

AUDITING | RESEARCH ARTICLE

Financial Literacy, Financial Behavior, and Financial Inclusion as Critical Determinants of Economic Resilience Among Fishing Families in Tambak Lorok, Semarang, Indonesia

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ABSTRACT

Tanjung Mas is an administrative village in North Semarang that includes a fishing settlement known as Tambak Lorok, located within the Semarang Port area. Due to its direct access to the sea, the area is rich in marine resources. However, this abundance has not translated into prosperity for the local fishing families. In fact, Tanjung Mas is one of the three urban villages in Semarang City that are classified as experiencing extreme poverty. This condition has significantly impacted the area's economic resilience of fishing families. This study aims to analyze the influence of financial literacy, financial behavior, and financial inclusion—three factors that play an important role in determining the economic resilience of fishing families in Tambak Lorok. This research adopts a quantitative approach using a questionnaire-based survey method. Data analysis was conducted using SPSS version 26, chosen for its ability to objectively and empirically test the partial and simultaneous effects of independent variables on a single dependent variable. A total of 265 respondents were selected using a convenience sampling technique. The analytical method employed was multiple linear regression. The hypothesis testing results show that all three variables have a significant positive effect, with significance values of Sig. = 0.002 for financial literacy, Sig. = 0.001 for financial behavior, and Sig. = 0.000 for financial inclusion. Future research is encouraged to broaden the geographic scope of the study to enable comparative analyses across different fishing communities, adopt a mixed-methods approach for more comprehensive results, and consider modifying or adding other relevant variables.

Keywords: Finance, Poverty, Marine Resources, Economic Resilience, Fishing Families.

JEL Code: D14, G53, O16, I32, Q22.

I. Introduction

Family economic resilience plays a vital role in supporting societal well-being. According to Rachmawati et al. (2022) It reflects a family's ability to withstand threats and challenges that could disrupt the sustainability of the economic resilience of their fishing families. This resilience is influenced by income levels and the family's capacity to plan and manage their finances prudently. A stable family economy contributes directly to the strength of a nation's overall economic resilience.



However, achieving economic resilience is difficult, particularly for vulnerable groups such as fishing families. In this regard, the economic resilience of fishing families is a critical issue that demands focused attention. Their lives are marked by uncertainty due to unstable incomes and the inherently high risks of the fishing profession. (Lukum et al., 2023). Despite Indonesia's abundant marine resources, this wealth has not translated into prosperity for many fishing families. Ironically, as Wijaya & Fauzie (2020) Point out that poverty remains widespread among traditional and labor fishing families, even though Indonesia has the second-longest coastline in the world. According to Mustika et al. (2023) This situation is further exacerbated by the unpredictable effects of climate change, including extreme weather, shifting seasons, and high tides. Other contributing factors, such as market prices, social conditions, and broader economic, technological, and political challenges, also deepen fishing communities' economic instability. (Nirmasari & Bibin, 2022).

One area that exemplifies this issue is Tanjung Mas, a subdistrict situated in North Semarang, Semarang City, Central Java. Tanjung Mas is renowned for its abundant marine resources due to its proximity to the northern part of the Java Sea. However, despite this potential, the subdistrict has drawn special attention from the Semarang City Government, as surveys have identified Tanjung Mas as one of three areas classified under extreme poverty indicators. This is quite ironic, considering Tanjung Mas is a strategic location housing the Semarang Port and boasts a substantial fishing community, particularly in the Tambak Lorok fishermen's village. The following data on poverty in the North Semarang area is presented in Table 1:

Table 1. Poverty Data in the North Semarang Region

No	Sub-district	Poverty Criteria (Person)	
		Almost Poor	Poor
1.	Bululor	3.814	1.003
2.	Plombokan	2.388	1.284
3.	Panggung Kidul	2.203	375
4.	Panggung Lor	177	11
5.	Kuningan	3.739	498
6.	Purwosari	2.341	249
7.	Dadapsari	3.762	790
8.	Bandarharjo	7.426	1.457
9.	Tanjung Mas	12.100	2.909

