become an essential strategy for improving financial management among Micro, Small, and Medium Enterprises (MSMEs). This study investigates the effects of fintech adoption and cloud accounting utilization on the effectiveness of MSME financial management, while examining the moderating role of digital literacy. A quantitative research design was employed using data collected from 100 MSMEs in Deli Serdang Regency, Indonesia. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that fintech adoption has a positive and significant effect on financial management effectiveness ($\beta = 0.363$, $t = 2,592$, $p = 0,010 < 0.05$). Conversely, cloud accounting utilization does not significantly influence financial management effectiveness ($\beta = 0.090$, $t = 0,605$, $p = 0,546 > 0.05$). Furthermore, digital literacy does not moderate the relationship between fintech adoption and financial management effectiveness ($\beta = -0,193$, $p = 0,226 > 0.05$), nor does it moderate the relationship between cloud accounting utilization and financial management effectiveness ($\beta = 0,062$, $p = 0,662 > 0.05$). The structural model explains 71,7% ($R^2 = 0.717$) of the variance in financial management effectiveness. These findings suggest that fintech adoption provides direct benefits to MSMEs, whereas cloud accounting implementation has not yet generated significant improvements. Moreover, digital literacy alone is insufficient to strengthen the effectiveness of digital financial technologies. The findings offer practical implications for policymakers and MSME stakeholders in designing more targeted digital transformation strategies.

INTRODUCTION

The role of MSMEs is highly strategic in driving local economies, strengthening value chains, and creating economic resilience within communities, particularly in areas that are not yet reached by large industries. The ability of MSMEs to generate employment opportunities, increase income, and encourage entrepreneurial activities makes them an important pillar of inclusive economic growth. In 2024, MSMEs contributed 61.07% to Gross Domestic Product (GDP) and absorbed more than 97% of the workforce (Junaidi, 2024).

The rapid advancement of digital technology has brought significant changes across various aspects of life, including the business sector. The speed of information has become an important factor, particularly in financial management among MSMEs. MSME actors are required to respond quickly to digital technological developments in order to expand their businesses in an era that is increasingly dependent on technology. However, at the regional level, including in Deli Serdang, MSMEs face structural challenges in financial management and the adoption of digital technology (Lisnawati, 2023; Nugraha et al., 2022; Persada et al., 2025). These challenges directly affect operational effectiveness, business resilience, and long-term growth capacity.

Digital transformation in the MSME sector has become a national strategic agenda aimed at improving efficiency, business process integration, and financial transparency. Research by (Persada et al., 2025) and (Iriyayanti & Azis, 2023) emphasizes that digitalization plays a significant role in enhancing MSME performance through process automation, cost reduction, and improved decision-making quality.

Fintech adoption is utilized to improve or automate financial processes. This encompasses everything from cashless payments and financial service platforms to virtual currencies. Empirically, fintech has also contributed to the advancement and performance of MSMEs in Indonesia (Nugraha et al., 2022; Oktaviani, 2025; Seta et al., 2025; Ufmayza & Mulyani, 2024). Fintech services facilitate MSME actors in conducting transactions, ranging from digital financial transactions and investments to business capital financing.

The use of cloud accounting as a technology-based accounting innovation has been proven to enhance recording efficiency, financial report accuracy, and real-time access to financial data (Novitasari et al., 2023; Suvia & Helmayunita, 2024) (Wulansari & Aligarh, 2023). Research conducted by (Novitasari et al., 2023) indicates that cloud accounting improves the quality of financial information, which subsequently affects strategic decision-making among MSMEs. This finding is consistent with studies by (Suvia & Helmayunita, 2024; Wulansari & Aligarh, 2023), which demonstrate that cloud accounting significantly improves the accuracy, speed, and transparency of financial reporting, thereby enhancing MSME financial management.

