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The Influence of Financial Literacy and Financial Inclusion on the Sustainability of MSMEs in Kudus Regency

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Abstract

This study aims to analyze the influence of financial literacy and financial inclusion on the business sustainability of Micro, Small, and Medium Enterprises (MSMEs) in the culinary sector in Kudus Regency. MSMEs play an important role in regional economic development, employment creation, and income distribution; however, many culinary MSMEs continue to face challenges related to financial management, limited access to formal financial services, and long-term business sustainability. This study employed a quantitative approach using a descriptive correlational design with a cross-sectional method. A total of 115 respondents were selected through probability sampling techniques to ensure representative data. Data collection was conducted using structured questionnaires, while data analysis involved descriptive statistics, validity and reliability testing, classical assumption testing, multiple linear regression analysis, and hypothesis testing. The findings reveal that financial literacy and financial inclusion have a positive and significant effect on the sustainability of culinary MSMEs, both partially and simultaneously. The Adjusted R Square value of 0.517 indicates that 51.7% of business sustainability is explained by the two independent variables, while the remaining percentage is influenced by other factors outside the model. These findings highlight the importance of strengthening financial knowledge and expanding access to financial services to support sustainable MSME development in Kudus Regency and improve long-term business competitiveness significantly.

Keywords: Financial Literacy, Financial Inclusion, MSME Sustainability, Culinary MSME

1. Introduction

Nationally, the number of MSMEs in Indonesia reaches approximately 65 million business units, contributing 61% to GDP and absorbing approximately 97% of the national workforce (KEMENKOPUKM RI, 2024). The sustainability of MSMEs can be influenced by many factors that make MSMEs more resilient in economic situations, including MSME capabilities such as innovation, human resource management, customer relationships, and the ability to manage business capital (Erwin et al., 2023). However, many MSMEs still experience difficulties in maintaining business continuity due to a lack of understanding of financial management, including transaction recording, separation of personal and business finances, and cash flow planning (Natsir & Waani, 2023). This condition can hinder business development, increase the risk of loss, and reduce the welfare of business actors and workers (Jufri, 2023). In addition, limited financial management can also hinder business expansion, product innovation, and the ability to face business risks such as rising raw material prices and market competition (Sitompul, 2023).

Within the sustainability framework of MSMEs, financial literacy occupies a central position as an internal capacity that shapes how financial resources are navigated. This dimension extends across cognitive understanding, practical capability, behavioral patterns, and attitudinal orientation in handling financial matters (Akande et al., 2023). In operational terms, the presence of this competence aligns business processes with clearer reporting structures, tighter control mechanisms, and more accountable financial conduct (Yanti & Zuhroh, 2022). When this capacity is embedded, MSMEs operate with more structured financial records, maintain stable cash flow cycles, and respond to financial choices with greater precision conditions that reinforce both performance stability and long-term continuity (Leatemia et al., 2023).

A complementary layer emerges through financial inclusion, which situates MSMEs within a broader access network to formal financial systems. Through this access ranging across banking facilities, credit channels, and digitally mediated financial services business actors gain entry points to capital expansion and operational scaling

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(Hilmawati & Kusumaningtias, 2021). At the macro level, national indicators reflect this dual structure: literacy reached 65.4%, while inclusion stood at 75.02% in 2024, marking an upward shift relative to the prior period (Finance, 2024). The gap between the two figures signals that access expansion has progressed more rapidly than capability formation, creating a configuration where system availability and user readiness do not fully converge.

Across the analytical landscape of MSME sustainability, financial literacy and financial inclusion appear as two interacting components within the same structural system. In this configuration, literacy aligns with internal readiness in handling financial decisions, while inclusion connects business actors to external financial channels. When both elements converge, the sustainability trajectory of MSMEs particularly in the culinary sector reflects a strong relational intensity, indicated by an association level reaching 75.6% (Yanti & Zuhroh, 2022).

Within a localized setting such as Yogyakarta, this dual structure extends into performance dynamics. The interaction between financial capability and access to financial services forms a condition where operational outcomes become more responsive to financial management quality and resource availability (Pradipta & Kristanto HC, 2024).

A broader configuration further shows that, when treated simultaneously, these two variables account for 41.3% of the variation in MSME sustainability, indicating a measurable contribution within the overall system (Djafar et al., 2025).