Source : (Repository, 2021)

Tanjung Mas Subdistrict has the highest poverty rate in North Semarang, as shown in Table 1, with 12,100 residents classified as nearly poor and 2,909 as poor. This situation has positioned Tanjung Mas as a priority area for the government's poverty alleviation programs. A key area that most clearly reflects the poverty conditions in Tanjung Mas is Tambak Lorok, now officially renamed Tambak Mulyo. This fishing village is the largest in Semarang City and is the hub of coastal community life in the region. According to Adissa et al. (2023) Tambak Lorok remains neglected mainly in terms of development and is perceived as rundown, despite its proximity to the more developed Tanjung Mas Port. Known as a traditional fishing settlement along the coast of the Java Sea, Tambak Lorok was recently designated by the government as a Maritime Village, part of an initiative to develop the area based on its marine and fisheries potential.

Nevertheless, this designation has yet to significantly improve the livelihoods of the fishing families in the area. Tambak Lorok fishermen remain traditional, relying on simple fishing equipment, limited capital, and a heavy dependence on natural conditions. Such factors leave them economically vulnerable, a common plight among traditional fishing communities. Prasetya (2024) highlights that these constraints limit their ability to meet daily needs and contribute to low-income levels. The substantial risks and environmental uncertainties also pose further challenges (Assagaf et al., 2023). To overcome these challenges, fishing families need more than just fishing skills; they must also be proficient in innovative and effective financial management. Fauzan et al. (2023) note that small-scale fishermen in Indonesia face numerous challenges that

require fishing expertise and financial savvy to maintain their livelihoods amid uncertainty. Therefore, enhancing financial literacy, responsible financial behavior, and financial inclusion is crucial to strengthening the economic resilience of fishing families, particularly in Tambak Lorok Village, Tanjung Mas Subdistrict, Semarang City.

In this context, financial literacy plays a crucial role in strengthening the economic resilience of fishing families. It encompasses an individual's knowledge and understanding of financial management, enabling them to make informed and responsible financial decisions. Yushita (2017), as cited in Wahyudi et al. (2024) It emphasizes that financial literacy is fundamental to helping individuals avoid financial difficulties. Nainggolan (2022) Further, it explains that a lack of financial understanding often leads to losses, particularly during times of economic uncertainty or in the presence of consumptive behavior. Fishing families with strong financial literacy are better equipped to respond to income fluctuations and manage their catches effectively, enhancing their economic stability. (Kalorbobir & Pasamba, 2024). Similar to financial literacy, financial behavior plays a critical role in the economic resilience of fishing families. It reflects how financial knowledge is applied daily, particularly in managing and using resources wisely. According to Sufyati HS & Alvi Lestari (2022) Financial behavior is shaped by an individual's mindset and habitual responses to financial situations. The Financial Services Authority OJK (2017), as cited in Nirmala et al. (2022), notes that sound financial behavior supports goal-setting, planning, and rational decision-making. Fishing families demonstrating positive financial behavior are generally more resilient in economic uncertainty.

Healthy financial behavior must be supported by adequate access to financial services. In this regard, financial inclusion is crucial in strengthening fishing families' economic resilience. According to Amin & Pamungkas (2022) Financial inclusion refers to efforts to provide access to efficient and needs-based financial services. Individuals can save, borrow, manage assets, and invest more easily through such access. For fishing families, financial inclusion supports financial planning, risk management, and income and overall well-being improvements. Access to financial services is essential in supporting fishing families' economic resilience, which is defined as a family's dynamic capacity to cope with and respond to economic challenges. (Rachmawati et al., 2022). Lutfi & Safitri (2020) Describe this resilience as a family's ability to recover from financial hardship. Mulyanti et al. (2022) Further explains that fishing families' economic resilience encompasses physical and material strength, enabling families to live independently and maintain harmony for overall well-being. More broadly, fishing families' economic resilience refers to managing finances effectively to meet basic needs, overcome challenges, and plan for the future. The interrelationship between financial behavior, financial literacy, and financial inclusion aligns with the Sustainable Livelihoods Theory proposed by Chambers and Conway (1992). As noted by Maghfirah et al. (2018) This theory emphasizes the importance of adopting long-term strategies to improve economic well-being. In fishing communities, these three aspects serve as essential and complementary factors that collectively strengthen families' economic resilience while ensuring the sustainability of livelihoods without depleting marine resources.

