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The Influence of Financial Literacy and Financial Inclusion on Financial Management Among MSMEs in South Tondano District

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Abstract		This study examines the influence of financial literacy and financial inclusion on financial management among micro, small, and medium enterprises (MSMEs) in South Tondano District, Minahasa Regency, Indonesia. A quantitative causal-associative design was employed. The population comprised 2,216 culinary MSMEs, and 100 respondents were selected through purposive sampling based on the Cochran sample-size calculation. Primary data were collected using questionnaires and analyzed through multiple linear regression with IBM SPSS Statistics 25. The results show that financial literacy has a positive and statistically significant effect on MSME financial management (B = 0.588; β = 0.565; t = 9.035; p < 0.001). Financial inclusion also has a positive and significant effect (B = 0.442; β = 0.423; t = 6.769; p < 0.001). The adjusted coefficient of determination is 0.927, indicating that the two predictors jointly explain 92.7% of the variation in financial management in the estimated model. Financial literacy demonstrates the larger standardized coefficient and t-statistic, suggesting a stronger relative association in this sample. The findings underline the importance of strengthening business owners' financial knowledge and their effective access to and use of formal financial services.
Keywords		Financial literacy; financial inclusion; financial management; MSMEs; South Tondano.
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INTRODUCTION

Micro, small, and medium enterprises (MSMEs) play an important role in local economic activity by creating employment, supporting household income, and sustaining community-based production and trade. Their contribution, however, depends not only on sales and operational capability but also on the ability of owners to manage business

finances. Financial management includes planning financial needs, preparing budgets, recording transactions, monitoring cash flows, controlling expenditure, and evaluating financial performance. In small enterprises, these activities are often performed directly by the owner, making the owner's financial knowledge and access to appropriate financial services particularly consequential.

Financial management challenges can be observed in the daily practices of small businesses. Owners may fail to record income and expenditure consistently, mix personal and business funds, or make decisions without a clear budget. Such practices limit their ability to determine actual profit, anticipate cash requirements, assess borrowing capacity, and plan business expansion. Research on MSMEs has consequently emphasized the importance of financial management practices and the role of financial capability in supporting business continuity (Khadijah & Purba, 2021; Hilmawati, 2021).

Financial literacy refers to the knowledge and skills that enable individuals to understand financial concepts and make informed financial decisions. For MSME owners, this capability is reflected in understanding budgeting, credit, savings, investment, financial risks, and the need for reserves. Financially literate owners are better equipped to assess financing costs, plan cash requirements, distinguish productive from unproductive expenditure, and make decisions based on the financial condition of their businesses. Previous studies have reported positive associations between financial literacy and financial management or MSME performance (Ardiansyah et al., 2022; Hilmawati & Kusumaningtias, 2021; Kodu et al., 2023; Santiara & Sinarwati, 2023).

Financial inclusion complements financial literacy by referring to the availability, accessibility, and use of formal financial products and services. These services may include bank accounts, savings facilities, credit, payment services, and digital financial channels. Access alone does not guarantee better financial management; business owners must also understand the costs, terms, and suitability of available services. Nevertheless, accessible and usable financial services can support safer transactions, liquidity management, savings, and financing for business activities. Studies have linked financial inclusion with MSME sustainability, financial management, and business performance (Aprayuda & Wahana Warga Dalam, 2022; Harefa et al., 2024; Martono & Febriyanti, 2023; Usmayanti & Putri, 2023).

The Theory of Planned Behavior provides a useful perspective for explaining why financial knowledge and access may be reflected in financial management practices. Ajzen (1991) explains that behavior is shaped by behavioral intentions, which are influenced by attitudes, subjective norms, and perceived behavioral control. In the context of MSMEs, financial literacy can strengthen owners' attitudes and confidence toward planning, recording, saving, and controlling business finances. Financial inclusion can enhance perceived behavioral control by making financial services more accessible and practical to use. These factors may therefore support the intention and ability to undertake more systematic financial management.

The local context of South Tondano District provides a relevant setting for examining these relationships. The thesis-based research population consisted of 2,216 culinary MSME units distributed across eight local areas: Tataaran II, Tataaran I, Koya, Tataaran

Patar, Peleloan, Tounsaru, Maesa Unima, and Urongo. Culinary businesses have recurring operating expenses, relatively frequent cash transactions, and inventory requirements that make budgeting and cash-flow monitoring important. A preliminary survey of 30 businesses indicated that only 36.7% reported routinely recording business income and expenditure, while 63.3% did not. The same preliminary survey showed that 36.7% reported understanding basic financial management concepts. These initial observations suggest a practical need to examine whether financial literacy and financial inclusion are associated with financial management among local MSMEs.