From a theoretical standpoint, this pattern is consistent with the logic embedded in Financial Intermediation Theory. Within this framework, financial institutions occupy a bridging position that links surplus funds with business actors requiring capital. The consequence of this linkage lies in the expansion of financing opportunities and the strengthening of business continuity, particularly when MSMEs are both capable of managing finances internally and connected to formal financial infrastructures.

Within Kudus Regency, the culinary MSME sector dominates in scale, totaling 18,436 units. The structure is largely composed of micro enterprises (93.5%), while small businesses account for 6% and medium-scale actors only 0.6% (MSMEs, 2024). Such a composition points to a system characterized by limited capacity at the unit level, where continuity is closely tied to internal readiness alongside access to external financial support.

At the operational level, funding patterns remain centered on personal and family resources, creating constraints in expansion and reducing business flexibility (Saa et al., 2020). This condition narrows access to wider financing channels and weakens responsiveness to shifting market dynamics.

A structural imbalance becomes visible when the large number of MSMEs is placed against the relatively low capability in financial management, particularly under the pressure of digital economic transformation (Mustaghfiroh & Martini, 2025). In many cases, financial planning is not systematically arranged, understanding of financial management remains limited, and linkage to formal funding sources is still weak.

Under these conditions, financial literacy and financial inclusion emerge as critical limiting factors, where MSME sustainability is shaped more by constrained capacity than by growth potential.

The analytical direction of this study is centered on examining how financial literacy and financial inclusion interact within the sustainability framework of culinary MSMEs in Kudus Regency. The focus lies on positioning both variables as key elements within the business continuity structure rather than as isolated factors.

From a practical standpoint, the expected outcome relates to strengthening MSME awareness in managing financial processes and expanding access to formal financial services. The consequence of this alignment is an improvement in business resilience alongside broader welfare outcomes.

In the academic domain, this study extends the discourse within accounting by situating financial literacy and financial inclusion as integral components in explaining MSME sustainability, particularly within small-scale business contexts.

2. Research Method

This study operates within a quantitative framework, combining a descriptive–correlational design with a cross-sectional setting. Numerical data serve as the primary basis for examining variable relationships, where statistical procedures are applied to maintain objective measurement of associations (Sugiyono, 2016). Within this configuration, observation is confined to a single time point, allowing the linkage between financial literacy, financial inclusion, and MSME sustainability to be captured without repeated measurement cycles (Priadana & Sunarsi, 2021).

The procedural flow begins with situating the issue of limited financial literacy and inclusion among culinary MSMEs in Kudus Regency. This is followed by constructing a theoretical foundation alongside hypothesis formulation, after which the methodological design is finalized. Data are then gathered through questionnaire instruments, processed using statistical analysis, and concluded with interpretative outcomes that lead to recommendations.

The research variables consist of two independent variables, namely financial literacy (X_1) and financial inclusion (X_2), and one dependent variable, namely MSME sustainability (Y). Independent variables are variables that influence other variables, while dependent variables are variables that are influenced by independent variables (Priadana & Sunarsi, 2021). Financial literacy is measured through indicators of financial knowledge, behavior, and attitudes (Ramadani, 2024), while financial inclusion is measured through access, use, and quality of financial services (Finance, 2024). MSME sustainability is measured based on the business's ability to survive economically and accountingly (Tri Widayati, 2025).

The empirical scope covers all culinary MSMEs in Kudus Regency, totaling 18,436 units. Within this population frame, each unit holds an equal selection probability through a simple random sampling scheme, ensuring no subgroup receives preferential inclusion (Sugiyono, 2016). Sample size determination follows the Slovin approach under a 5% margin of error, yielding 115 respondents as the analytical subset. The dataset is derived from primary sources, collected structured questionnaires. Respondent perceptions toward the observed variables are captured using a five-point Likert scale, enabling quantification for subsequent statistical processing (Sugiyono, 2016).

The analytical procedure is carried out using SPSS through a sequence that begins with descriptive exploration, followed by data quality assessment, assumption verification, and regression modeling. Data validity is examined through the Pearson Product Moment Correlation, where acceptance depends on the comparison between calculated and critical values. Reliability is evaluated using Cronbach's Alpha with a minimum threshold of 0.60 (Ghozali, 2018).