However, the successful implementation of technology is strongly influenced by digital literacy, organizational support, and human resource competencies. The utilization of digital

technology remains constrained by barriers such as costs, digital skills, and perceptions of data security risks (Lisnawati, 2023; Persada et al., 2025; Rika et al., 2025). In fact, digital literacy can be utilized to improve business management, product marketing, customer data management, consumer behavior analysis, marketing strategy development, operational efficiency, and business branding (Kamuri & Anabuni, 2025; Q.A et al., 2024). Nevertheless, many MSME actors still lack a comprehensive understanding of safe and effective online marketing practices. Many MSMEs remain vulnerable to digital fraud and illegal online lending schemes due to limited understanding (UMY, 2025). Digital literacy is therefore essential for MSME actors, as it is not only related to promotion but also to self-protection against cyber risks. Digital literacy is essential for SME operators because it is not just about promotion but also about self-protection from cyber risks. The problem is that most SMEs in Deli Serdang Regency still face fundamental issues in financial management, such as inadequate record-keeping, weak cash flow control, and limitations in data-driven decision-making. Although specific data on the percentage of MSMEs in Deli Serdang Regency that have formal financial statements is not yet officially available, a national survey cited by the Central Statistics Agency indicates that approximately 70% of MSMEs do not yet have adequate financial statements. Additionally, the 2024 Business Fitness Index study shows that 77% of MSMEs in Indonesia still use manual financial record-keeping and lack a digitally integrated financial reporting system. This situation hinders SMEs' capacity to grow, increase profitability, and survive in an increasingly competitive market.

The main issue is that most MSMEs in Deli Serdang Regency still face fundamental problems in financial management, such as inadequate bookkeeping, weak cash flow control, and limited capacity for data-driven decision-making. These conditions hinder MSMEs' ability to grow, improve profitability, and survive within increasingly competitive market dynamics. Therefore, research-based interventions are necessary to ensure that the digitalization process effectively addresses the actual needs of MSMEs.

The adoption of fintech, the use of cloud accounting, and digital literacy are strategic factors with the potential to significantly improve the financial management of MSMEs. However, to date, there has been no comprehensive empirical study measuring the simultaneous impact of these three aspects on the effectiveness of SME financial management at the district level, particularly in Deli Serdang—an economic buffer zone for the city of Medan with relatively high SME growth (see Table 1). Theoretically, digital literacy significantly influences the effectiveness of utilizing financial technology and cloud accounting in SME financial management. SME operators with high levels of digital literacy tend to be better able to operate financial applications, understand digital financial information, and optimally utilize technological features to support financial record-keeping and decision-making. Conversely, low digital literacy can lead to less effective use of fintech and cloud accounting. Therefore, digital literacy is seen as capable of strengthening or weakening the relationship between the utilization of digital technology and the effectiveness of SME financial management. This

research gap presents an academic urgency and a strong need for data to inform evidence-based policy formulation.

Tabel 1. Prior Research

No.	Title	Variable	Method	Result
1.	(Amaliani & Mulyani, 2024)	MSME performance (Y)	Quantitative approach using surveys, with data analysis conducted through multiple regression analysis.	The results indicate that fintech adoption and financial literacy have a positive and significant effect on MSME performance.
		Fintech Adoption (X1)		
		Finance Literacy (X2)		
		Finance Management behavior (X3)		
2.	(Oktaviani, 2025)	MSME growth (Y)	Quantitative approach using surveys, with data analysis conducted through multiple regression analysis.	Fintech contributes to increasing MSME revenue, customer numbers, and market access expansion.
		Fintech Adoption (X1)		
3.	(Seta et al., 2025)	MSME performance (Y1)	Quantitative approach using surveys, with data analysis conducted through SEM-PLS.	Digital marketing and fintech payment significantly influence business performance. Furthermore, business performance affects business sustainability
		Business sustainability (Y2)		
		Digital Marketing (X1)		
		Fintech Payment (X2)		
4.	(Novitasari et al., 2023)	The Effectiveness of Cloud Accounting in MSME Financial Management	Qualitative method using a case study approach on the implementation of the SI APIK application.	The cloud-based accounting application SI APIK is effective in managing MSME finances, as analyzed through seven effectiveness indicators: data security, speed, accuracy, report variety, relevance, precision, and information quality.
5.	(Suvia & Helmayunita, 2024)	MSMEs' Intention to Use Cloud Accounting Based on the Unified Theory of Acceptance and Use of Technology (UTAUT) Model	Quantitative approach using surveys, with data analysis conducted with SEM-PLS.	The use of cloud accounting is influenced by the availability of features within the application that facilitate business process recording, resource availability, and support from certain parties (such as customer service).