Prior empirical studies have investigated these variables in different Indonesian settings. Astuti and Soleha (2023) examined financial literacy, financial inclusion, and locus of control in relation to MSME financial management, while Kusumaningrum et al. (2023) considered financial literacy, inclusion, and financial attitudes among MSMEs in Godean. Munthay and Sembiring (2024) also examined the joint influence of literacy and inclusion on MSME financial management. Related work has explored financial literacy and financial attitudes (Fitria et al., 2021), financial literacy and financial management (Mayasari et al., 2022), and financial inclusion in relation to MSME performance (Harefa et al., 2024). The present study contributes local empirical evidence from culinary MSMEs in South Tondano District. Additional evidence is provided by Pratiwi and Kurniawan (2023), Putri and Rahyuda (2024), and Yasminudin et al. (2024), whose studies address financial inclusion or financial literacy in relation to MSME financial management. Munthay and Sembiring (2024) also provide a directly comparable investigation of the two predictors.

Based on this background, this study aims to examine (1) the influence of financial literacy on financial management among MSMEs in South Tondano District and (2) the influence of financial inclusion on financial management among these MSMEs. The proposed hypotheses are that financial literacy has a positive and significant influence on MSME financial management (H1), and financial inclusion has a positive and significant influence on MSME financial management (H2).

METHOD

This research employed a quantitative approach with a causal-associative design to examine the relationships between financial literacy, financial inclusion, and MSME financial management. The study was conducted among culinary MSMEs in South Tondano District, Minahasa Regency, Indonesia. The population comprised 2,216 culinary MSME units. Using the Cochran sample-size calculation, the study determined a sample of 100 respondents. Respondents were selected through purposive sampling. The questionnaire distribution record shows that 110 questionnaires were distributed and 100 usable questionnaires were returned, representing a response rate of 90.91%.

Primary data were collected through a structured questionnaire. Responses were measured using a five-point Likert scale ranging from strongly disagree to strongly agree. The financial literacy construct covered understanding of basic financial management, budgeting, credit, savings, investment, and financial risk. Financial inclusion covered

access to formal financial services, ease of access, credit facilities, savings, and the use of financial services. Financial management covered business financial planning, recording, reporting, and control. The questionnaire items were tested for validity and reliability before hypothesis testing.

Data were processed using IBM SPSS Statistics 25. The analysis included descriptive statistics, validity and reliability tests, classical assumption tests, and multiple linear regression. Normality was examined using the One-Sample Kolmogorov–Smirnov test; multicollinearity was assessed using tolerance and variance inflation factor (VIF); and heteroscedasticity was examined using a scatterplot and Spearman correlation procedure as reported in the thesis. The partial t-test was used to assess each independent variable, while the coefficient of determination was used to assess the explanatory capacity of the regression model. Statistical significance was evaluated at the 5% level.

FINDINGS AND DISCUSSION

Respondent and descriptive profile

Of the 110 questionnaires distributed to culinary MSME owners, 100 were returned and could be analyzed. Women accounted for 64 respondents (64%), while men accounted for 36 respondents (36%). In terms of business category, 80 respondents (80%) operated halal culinary businesses and 20 (20%) operated non-halal culinary businesses. The descriptive statistics show a mean financial literacy score of 46.03 (standard deviation = 5.624), a mean financial inclusion score of 45.88 (standard deviation = 5.604), and a mean financial management score of 46.08 (standard deviation = 5.855). The observed score ranges were 31–55 for financial literacy, 32–55 for financial inclusion, and 30–55 for financial management.

Instrument testing indicated that all questionnaire items met the validity criterion reported in the thesis. The Cronbach's alpha values were 0.799 for financial literacy, 0.795 for financial inclusion, and 0.822 for financial management, each exceeding the stated threshold of 0.60. The normality test produced an Asymp. Sig. value of 0.140, above 0.05. Tolerance values for both independent variables were 0.189 and VIF values were 5.289, indicating that the model met the study's stated multicollinearity criteria.

The influence of financial literacy on MSME financial management

The regression results indicate a positive and statistically significant relationship between financial literacy and financial management. The unstandardized coefficient for financial literacy was 0.588, the standardized coefficient was 0.565, and the t-statistic was 9.035, with a reported significance value of 0.000 ($p < 0.001$). Since the t-statistic exceeded the critical value of 1.984 and the significance level was below 0.05, H1 was accepted. This result indicates that higher financial literacy is associated with better financial management among the sampled culinary MSMEs in South Tondano District.

This finding is consistent with research indicating that financial literacy is relevant to the way MSME owners plan and manage their business finances. Ardiansyah et al. (2022) and Hilmawati and Kusumaningtias (2021) discuss the contribution of financial literacy to MSME financial management, while Kodu et al. (2023) report a relationship between financial literacy and financial management among MSMEs in a university food-court

setting. Santiara and Sinarwati (2023) likewise examine financial literacy in relation to MSME financial management. Together, these studies support the interpretation that financial knowledge is not merely theoretical; it can be reflected in practical routines such as budgeting, recording, saving, credit assessment, and risk control.