Before entering the regression stage, several prerequisite conditions are tested. Distributional conformity is assessed via the Kolmogorov-Smirnov Test, while potential interdependence among independent variables is examined through tolerance levels and VIF indicators. Variance consistency is checked using the Glejser Test.

The core analytical model applies Multiple Linear Regression to map the relationship between financial literacy, financial inclusion, and MSME sustainability. Within this framework, partial influence is read through the t-test, joint influence through the F-test, and explanatory capacity through the coefficient of determination (R^2), indicating how far the independent variables account for variation in the dependent variable (Ghozali, 2018).

3. Result and Discussion

Table 1. Descriptive Statistics By Age

Variables	Mean	Median	Minimum	Maximum	Elementary School
Age	38.68	40	19	69	13,210

The results show that the majority of respondents had an average age of 38.68 years with a median of 40 years, a minimum age of 19 years, and a maximum of 69 years, with a standard deviation of 13.210. This indicates that most MSMEs are of productive age, which generally has better capabilities in business decision-making and financial management. Productive age is an important factor in business sustainability because individuals in this

age range tend to have experience, maturity of thought, and better ability to adapt to economic and technological developments.

Table 2. Descriptive Statistics Based on Gender, Education, Length of Business, Turnover, Employees, Ownership, and Location

Characteristics	f	%
Gender		
Man	84	73.0
Woman	31	27.0
Education		
Elementary School	27	23.5
JUNIOR HIGH SCHOOL	7	6.1
SENIOR HIGH SCHOOL	72	62.6
S1	9	7.8
Length of Business		
≥1 Year	24	20.9
< 5 Years	79	68.7
< 10 Years	12	10.4
Turnover		
< Rp. 50,000,000	24	20.9
Rp. 50,000,000 – Rp. 100,000,000	75	65.2
≥ Rp. 100,000,000	16	13.9
Employee		
1-4 People	96	83.5
5-19 People	19	16.5
Ownership		
Private property	101	87.8
Not private property	14	12.2
Location		
Private House	31	27.0
Private Shop	63	54.8
Rental Place	21	18.3
Total	115	100

The respondent profile is predominantly composed of male business actors, accounting for 73.0% of the sample. In terms of educational background, most individuals are situated at the high school level (62.6%), indicating a concentration within secondary education. Within this condition, limitations in financial understanding and access to formal financial services may emerge as a consequence of the existing educational capacity.

From an operational timeline perspective, 68.7% of respondents have managed their businesses for less than five years. This pattern places the majority of MSMEs within an early development phase, where stability and expansion are still in progress.

Regarding business scale, turnover is largely clustered in the range of IDR 50,000,000 to IDR 100,000,000 (65.2%). This positioning aligns these enterprises within the small business category, where growth opportunities remain open but are still dependent on strengthening internal capacity and external support access. In addition, the majority of respondents had 1–4 employees (83.5%), business ownership was private (87.8%), and the majority of businesses were located in private shops (54.8%). This condition indicates that culinary MSMEs in Kudus Regency are dominated by small-scale businesses with simple organizational structures, individual ownership, and limited workforce capacity.

Table 3. Descriptive Statistics Based on MSME Sustainability, Financial Literacy, and Financial Inclusion

	N	Minimum	Maximum	Mean	Standard Deviation
Sustainability of MSMEs	115	24	40	32.19	3,551
Financial Literacy	115	20	30	26.45	2,268
Financial Inclusion	115	20	30	25.93	2,714

The descriptive profile of the variables indicates that financial literacy reaches a mean of 26.45 with a standard deviation of 2.268, while financial inclusion records an average of 25.93 and a dispersion level of 2.714. MSME sustainability shows a higher central value at 32.19, accompanied by a standard deviation of 3.551. The observed ranges remain relatively stable, with financial literacy and inclusion spanning 20–30, and sustainability extending from 24 to 40.

In statistical terms, the condition where the mean exceeds the standard deviation reflects a well-distributed dataset with no extreme fluctuation patterns (Ghozali, 2018). The implication of this structure lies in the reliability of the data for subsequent analysis, as variability remains within a controlled range.

From an analytical standpoint, the relatively elevated averages of financial literacy and financial inclusion indicate that MSME actors in Kudus Regency operate with an adequate level of financial understanding alongside access to formal financial services. This configuration strengthens decision-making processes, supports more efficient business management, and sustains operational continuity over time.