No.	Title	Variable	Method	Result
6.	(Wulansari & Aligarh, 2023)	1. MSME Performance (Y2) 2. Adopsi E-Accounting (Y1) 3. Computer self-efficacy (X1) 4. Computer Anxiety (X2) 5. Owner Support (X3) 6. Organisational readiness (X4) 7. Entrepreneurial orientation (X5) 8. Bandwagon effect (X6)	Quantitative approach using surveys, with data analysis conducted through SEM-PLS.	E-accounting adoption is able to influence MSME performance, particularly in terms of improving efficiency, reducing operational and risk costs, enhancing services, and strengthening customer relationships.
7.	(Kamuri & Anabuni, 2025)	1. MSME Competitiveness (Y) 2. Enterpreuniership education (X1) 3. Self Efficacy (X2) 4. Digital literacy (X3)	Quantitative approach using surveys, with data analysis conducted through SEM-PLS.	Self-efficacy and digital literacy have a positive and significant effect on MSME competitiveness in the international market.
8.	(Utami & Suwena, 2025)	1. Competitive advantage (Y1) 2. MSME performance (Y2) 3. Digital literacy (X1)	Quantitative approach using surveys, with data analysis conducted through SEM-PLS.	The study results indicate that digital literacy has a substantial effect on MSME performance, and digital literacy also significantly influences MSME performance through competitive advantage.

RESEARCH METHODS

This study employs a quantitative approach using descriptive and inferential analysis. The data utilized are primary data obtained directly from the respondents. Data collection was conducted through a survey using structured questionnaires administered to MSME actors in Deli Serdang Regency regarding their preferences, perceptions, and experiences. A five-point Likert scale was employed to measure the four primary constructs examined in this study. effectiveness of financial management (Y) was measured by financial planning, financial recording and reporting, cash flow management, and financial control. Fintech adoption (X1) was measured by ease of use, usefulness, accessibility and security. Cloud accounting utilization (X2) was measured by data security, time efficiency, accuracy, report variety, relevance, precision and information quality. Digital literacy (Z) was measured by ability to utilize digital technology for business, effectiveness in using digital technology in business, ability to process data and analyze information based on digital technology, ability to adopt new technologies relevant to business and ability to implement business security using digital devices.

Population and Sample. The population of this study consisted of all MSMEs in Deli Serdang Regency. Based on the official website Deli Serdang Entrepreneurship Portal, the number of MSMEs in Deli Serdang reached 129,682 units. The sampling technique used in this study was non-probability sampling with a purposive sampling approach, namely sample selection based on specific criteria. The criteria established in this study were MSMEs that had been operating for more than three years, had adopted fintech, and had utilized cloud accounting in conducting their business activities. The determination of the sample size was carried out using G*Power version 3.1 with a power analysis approach in the SEM-PLS model. The testing procedure employed Linear Multiple Regression: Fixed Model, R^2 Increase with a significance level of 5% ($\alpha = 0.05$), statistical power of 0.80, and a medium effect size ($f^2 = 0.15$). Based on the five predictors included in the research model, the minimum required sample size was approximately 92 respondents.

Data Analysis Technique. The data analysis technique used in this study was PLS-SEM because PLS-SEM enables the comprehensive development and testing of reflective theoretical models that connect theoretical and empirical concepts as well as hypotheses into latent variables and indicators (Hair et al., 2017). In addition, PLS-SEM is more appropriate when the research model contains dependent variables and the sample size is fewer than 250 observations. PLS-SEM with a bootstrapping technique using 5,000 bias-corrected and accelerated bootstrap samples was also applied because it can overcome the limitations of the maximum likelihood method commonly found in other analytical software. The first stage involved testing the outer measurement model before evaluating the structural model through bivariate relationships between indicators and constructs. Indicator validity and reliability were assessed using the metrics of Outer Loading, Cronbach's Alpha, and Average Variance Extracted (AVE) (Hair et al., 2017). The next stage involved Inner Model Analysis to ensure the accuracy of the structural model developed. In the Inner Model evaluation, the R^2 value served as an indicator to measure how well the independent variables explained the dependent variable. Hypothesis testing was conducted using bootstrapping, and the bootstrapping results were subsequently compared with the p-value. The criterion for hypothesis acceptance was that if the p-value was smaller than $\alpha = 0.05$, the hypothesis was accepted. Conversely, if the p-value was greater than $\alpha = 0.05$, the hypothesis was rejected (Jr et al., 2018).