Based on various theories and previous research findings, there is a strong relationship between financial literacy, financial behavior, and financial inclusion in shaping the economic resilience of fishing families. These three aspects play a critical role in enhancing a family's ability to manage finances and cope with economic pressures, particularly given the typically unstable income of fishing families. Therefore, strengthening the economic resilience of fishing communities requires more than simply increasing income. It must also accompany financial education, healthy financial habits, and improved access to formal financial services. Based on this framework, the present study aims to examine the influence of financial literacy, financial behavior, and financial inclusion—three factors that significantly determine the economic resilience of fishing families in Tambak Lorok. These three dimensions are essential, as fishing families must manage their finances independently to maintain their well-being and build long-term economic resilience. In line with this context, the study hypothesizes that financial literacy, financial behavior, and financial inclusion each positively and significantly influence fishing families' economic resilience. Most existing research still focuses on the general population, urban families, or MSME actors, and few studies specifically examine the relationship between these three variables simultaneously in the context of fishing families, who often face

high levels of vulnerability. Research that truly places fishing families as the primary subject remains very limited. Furthermore, studies investigating how financial literacy and behavior interact with access to formal financial services within fishing families are still scarce. However, financial literacy alone does not guarantee the effective use of financial services without being supported by prudent behavior and adequate access. This highlights the need to examine these three variables within a single research model comprehensively. Therefore, this study aims to fill that gap in the literature by simultaneously analyzing the three key factors influencing the economic resilience of fishing families.

II. Literature Review and Hypothesis Development

2.1. Sustainable Livelihoods Theory

The Sustainable Livelihoods approach examines how individuals and families manage various assets to build strong and sustainable livelihoods. (Morse, 2025). According to Natarajan et al. (2022) Sustainable livelihoods encompass the assets and economic activities necessary to maintain daily life. Such livelihoods are characterized by the ability to cope with and recover from stress or crises, maintain or enhance existing resources, and create long-term economic opportunities that also benefit future generations. Moreover, sustainable livelihoods should positively contribute to the social and economic environment. Sustainable Livelihoods emphasizes assessing how families or communities utilize five key types of assets—human, physical, social, natural, and financial—to develop resilient livelihood strategies. (Fauzia Putra & Suprianto, 2020). Within this framework, economic resilience is not solely measured by income level but also by how effectively families manage risks, seize opportunities, and adapt to change. In this study, the three main variables—financial literacy, financial behavior, and financial inclusion—are components of financial assets. These three factors are believed to strengthen the economic resilience of fishing families by helping them manage income, make more informed financial decisions, and utilize financial services more effectively.

Financial literacy refers to an individual's ability to understand fundamental concepts and principles of financial management. This knowledge enables families to plan budgets, control spending, and make sound financial decisions. Natarajan et al. (2022) Emphasize that financial literacy is a key element in building strong financial assets, particularly in the face of economic uncertainty. Financial behavior reflects the habits of individuals or families in managing their day-to-day finances, such as saving regularly, tracking expenses, and avoiding wasteful or consumptive debt. Positive financial behavior is marked by a family's adaptive capacity in the face of economic risks. Morse (2025) Highlights that careful financial management is a crucial indicator of livelihood sustainability. Financial inclusion refers to the availability and accessibility of formal financial services such as savings accounts, credit, and insurance. These services enable individuals to securely store money, access capital for business activities, and safeguard themselves against unexpected financial shocks. (Miani et al., 2023). Djenontin et al. (2024) Further emphasize that improved financial access contributes to greater economic stability in coastal communities, ultimately leading to a more secure and resilient livelihood. Financial literacy, financial behavior, and financial inclusion are interrelated factors that play a critical role in building the economic resilience of fishing families. Together, they strengthen families' financial capital, enabling families to withstand uncertainty and sustainably plan long-term economic strategies.