When viewed together with respondent characteristics, the overall pattern suggests that the culinary MSME sector is supported by both demographic readiness and financial capacity, creating conditions that are conducive to business development and long-term sustainability.

Table 4. Validity Test

Validity testing operates as a control mechanism to ensure that each measurement item accurately captures the intended construct. The assessment relies on comparing the correlation coefficient obtained from calculation with the reference value in the table. A positive coefficient that exceeds the threshold indicates that the item aligns with the construct being measured, whereas a lower value signals that the item does not adequately represent it and should be excluded.

The detailed outcomes of this evaluation are presented in the following table:

Variables	Indicator	R count	R table	Sig.	Alpha	Information
Sustainability of MSMEs (Y)	Y1	0.307	0.183	0.001	0.05	Valid
	Y2	0.390	0.183	0,000	0.05	Valid
	Y3	0.558	0.183	0,000	0.05	Valid
	Y4	0.667	0.183	0,000	0.05	Valid
	Y5	0.669	0.183	0,000	0.05	Valid
	Y6	0.658	0.183	0,000	0.05	Valid
	Y7	0.617	0.183	0,000	0.05	Valid
	Y8	0.589	0.183	0,000	0.05	Valid
Financial Literacy (X1)	X1.1	0.471	0.183	0,000	0.05	Valid
	X1.2	0.498	0.183	0,000	0.05	Valid
	X1.3	0.560	0.183	0,000	0.05	Valid
	X1.4	0.586	0.183	0,000	0.05	Valid
	X1.5	0.578	0.183	0,000	0.05	Valid
	X1.6	0.526	0.183	0,000	0.05	Valid
Financial Inclusion (X2)	X2.1	0.292	0.183	0.002	0.05	Valid
	X2.2	0.343	0.183	0,000	0.05	Valid
	X2.3	0.576	0.183	0,000	0.05	Valid
	X2.4	0.712	0.183	0,000	0.05	Valid
	X2.5	0.749	0.183	0,000	0.05	Valid
	X2.6	0.618	0.183	0,000	0.05	Valid

Within the measurement framework, all observed variables produce correlation coefficients that exceed the reference threshold ($r\text{-table} = 0.183$) and are accompanied by significance levels below 0.05. This configuration confirms that each indicator consistently aligns with the construct it is intended to capture.

As a consequence, the instruments used to represent MSME sustainability, financial literacy, and financial inclusion among culinary MSMEs in Kudus Regency meet the validity criteria and are suitable for further analysis.

Table 5. Reliability Test

Reliability testing functions to verify the consistency of measurement outcomes, both across different time points and across different users of the same instrument. Stability in results indicates that the instrument produces dependable measurements under varying conditions.

The evaluation applies the Cronbach's Alpha approach, where a coefficient exceeding 0.60 reflects acceptable internal consistency, while a value below this threshold signals that the measurement items lack reliability.

The detailed results of this assessment are presented in the following table:

Variables	Cronbach's Alpha	Limit Value	Information
Sustainability of MSMEs	0.726	≥ 0.60	Reliable
Financial Literacy	0.604	≥ 0.60	Reliable
Financial Inclusion	0.607	≥ 0.60	Reliable

The results show that all x and y variables produced *Cronbach's Alpha values* greater than the threshold of 0.60, thus indicating reliability. It can be concluded that the questionnaire items can be used as instruments for further research.

Table 6. Normality Test

The normality check is directed at verifying whether the residuals within the regression model follow a normal distribution pattern. This assessment applies the Kolmogorov-Smirnov Test with a significance threshold set at 0.05.

In this framework, a significance value exceeding 0.05 indicates that the distribution of residuals remains within normal boundaries, allowing the null assumption to be retained. On the other hand, a value below this threshold signals deviation from normality, implying that the residual structure does not meet the required distributional condition.

		Unstandardized Residual
N		115
Normal Parameters ^{a,b}	Mean	0.000000
	Standard Deviation	2.41456249
Most Extreme Differences	Absolute	0.063
	Positive	0.053
	Negative	-0.063
Test Statistics		0.063
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. Based on 10000 sampled tables with starting seed 2000000.		

The residual distribution produces an Asymp. Sig. (2-tailed) value of 0.200 based on the Kolmogorov-Smirnov Test. Since this value exceeds the threshold of 0.05, the distribution remains within normal limits.