From the perspective of the Theory of Planned Behavior, financial literacy can strengthen positive evaluations of disciplined financial practices and increase owners' perceived ability to perform them (Ajzen, 1991). An owner who understands budgeting, credit obligations, investment, and risk is more likely to recognize the value of separating business funds, monitoring cash flows, and preparing reserves. The result is also consistent with the preliminary survey, in which a substantial proportion of respondents reported not recording business income and expenditure regularly. Strengthening financial literacy may therefore help address practical weaknesses in financial planning and control.

The influence of financial inclusion on MSME financial management

Financial inclusion also has a positive and statistically significant influence on MSME financial management. The regression coefficient was 0.442, the standardized coefficient was 0.423, and the t-statistic was 6.769, with a reported significance value of 0.000 ($p < 0.001$). Because the t-statistic was greater than the critical value of 1.984 and the significance value was below 0.05, H2 was accepted. This finding suggests that better access to and use of financial services are associated with improved financial management among the respondents.

The result is in line with studies that position financial inclusion as an important factor in MSME development and financial practices. Aprayuda and Wahana Warga Dalam (2022) examine the relationship between financial literacy, inclusion, and MSME performance. Hilmawati (2021) similarly considers inclusion and literacy in relation to MSME performance and sustainability. Martono and Febriyanti (2023) examine financial inclusion, financial literacy, and financial management in relation to MSME performance, while Usmayanti and Putri (2023) focus on financial inclusion and MSME financial management behavior. Harefa et al. (2024) further discuss the role of financial inclusion in MSME business sustainability.

Access to a bank account, savings, credit, and digital payment services can facilitate the handling of business transactions and the allocation of funds. However, inclusion should be understood not only as account ownership or service availability, but also as the ability to use services appropriately. The preliminary survey found that 66.7% of respondents reported having a bank account for business purposes and 60% reported using digital financial services, while only 16.7% reported using credit or loan services. These figures illustrate that different forms of financial access are not used uniformly. The positive regression result indicates that more effective access and use, as captured by the study's inclusion measure, are associated with better financial management.

Relative contribution of the predictors and model explanatory power

Comparing the standardized coefficients, financial literacy (β = 0.565) had a larger coefficient than financial inclusion (β = 0.423). The t-statistic for financial literacy (9.035) was also higher than that for financial inclusion (6.769). Within this sample and the specified regression model, financial literacy therefore showed the stronger relative statistical association with financial management. This comparison does not imply that access to financial services is unimportant; rather, it suggests that knowledge and capability may be especially influential in determining whether owners can translate financial opportunities into systematic business practices.

The model summary reported R = 0.964, R Square = 0.928, and Adjusted R Square = 0.927. Accordingly, the two independent variables explain 92.7% of the variation in MSME financial management when the adjusted measure is considered, while the remaining 7.3% is attributable to factors outside the model. Possible factors for future investigation include financial attitudes, locus of control, business experience, owner characteristics, digital financial technology, and access to capital. The relevance of additional factors is also reflected in prior studies that have considered financial attitudes and locus of control alongside literacy and inclusion (Astuti & Soleha, 2023; Fitria et al., 2021; Kusumaningrum et al., 2023).

The findings have practical implications for MSME owners, local government, financial institutions, and business-support organizations. Financial education programs should emphasize applied skills—cash-flow planning, simple bookkeeping, budgeting, credit evaluation, savings, and risk management—rather than focusing only on general financial concepts. Financial institutions can contribute by improving the accessibility and clarity of products, explaining fees and repayment obligations, and supporting the appropriate use of digital financial services. Local MSME development programs may combine financial literacy assistance with practical guidance on opening and using formal financial accounts. Such integrated support is consistent with the national policy emphasis on strengthening financial literacy and inclusion (Otoritas Jasa Keuangan, 2022).

CONCLUSION

This study concludes that financial literacy has a positive and significant influence on financial management among culinary MSMEs in South Tondano District. Financial inclusion also has a positive and significant influence on financial management. Both hypotheses are therefore supported by the study's partial regression tests. The standardized coefficient comparison indicates that financial literacy has a stronger relative association with financial management than financial inclusion in the estimated model.

The adjusted R Square of 0.927 indicates that financial literacy and financial inclusion jointly explain 92.7% of the variation in financial management in this sample. The results emphasize the importance of improving MSME owners' financial knowledge while ensuring that formal financial services are accessible and can be used effectively. Practical support should focus on budgeting, recording, reporting, cash-flow control, credit management, savings, and risk preparedness.

This study is limited to 100 culinary MSME respondents in one district and uses a cross-sectional questionnaire design. The results should therefore be interpreted within the study setting and should not automatically be generalized to all MSME sectors or regions. Future studies may include additional variables, larger samples, other business sectors, and longitudinal observations to examine how financial literacy and financial inclusion relate to changes in financial management over time.

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