2.2. Financial Literacy

The ability to understand and manage finances plays a crucial role in strengthening the economic resilience of fishing families, particularly because their income tends to be unstable and is heavily influenced by weather conditions and catch volume. Karepesina (2024) explains that financial literacy helps individuals avoid financial mismanagement and develop healthier financial habits. These skills are essential for fishing families to create effective financial plans, even when income is unpredictable. Sihalohe (2024) adds that financial knowledge encourages more rational economic decision-making, especially in urgent situations such as lean fishing seasons or extreme weather events. Meanwhile, Khairunnisah et al. (2024) emphasize that financial literacy includes managing all aspects of personal finance—from income and loans to savings and investments—which is critical for maintaining financial stability and ensuring the long-term sustainability of fishing families' economies. In a broader context, research by Liu et al. (2024) shows that financial literacy has

a tangible impact on families' economic resilience. Their study, conducted in China, found that individuals with strong financial knowledge are more capable of managing assets, minimizing financial risks, and building economic safeguards during times of crisis. These findings suggest that financial literacy is important for day-to-day financial planning and is a key strategy for enhancing families' resilience, including fishing communities.

Previous studies by Wibowo & Siswanto (2022), Atanda & Ibrahim (2023), and Putra et al. (2023) Also supports the view that financial literacy significantly influences economic resilience. A solid understanding of financial principles helps families cope with financial pressure and encourages more strategic long-term economic planning. However, Lamsah & Arifin (2023) Although the relationship is positive, the influence of financial literacy on economic resilience is not always statistically significant. These differing findings suggest that other contributing factors may shape the impact of financial literacy. Therefore, it is important to examine further the relationship between financial literacy and economic resilience, particularly among fishing communities vulnerable to economic and environmental uncertainties. Based on this premise, the first hypothesis proposed in this study is:

H1: Financial literacy has a significant positive influence on the economic resilience of Tambak Lorok fishing families, Tanjung Mas Village.

2.3. Financial Behavior

Financial behavior describes how individuals manage and utilize their finances in daily life. According to Siagian & Rizky (2024) Financial behavior reflects a person's perspective on using their financial resources. Hartono et al. (2024) Additionally, financial decisions can be influenced by psychological factors such as emotions and risk perception. Meanwhile, Juniarta et al. (2025) Explain that financial behavior is also reflected in concrete actions, such as saving regularly, creating budgets, managing debt, and allocating assets in a structured manner. Good financial habits are crucial in maintaining economic stability in irregular-income fishing families. Recording expenses and avoiding consumptive spending can help families cope with financial pressure. Agatha et al. (2023) Found that financial behavior positively and significantly impacts families' economic resilience. Similarly, Zayats (2024) Emphasizes that financial behavior is a key factor in building a family's economic resilience, serving as an effective tool for financial control. In line with this, Moazezi et al. (2025) State that financial behavior acts as a bridge between financial literacy and individual financial resilience. These findings reinforce the idea that disciplined financial habits can strengthen a family's ability to withstand economic uncertainty, including among fishing families in coastal areas. Based on this rationale, the second hypothesis in this study is:

H2: Financial behavior has a significant positive effect on the economic resilience of Tambak Lorok fishing families, Tanjung Mas Village.