Under this condition, the residual structure satisfies the normality requirement, indicating that the regression model does not exhibit distributional deviations.

Table 7. Multicollinearity Test

The multicollinearity assessment is directed at identifying potential overlap among independent variables within the regression structure. This condition is evaluated through the Variance Inflation Factor and tolerance indicators.

Within this framework, a VIF value below 10 alongside a tolerance level above 0.10 indicates that inter-variable dependency remains within acceptable limits, meaning the model does not exhibit multicollinearity issues.

The detailed outcomes of this test are presented in the following table:

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)	0.903	1.108
Financial Literacy	0.903	1.108
Financial Inclusion		

The diagnostic output shows that both financial literacy and financial inclusion produce tolerance values of 0.903, exceeding the minimum threshold of 0.10. At the same time, the Variance Inflation Factor for each variable is recorded at 1.108, remaining well below the upper limit of 10.

Within this configuration, the relationship between independent variables does not indicate problematic overlap. The absence of strong interdependence implies that each variable retains its distinct contribution within the model.

As a consequence, the regression structure is free from multicollinearity constraints, allowing all independent variables to be maintained in the multiple linear regression analysis.

Table 8. Heteroscedasticity Test

The heteroscedasticity check is aimed at detecting whether the residual variance remains consistent across observations within the regression model. This condition is evaluated using the Glejser Test.

In this setting, a significance value above 0.05 for each independent variable indicates that the variance of residuals is stable, meaning no heteroscedasticity is present. Conversely, values below this threshold would signal unequal variance across observations.

The detailed results of this assessment are presented in the following table:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,115	1,755		1,205	0.231
Financial Literacy	0.016	0.059	0.028	0.279	0.781
Financial Inclusion	-0.025	0.054	-0.045	-0.456	0.649

a. Dependent Variable: Abs_RES

The statistical output indicates that financial literacy records a significance value of 0.781, while financial inclusion shows 0.649. Both values exceed the 0.05 threshold under the Glejser Test framework.

This pattern reflects a stable residual variance across observations, meaning no unequal dispersion is detected within the model. As a consequence, the regression structure does not exhibit heteroscedasticity, allowing the analysis to proceed without adjustment.

Table 9. Multiple Linear Regression Analysis Test

Multiple linear regression is applied to capture how independent variables relate to the dependent variable, both in terms of directional tendency and the scale of their contribution. Within this framework, each variable’s role is interpreted through its coefficient, reflecting how changes in the predictors are associated with shifts in the outcome.

The detailed results of the Multiple Linear Regression analysis in this study are presented in the following table:

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1,003	2,891		0.347	0.729
Financial Literacy	0.492	0.097	0.347	5,060	0,000
Financial Inclusion	0.701	0.089	0.537	7,834	0,000

a. Dependent Variable: Sustainability of MSMEs

The results of the multiple linear regression analysis obtained the following regression equation model:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + e$$

$$Y = 1.003 + 0.492X_1 + 0.791X_2 + e$$

The regression configuration reflects how each component contributes within the model structure. The constant value of 1.003 represents the baseline level of MSME sustainability when financial literacy and financial inclusion are held at a neutral point (zero), indicating the model’s starting position.

In the relationship between financial literacy and MSME sustainability, the coefficient of 0.492 signals a positive directional pattern. Within this linkage, an incremental rise in financial literacy is followed by an increase in sustainability of 0.492 units, assuming other factors remain unchanged.

A similar pattern appears in the connection between financial inclusion and sustainability. The coefficient of 0.701 indicates a stronger positive linkage, where each additional unit in financial inclusion corresponds to a 0.701-unit increase in MSME sustainability under constant conditions.

Overall, both variables occupy reinforcing positions within the regression system, with financial inclusion showing a relatively greater contribution compared to financial literacy.

Table 10. T-Test (Partial)

The partial testing stage is directed at identifying how each independent variable relates individually to the dependent variable within the regression structure. This evaluation relies on the significance value obtained from the t-statistic.

Within this framework, a significance level below 0.05 indicates that the variable holds a meaningful role in explaining changes in the dependent variable. In contrast, a value exceeding 0.05 reflects the absence of a statistically relevant contribution when the variable is assessed independently.