RESULTS & DISCUSSION

Respondent Characteristics. This section presents descriptive results regarding the characteristics of the research respondents, consisting of 100 MSME owners and managers in the Deli Serdang region. The majority of respondents were engaged in the culinary sector (37%) and trade sector (37%), followed by the service sector (19%) and manufacturing sector (5%). In terms of business age, 59% of MSMEs had been operating for 1–5 years, while the remaining 41% had been in operation for more than 5 years. Regarding the age of MSME owners/managers, 71% were between 25 and 35 years old, while 29% were between 36 and

55 years old.

Based on technology adoption, all respondents had implemented fintech payment services as one of the payment methods in their businesses. The majority of MSMEs used e-wallets such as Dana, OVO, GoPay, and ShopeePay (34%), followed by QRIS (31%), bank transfers (25%), payment gateways (7%), and other cashless payment systems (3%). Regarding cloud accounting adoption, all respondents utilized a financial transaction recording system, particularly for cashier and sales transactions. The most widely used cloud accounting application was BukuKas (25%), followed by Kasir Pintar (19%), Akuntansiku (15%), POST (11%), Moka POS (10%), Qasir and Accurate (7% each), Jurnal.id (3%), and other applications (3%). The demographic characteristics of the respondents are presented in Table 2 below.

Table 2. Demographic Characteristics of the Respondents

Characteristic	Category	Frequency	Percentage%
Business Sector	- Culinary	37	37%
	- Trading	37	37%
	- Service	19	19%
	- Manufacture	5	5%
Business Age	- less than 5 years	59	59%
	- more than 5 years	41	41%
Age	- 25-35 years old	71	71%
	- 36-55 years old	29	29%
Fintech Payment (MSMEs may select more than one option)	- E-Wallet	83	34%
	- QRIS	76	31%
	- Transfer Bank	62	25%
	- Payment Gateway	18	7%
	- Lainnya	8	3%
Cloud Accounting	- BukuKas	25	25%
	- Kasir Pintar	19	19%
	- Akuntansiku	15	15%
	- POST	11	11%
	- Moka Pos	10	10%
	- Accurate.id	7	7%
	- Qasir	7	7%
	- Jurnal.id	3	3%
	- Lainnya	3	3%

Source: Research Data, 2026

Outer Model. The outer model assessment was conducted to evaluate the validity and reliability of the relationship between the indicators and their respective latent constructs. This assessment ensures that each questionnaire item is appropriate and accurately measures the intended construct. Validity was evaluated through convergent validity and discriminant validity. Convergent validity was assessed using the outer loading values, while discriminant validity was assessed by comparing the square root of the Average Variance Extracted (AVE) with the correlations among constructs.

Table 3. Loading Factor Value

Indikator	Cloud Accounting	Efektifitas Pengelolaan Keuangan	Fintech Adoption	Literasi Digital	Moderating Effect 1	Moderating Effect 2	Status
Cloud Accounting	0.878						Valid
Financial management							Tidak Valid
Financial Management		0.675 0,783					Valid
Fintech adoption			0.806				Valid
Digital literacy				0.866			Valid
Financial Literacy*							Valid
Fintech adoption					0,701		
Financial Literacy*							Valid
Cloud accounting						2,442	

Source: Research Data, 2026

The results of the convergent validity test indicated that one indicator (EF7) was not valid because its outer loading value was below the recommended threshold of 0.70 (see Table 3). Therefore, this indicator was removed from the model and excluded from further hypothesis testing. Furthermore, the discriminant validity assessment showed that the square root of the AVE for each construct exceeded its correlations with other constructs. These results indicate that all constructs demonstrate adequate discriminant validity. Consequently, the measurement instrument used in this study can be considered valid and appropriate for measuring the proposed constructs (see Table 4).

Table 4. AVE Root Value Fornell-Larcker Criterion

Variabel	Cloud Accounting	Efektifitas Pengelolaan Keuangan	Fintech Adoption	Literasi Digital	Moderating Effect 1	Moderating Effect 2
Cloud Accounting (X2)	0.878					
Efektifitas Pengelolaan Keuangan (Y)	0.563	0.772				
Fintech Adoption (X1)	0.453	0.763	0.802			
Literasi Digital (Z)	0.740	0.684	0.570	0.867		
Moderating Effect 1	-0.156	-0.533	-0.569	-0.196	0.689	
Moderating Effect 2	-0.498	-0.228	-0.060	-0.702	-0.174	0.923

Source: Research Data, 2026

The internal consistency of the measurement instrument was assessed using reliability testing. In PLS-SEM, reliability can be evaluated through two measures: Cronbach's alpha and Composite Reliability. A construct is considered reliable when both the Cronbach's alpha and Composite Reliability values exceed the recommended threshold of 0.70.