2.4. Financial Inclusion

Financial inclusion can be defined as an effort to ensure that all segments of society—especially those underserved—have easy access to and can benefit from formal financial services such as savings, credit, insurance, and payment systems. According to Astohar et al. (2022), financial inclusion's success is measured by the availability of services and how actively people use them in their daily lives. Martono & Febriyanti (2023) emphasize the importance of providing equitable and widespread access to financial services, particularly for economically vulnerable groups. Similarly, Kumar & Ahuja (2025) view financial inclusion as a continuous process that requires the active participation of users—not just account ownership. They further highlight that expanding financial access has broader impacts beyond economic growth, including improvements in social welfare. Inclusive financial services can empower individuals to manage their finances independently, open business opportunities, and reduce economic inequality across communities. Financial inclusion plays a

vital role in maintaining economic stability in the lives of fishing families, whose income heavily depends on seasonal and weather conditions. Amanda et al. (2024) explain that greater financial inclusion improves access to financial services, ultimately helping individuals manage their finances more effectively. For fishing families, this ease of access allows them to save money during periods of high catch and obtain loans during economic hardship. This view is supported by Djenontin et al. (2024), whose research across various emerging countries shows that traditional and digital financial services significantly enhance families' economic resilience. Account ownership and habitual saving were key factors in helping communities cope with economic uncertainty.

Furthermore, according to Sitriani et al. (2025) The role of financial inclusion has been significantly strengthened by the emergence of financial technology (fintech), which facilitates access to financial services for communities previously underserved by conventional financial institutions. The development of fintech has expanded financial inclusion through digital lending services, e-wallets, and savings platforms, ultimately contributing to greater economic stability. This advancement allows fishing families to manage their finances more flexibly and securely, reducing reliance on often disadvantageous informal financial practices. Effective financial inclusion can help fishing families manage irregular income, expand economic opportunities, and build stronger social and financial resilience. As a continuation of this line of thought, the third hypothesis is stated as follows:

H3: Financial inclusion has a significant positive effect on the economic resilience of fishing families in Tambak Lorok, Tanjung Mas Village.

2.5. The influence of financial literacy, financial behavior, and financial inclusion on the economic resilience of fishing families in Tambak Lorok

A solid understanding of financial matters is crucial for fishing families who often face irregular and unstable incomes. With sufficient financial literacy, they can manage their money more effectively—budgeting wisely, setting aside savings, and making long-term financial plans. Prasetya (2024) Notes that improving financial literacy encourages more prudent financial behavior. According to Kartini et al. (2020) An individual's understanding of the basic concepts of financial literacy directly influences their financial behavior. A combination of financial knowledge and personal attitudes shapes this behavior. In other words, effectively managing finances depends not solely on how much a person knows, but also on their habits and mindset. Altogether, these factors contribute to a person's financial condition and overall well-being, ultimately helping to strengthen their financial resilience. Similarly, Mustika et al. (2023) Affirm that managing money properly helps fishing families reduce financial stress and strengthen their economic resilience. However, financial knowledge alone is not enough without consistent action. Healthy financial habits—such as saving regularly, tracking expenses, and avoiding unnecessary spending—are essential. At the same time, financial inclusion—defined as access to services like savings accounts, credit, and insurance—also plays a key role by enabling fishing families to meet their needs and cope with economic risks. Qur'ani & Istiono (2025) Emphasize that understanding, behavior, and access to financial services significantly strengthen families' economic resilience.

These three elements align with the Sustainable Livelihoods, which views economic resilience as the result of utilizing various types of assets. Financial literacy and behavior fall under human assets, as they involve knowledge and skills, while financial inclusion is part of financial assets related to access to economic resources. When fishing families possess adequate financial knowledge, can apply it in daily life, and have access to appropriate financial services, they are generally better equipped to withstand economic pressures and maintain sustainable livelihoods. Accordingly, the fourth hypothesis is formulated as follows :

H4: There is a significant positive influence of financial literacy, financial behavior, and financial inclusion on the economic resilience of fishing families.