The detailed outcomes of the t-test are presented in the following table:

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1,003	2,891		0.347	0.729
Financial Literacy	0.492	0.097	0.347	5,060	0,000
Financial Inclusion	0.701	0.089	0.537	7,834	0,000

a. Dependent Variable: Sustainability of MSMEs

The results of the hypothesis testing are as follows:

a. First Hypothesis Testing (H1)

Within the partial testing structure, financial literacy (X_1) produces a significance value of 0.000, which falls below the 0.05 threshold, alongside a calculated t-value of 5.060 that exceeds the reference value of 1.98. This configuration places the variable in a statistically decisive position within the model. In the relationship between financial literacy and MSME sustainability (Y), the direction of association is positive, indicating that increases in financial literacy are aligned with higher levels of business sustainability. The statistical strength of this linkage confirms that the null assumption is not maintained, while the alternative proposition is supported. Under these conditions, financial literacy holds a meaningful and positive role in shaping MSME sustainability.

b. Testing the Second Hypothesis (H2)

Within the partial testing configuration, financial inclusion (X_2) records a significance value of 0.000, remaining below the 0.05 threshold, while the calculated t-value reaches 7.834 and surpasses the reference value of 1.98. This statistical position indicates that the variable carries strong explanatory weight in the model. In its linkage with MSME sustainability (Y), the relationship follows a positive direction, where higher levels of financial inclusion align with increased sustainability outcomes. The magnitude of the t-value further reflects a stronger influence compared to other variables in the same structure. Under these conditions, the null assumption is not sustained, and the alternative proposition is supported, confirming the meaningful role of financial inclusion in shaping MSME sustainability.

Table 11. F Test (Simultaneous)

The simultaneous testing stage examines how all independent variables operate collectively in relation to the dependent variable within the regression model. This assessment relies on the significance value derived from the F-statistic.

Within this structure, a significance level below 0.05 indicates that the independent variables, when considered together, provide a meaningful explanation of variations in the dependent variable. Conversely, a value above this threshold reflects that their combined influence does not reach statistical relevance.

The detailed results of the F-test are presented in the following table:

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	734,550	2	367,275	61,891	.000 ^b
Residual	664,633	112	5,934		
Total	1399,183	114			

a. Dependent Variable: Sustainability of MSMEs

b. Predictors: (Constant), Financial Inclusion, Financial Literacy

The simultaneous testing output shows an F-value of 61.993 with a significance level of 0.000, which remains below the 0.05 threshold. In parallel, the calculated F-value (61.993) exceeds the reference value of 3.08, placing

the model in a statistically strong position. Within this configuration, financial literacy and financial inclusion operate jointly in explaining variations in MSME sustainability. The combined effect indicates that both variables, when integrated within the same model, contribute meaningfully to the outcome. As a consequence, the null assumption is not maintained, and the alternative proposition is supported. This also confirms that the regression model is adequately specified and suitable for further analytical interpretation.

Table 12. Coefficient of Determination Test (R^2)

The coefficient of determination stage focuses on evaluating how far the independent variables account for variation in the dependent variable, using the Adjusted R Square indicator. Within this framework, the value reflects the proportion of explanatory power held by the model after considering the number of variables involved.

A higher Adjusted R Square indicates a stronger capacity of the independent variables to explain changes in the dependent variable, while a lower value suggests that much of the variation is influenced by factors outside the model.

The detailed results of this measurement are presented in the following table:

Model	R	R Square	Adjusted Square	R	Standard Error of the Estimate
1	.725 ^a	0.525	0.517		2,436

- a. Predictors: (Constant), Financial Inclusion, Financial Literacy
- b. Dependent Variable: Sustainability of MSMEs

The model exhibits an Adjusted R Square value of 0.517, indicating that financial literacy and financial inclusion collectively account for 51.7% of the variation in MSME sustainability. Within this structure, more than half of the outcome variability is explained by the variables included in the model.

The remaining 48.3% reflects influences originating outside the analytical framework, suggesting the presence of additional factors that contribute to MSME sustainability but are not captured in this study.

Discussion

1. The Influence of Literacy Finance On the Sustainability of Culinary MSMEs in Kudus Regency

Within the regression structure, financial literacy occupies a statistically decisive position in relation to the sustainability of culinary MSMEs in Kudus Regency. This position is reflected in a significance level of 0.000, which falls below the 0.05 threshold, alongside a positive coefficient of 0.492 that indicates a directional alignment between the two variables.