The results of the reliability assessment indicate that the Cronbach's alpha and Composite Reliability values for all constructs are greater than 0.70. Therefore, all constructs included in this study demonstrate satisfactory internal consistency and reliability. These findings confirm that the questionnaire items used to measure the research variables are reliable and suitable for further analysis (see Table 5).

Table 5. Cronbach's alpha dan Composite reliability Value

Variabel	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Cloud Accounting (X2)	0.963	0.968	0.968	0.772
Efektifitas Pengelolaan Keuangan (Y)	0.902	0.907	0.921	0.596
Fintech Adoption (X1)	0.888	0.892	0.915	0.643
Literasi Digital (Z)	0.945	0.948	0.955	0.751
Moderating Effect 1	0.973	1.000	0.974	0.475
Moderating Effect 2	0.997	1.000	0.997	0.853

Source: Research Data (Processed), 2026

Structural Model (Inner Model). Inner model testing was conducted to determine the relationships among the latent variables in the research model. The inner model was evaluated by examining the R-squared (R^2) value, path coefficients, t-statistics, and p-values obtained through the bootstrapping procedure. The test results are presented in Figure 1 below:

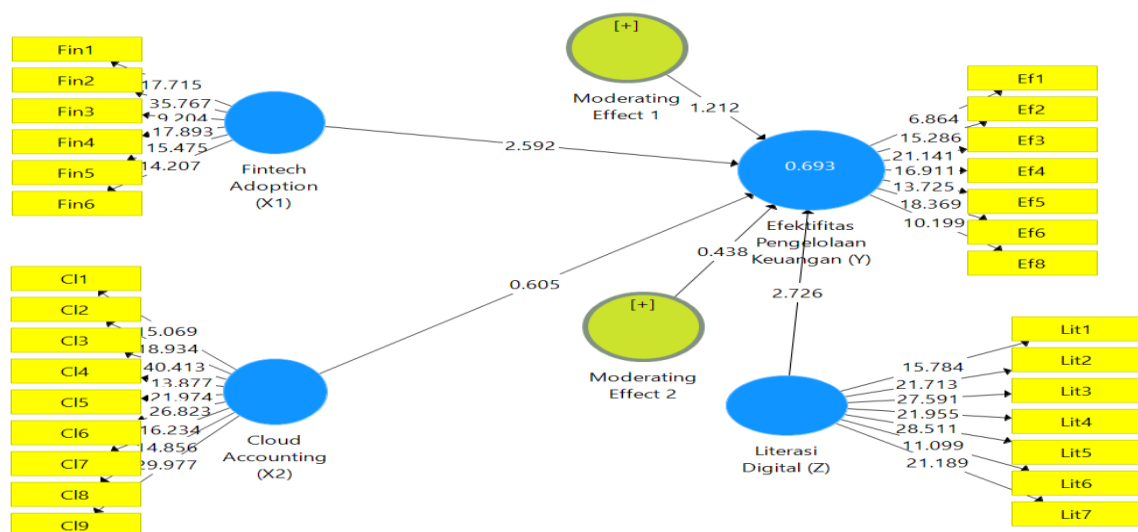


Figure 1. Inner Model

Source: SmartPLS Output (2026)

Coefficient of Determination (R-square). The structural model in PLS was evaluated based on the coefficient of determination (R-squared). According to the analysis results, the R-squared value for the endogenous variable was 0.717, indicating that the independent variables explained 71.7% of the variation in the dependent variable, while the remaining 28.3% was explained by other factors outside the research model.

Hypothesis Testing. Table 6 shows the results of hypothesis testing using the bootstrapping method in SmartPLS. A hypothesis is considered supported if the t-statistic is > 1.96 and the P-value is < 0.05 . Conversely, a hypothesis is considered not supported if the t-statistic is < 1.96 and the P-value is > 0.05 .