In this relational pattern, increases in financial literacy are followed by higher levels of MSME sustainability, confirming that the variable contributes meaningfully within the model. The statistical configuration places the null assumption outside the acceptable range, thereby supporting the alternative proposition.

Within the sustainability framework of culinary MSMEs in Kudus Regency, financial literacy occupies a central position in shaping business continuity. In this configuration, higher levels of financial understanding align with stronger capacity in budgeting, more controlled cash flow management, and more precise financial decision-making. The consequence of this alignment is a business condition that is more resilient and capable of maintaining long-term growth.

This pattern is consistent with the positioning found in (Yuliyawati & Mardiana, 2023) where financial literacy is placed as a reinforcing element within the sustainability structure of MSMEs.

The positioning of financial literacy within the MSME sustainability structure is reinforced by findings from by Maulana & Suyono (2023) where this variable occupies a foundational role in maintaining business stability. In this configuration, financial understanding is not merely supportive, but becomes a core element that underlies consistent business operations.

A complementary pattern appears in Kirana et al. (2024) where financial literacy is connected to MSME performance through the quality of financial reporting. The consequence of this linkage is an indirect strengthening of sustainability, as improved reporting practices enhance control, transparency, and decision accuracy.

Within the context of culinary MSMEs, this relationship gains further relevance as businesses increasingly integrate reporting technologies, placing financial literacy as a key driver in aligning operational practices with more efficient and sustainable systems.

2. The Influence of Inclusion Finance On the Sustainability of Culinary MSMEs in Kudus Regency

Within the regression configuration, financial inclusion occupies a strong position in relation to the sustainability of culinary MSMEs in Kudus Regency. This is reflected in a significance level of 0.000, which falls below the 0.05 threshold, alongside a positive coefficient of 0.701 that indicates a consistent directional linkage.

In this relationship, greater access to financial services aligns with higher levels of MSME sustainability, indicating that financial inclusion contributes meaningfully within the model. The statistical structure places the null assumption outside the acceptable range, thereby supporting the alternative proposition.

Based on these results, financial inclusion has also been proven to be a factor that MSMEs and policymakers need to consider when developing strategies to improve business sustainability. MSMEs with higher levels of financial inclusion generally have easier access to formal financial services such as savings, credit, and digital payment systems, thereby strengthening capital, maintaining smooth cash flow, and increasing business capacity for long-term survival and growth. This aligns with findings (Sahdan & Sardju, 2023) that financial inclusion positively contributes to MSME sustainability because access to formal financial services assists business actors in financial management and strengthens business stability.

The role of financial inclusion within the MSME sustainability structure is further reinforced by patterns identified in (Puspitasari et al., 2024) where access to financial services is linked with improved understanding and broader utilization among business actors. In this configuration, inclusion does not only open access channels but also strengthens the capacity to engage with formal financial systems.

A similar configuration appears in findings from Semarang City (Kisin & Setyahuni, 2024). where financial inclusion, alongside financial literacy, occupies a reinforcing position in sustaining MSME operations. The consequence of this alignment is a more stable growth trajectory, particularly under dynamic economic conditions, as access to formal financial services supports both expansion and resilience.

3. Discussion of the Coefficient of Determination (R^2) and its Relationship to *Rational Choice Theory*

The model exhibits an Adjusted R Square (R^2) value of 0.517, indicating that financial literacy and financial inclusion jointly account for 51.7% of the variation in the sustainability of culinary MSMEs in Kudus Regency. The remaining 48.3% reflects influences originating outside the model, pointing to additional factors that are not incorporated in the current analytical structure.

Within this configuration, the explanatory capacity of the model can be categorized as moderate to strong, where both independent variables hold meaningful positions in shaping sustainability outcomes. Their combined presence strengthens the ability of the model to capture variations in business continuity.

This pattern aligns with the logic embedded in Rational Choice Theory. In this framework, financial literacy is linked to improved decision rationality, while financial inclusion expands the range of available options. The consequence of this interaction is a more optimized decision process, where MSME actors can balance potential benefits and risks, ultimately reinforcing business sustainability.