Table 6. Hypothesis testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Fintech Adoption (X1) -> (Y)	0.363	0.388	0.140	2.592	0.010
Cloud Accounting (X2) -> (Y)	0.090	0.161	0.149	0.605	0.546
Literacy Digital (Z) -> (Y)	0.434	0.341	0.159	2.726	0.007
Moderating Effect 1 -> (Y)	-0.193	-0.167	0.159	1.212	0.226
Moderating Effect 2 -> (Y)	0.062	0.016	0.141	0.438	0.662

Source: Research Data, 2026

Based on the results of the hypothesis testing in Table 6, it is found that the Fintech Adoption variable (X1) has a positive and significant effect on Financial Management Effectiveness (Y). This is indicated by the path coefficient (Original Sample) of 0.363, a t-statistic of 2.592 (> 1.96), and a P-value of 0.010 (< 0.05). Thus, the hypothesis stating that Fintech Adoption influences Financial Management Effectiveness is accepted.

Furthermore, the Cloud Accounting variable (X2) has a path coefficient of 0.090, a t-statistic of 0.605 (< 1.96), and a P-value of 0.546 (> 0.05). These results indicate that Cloud Accounting does not have a significant effect on the Effectiveness of Financial Management. Therefore, the hypothesis stating that Cloud Accounting influences the Effectiveness of Financial Management is rejected. The test results also show that Digital Literacy (Z) has a positive and significant effect on the Effectiveness of Financial Management. This is evident from the path coefficient of 0.434, the t-statistic of 2.726 (> 1.96), and the P-value of 0.007 (< 0.05). Thus, the hypothesis stating that Digital Literacy influences the Effectiveness of Financial Management is accepted.

In the moderation effect test, Moderating Effect 1 had a path coefficient of -0.193, a t-statistic of 1.212 (< 1.96), and a P-value of 0.226 (> 0.05). Results: In the moderation effect test, Moderating Effect 1 had a path coefficient of -0.193, a t-statistic of 1.212 (< 1.96), and a P-value of 0.226 (> 0.05). These results indicate that the moderating variables were not able to significantly moderate the relationship between the independent variables and the effectiveness

of financial management. Thus, the first moderation hypothesis is rejected. Meanwhile, Moderating Effect 2 has a path coefficient of 0.062, a t-statistic of 0.438 (< 1.96), and a p-value of 0.662 (> 0.05). These results indicate that the second moderating effect also does not have a significant impact on Financial Management Effectiveness. Therefore, the second moderating hypothesis is rejected. This indicates that the moderating variable was unable to significantly moderate the relationship between the independent variable and Financial Management Effectiveness. Thus, the first moderating hypothesis is rejected. Meanwhile, Moderating Effect 2 has a path coefficient of 0.062, a T-statistic of 0.438 (< 1.96), and a P-value of 0.662 (> 0.05). These results indicate that the second moderation effect was also not significantly associated with financial management effectiveness. Therefore, the second moderation hypothesis is rejected.

The Impact of Fintech Adoption on the Effectiveness of MSME Financial Management.

The results of this study show that fintech adoption has a positive and significant impact on the effectiveness of MSME financial management. These findings indicate that fintech adoption helps business owners manage transactions more efficiently, quickly, and with proper documentation. The majority of respondents in this study adopted e-wallets and QRIS (83%) in managing their businesses and found it easier to monitor cash flow, reduce cash transactions, and access transaction histories in real time. This makes the financial control and evaluation process more structured, thereby supporting more accurate business decision-making. These findings align with a study (Amaliani & Muliyani, 2024) which states that the ease of use of digital payment technologies encourages their adoption by SMEs and improves business operational efficiency.

More specifically, fintech's impact on the effectiveness of financial management extends beyond the technological aspect to including the creation of a digital transaction history that enhances the transparency and accuracy of financial information. When all transactions are recorded electronically, MSME operators have more comprehensive data to manage liquidity, control expenses, and plan for business needs. This phenomenon is closely tied to the growing trend of digital payments in Indonesia. Bank Indonesia reports that the volume of QRIS transactions in 2024 grew by more than 175% compared to the previous year, with MSMEs as the largest user group. This high level of adoption demonstrates that fintech has become a vital tool in supporting more successful financial management for MSMEs, particularly for businesses with a high frequency of daily transactions.

The Impact of Cloud Accounting on the Effectiveness of Financial Management in MSMEs. The results of the study show that cloud accounting does not have a significant impact on the effectiveness of financial management in MSMEs. These findings indicate that the respondents' use of cloud accounting has not delivered optimal benefits in supporting business financial management. Based on field observations, 75% of respondents in this study use cloud accounting only partially, primarily for recording sales transactions or point-of-sale (POS) functions. However, only 25% of respondents utilize more comprehensive cloud accounting

features—such as preparing income statements, balance sheets, cash flow statements, and financial analyses—and these features have not yet been fully leveraged. As a result, the use of cloud accounting has not produced higher-quality financial information to support business decision-making.

These findings are aligned with a study (Pradesa et al., 2023) that explains that the adoption of cloud accounting among MSMEs in Indonesia is still in its early stages, meaning its utilization is not fully optimized to support comprehensive accounting and financial reporting processes. Furthermore, (Syahputri & Putu, 2025) found that the success of accounting digitization is determined not merely by the availability of technology but the readiness of users, their accounting competencies, and their ability to utilize the system in an integrated manner. Thus, the lack of a significant effect of cloud accounting in this study suggests that MSMEs have not yet fully leveraged this technology, rather than indicating that cloud accounting is not beneficial for business financial management.

The Moderating Effect of Digital Literacy on the Effectiveness of MSME Financial Management. The research findings indicate that digital literacy does not moderate the effects of fintech adoption and cloud accounting on the effectiveness of MSME financial management. These findings indicate that the digital capabilities of business owners are insufficient to maximize the benefits of technology in financial management. Although the majority of respondents have used QRIS, mobile banking, e-wallets, and cloud accounting, their usage is still limited to daily transactions and operational activities. Consequently, digital literacy has been unable to enhance the effectiveness of these technologies in supporting more effective financial management.

These findings indicate that digital skills need to be supported by more specific competencies, such as financial literacy and managerial skills, in order to enhance business performance. (Wulandari et al., 2024) (Septianda & Canggi, 2023) found that digital capabilities play a greater role as a factor influencing MSME performance directly rather than as variables that strengthen the relationships between other variables. Thus, the lack of a significant moderating effect of digital literacy in this study suggests that the effectiveness of MSME financial management is determined more by how technology is utilized in business activities than by the level of digital literacy itself. However, this contrasts with the study by (Kiswanto & Abdul Aziz Nugraha Pratama, 2024), which found that digital literacy moderates the effect of product innovation on the competitive advantage of MSMEs, as well as the study by (Maitri et al., 2024) which demonstrated that digital literacy strengthens the effect of social media innovation on the sustainability of MSME businesses. These differing results suggest that the moderating role of digital literacy is stronger when technology is strategically utilized to create added value and a competitive advantage for the business. Meanwhile, in this study, fintech and cloud accounting are mainly used to support transactions and operational record-keeping; thus, digital literacy has not become a key factor in enhancing the effectiveness of financial management.

Consequently, the benefits of technology for financial management are determined more by the extent to which features are utilized and technology is integrated into business processes than by the level of digital literacy alone.

CONCLUSION & SUGGESTION

Based on the research findings, it can be concluded that fintech adoption and digital literacy have a positive and significant impact on the effectiveness of MSME financial management, whereas cloud accounting has no significant impact. These results indicate that the use of digital financial technologies such as QRIS, mobile banking, e-wallets, and payment gateways can help MSMEs improve the effectiveness of their financial management by facilitating transactions, record-keeping, and cash flow monitoring. Meanwhile, the lack of a significant effect from cloud accounting suggests that most MSMEs only use these applications partially—primarily for recording sales transactions—and thus are not yet able to derive optimal benefits for their financial management. Furthermore, digital literacy was found to have a direct effect on the effectiveness of financial management but was unable to moderate the effects of fintech adoption and cloud accounting, suggesting that the digital capabilities of MSME operators are not adequate to reinforce the use of technology in financial management.

Based on these findings, MSMEs are advised to optimize their use of cloud accounting not only as a recording tool for transactions but also for preparing financial statements, managing cash flow, and analyzing business performance. In addition, capacity-building programs for MSME operators should focus on developing digital financial literacy and digital accounting competencies in order to maximize the benefits of fintech and cloud accounting. For future researchers, it is recommended to include other variables—such as financial literacy, technological readiness, accounting competencies, or government support—as moderating or mediating variables to gain a more comprehensive understanding of the factors influencing the effectiveness of MSME financial management.

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