The F-test results indicate that financial literacy and financial inclusion simultaneously significantly influence the sustainability of culinary MSMEs in Kudus Regency. This is indicated by a significance value of 0.000, which is less than 0.05. Therefore, the regression model is considered feasible, and the hypothesis stating a simultaneous influence is accepted. It can be concluded that financial literacy and financial inclusion do not act independently in influencing business sustainability, but rather work collectively in shaping business management decisions and

strategies. This finding suggests that increased financial understanding, followed by easier access to formal financial services, will jointly strengthen the resilience and sustainability of culinary MSMEs.

The simultaneous significance reflected in the F-test places financial literacy and financial inclusion within a unified decision framework rather than as isolated drivers. In this configuration, MSME sustainability is shaped through the interaction of internal financial understanding and external access to financial services, indicating that business continuity emerges from combined considerations rather than a single determinant.

This pattern corresponds with the logic of Rational Choice Theory, where economic actors operate by weighing available options against potential outcomes. Financial literacy strengthens the ability to evaluate alternatives, while financial inclusion expands the set of choices that can be accessed. The consequence of this interaction is a more calculated decision process, where MSME actors are better positioned to optimize gains while managing potential risks, ultimately reinforcing business sustainability.

The model shows an Adjusted R Square value of 0.517, placing its explanatory strength in the moderate–strong range. Within this structure, 51.7% of the variation in MSME sustainability is accounted for by financial literacy and financial inclusion, while the remaining portion reflects influences beyond the model.

This configuration aligns with the perspective of Rational Choice Theory, where economic actions emerge from calculated evaluation of benefits and risks. In this setting, financial literacy is linked to the capacity to interpret financial information, assess business risks in a measurable way, regulate cash flow, and organize investment planning. The consequence of this capability is a more structured and rational decision process in managing business activities.

At the same time, financial inclusion expands the range of accessible financial alternatives covering credit facilities, savings instruments, financing schemes, and digital financial services. The presence of these options broadens the decision space available to MSME actors. When both elements interact, the resulting condition reflects a strengthened rational capacity, where decisions are not only better informed but also supported by accessible financial pathways, ultimately reinforcing business sustainability.

4. Conclusion

Within the analytical structure, financial literacy (X_1) occupies a positive and statistically decisive position in relation to the sustainability of culinary MSMEs (Y) in Kudus Regency. In this relationship, stronger financial understanding aligns with improved capacity in planning, controlling, and managing business finances, which in turn supports continuity of operations. A parallel configuration appears in the linkage between financial inclusion (X_2) and MSME sustainability. Broader access to formal financial services such as savings, credit facilities, and digital payment system expands operational flexibility and strengthens business development pathways. The consequence of this access is a more stable and adaptive business condition. When both variables interact within the same model, their combined presence forms a significant and positive structure, indicating that sustainability is shaped through the integration of financial capability and financial access. The model's explanatory strength is reflected in an Adjusted R Square value of 0.517, where 51.7% of sustainability variation is accounted for, while 48.3% is linked to factors beyond the model. This pattern is consistent with Rational Choice Theory, where economic decisions emerge from the interaction between evaluative capacity and available alternatives. Financial literacy strengthens the ability to interpret and assess financial conditions, while financial inclusion expands the range of actionable choices. The interaction of both elements results in a more rational and optimized decision process, reinforcing the sustainability of MSMEs. Based on the results of the research and discussions that have been carried out, the suggestions that can be given are as follows: In terms of financial literacy, culinary MSMEs are advised to improve their working capital management skills. This can be achieved through disciplined separation of personal and business assets and digital financial record-keeping. Understanding cash flow and risk management is crucial for business sustainability in the culinary sector, given that fluctuations in raw material prices in the Kudus area often significantly impact profit margins. With good literacy, MSMEs can create more accurate budget plans, ensuring long-term business stability. From a financial inclusion perspective, MSMEs can optimize the use of formal financial products and services to support business expansion. The use of digital payment systems like QRIS not only simplifies transactions for culinary consumers in Kudus but also builds a credible digital footprint. This footprint can facilitate MSMEs' access to productive financing from banking institutions, thus addressing the issue of limited capital, which often hinders business sustainability, through secure

and legal access to capital. Future research is recommended to include other variables that can influence MSME sustainability, such as managerial skills, product innovation, digital marketing, and government policy support. Furthermore, further research could expand the sample size and research area to achieve more comprehensive and representative results.

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