This conceptual framework illustrates the partial and simultaneous effects of financial literacy, financial behavior, and financial inclusion on the economic resilience of fishing families:

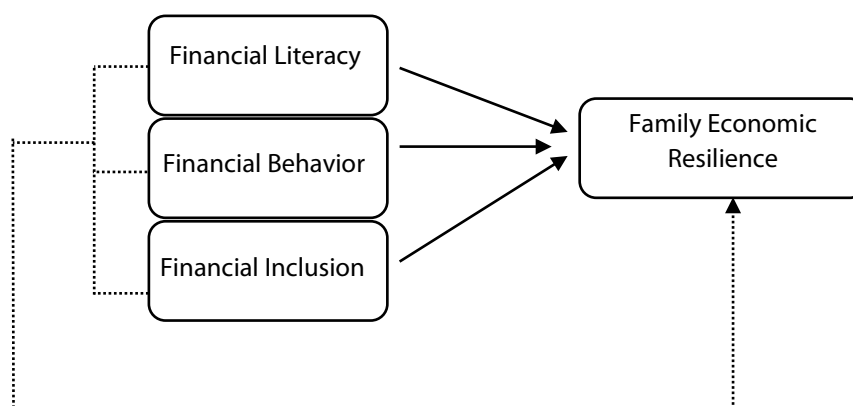


Figure 1. Conceptual Framework

III. Research Method

This study targeted a population of 785 fishermen residing in Tambak Lorok Fishermen Village, located in Tanjung Mas, Semarang City. A convenience sampling method was employed, primarily due to limited access and time constraints in reaching a geographically scattered population. The research site, situated along the coast, presents challenging terrain and is frequently affected by seasonal flooding. In addition, the fishermen's high work mobility—often spending extended periods at sea—posed further difficulties. Respondents were selected consecutively based on their availability and willingness to participate during the data collection period, continuing until the desired sample size was achieved. Slovin's formula, with a 5% margin of error, determined a final sample size of 265 fishermen. The calculation is presented below:

$$n = \frac{N}{1 + (N \cdot e^2)}$$

$$n = \frac{785}{1 + (785 \cdot 0,05^2)}$$

$$n = \frac{785}{1 + 1,9625}$$

$$n = 264,978... (265)$$

The data collection techniques used in this study included interviews and questionnaires. The primary data collection method was directly administering questionnaires to the fishermen. In this study, the researcher completed the questionnaires on behalf of the respondents to ensure data accuracy and minimize the risk of misinterpretation. This approach was chosen because most respondents had low levels of formal education and a limited understanding of the terms or concepts used in the questionnaire. By involving the researcher directly, each statement could be explained consistently, resulting in more accurate, relevant, and complete responses. The questionnaire included items measured using a five-point Likert scale, where respondents were asked to rate their agreement from 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), to 5 (Strongly Agree). Before the questionnaire was administered, validity and reliability tests were conducted to ensure the quality of the instrument. The validity test was carried out by examining the correlation between each item and the total score. An item was considered valid if the calculated *r* value exceeded the critical value

from the *r* table. The results showed that all items met the validity criteria. The reliability test was performed using the Cronbach's Alpha formula. An instrument is considered reliable if the alpha value exceeds 0.60. In this study, all variables had alpha values above the threshold, indicating that the questionnaire was appropriate and consistent for data collection. After that, the collected data will undergo several analyses. First, the standard assumption test uses normality, multicollinearity, and heteroscedasticity tests to ensure that the regression model used meets the validity criteria and has a linear relationship. Second, the effect of the independent variable (*X*) on the dependent variable (*Y*) is analyzed using multiple linear regression analysis. Third, an *F* test determines whether simultaneous independent factors impact the dependent. Fourth, a *t*-test examines whether each independent variable partially impacts the dependent variable. Finally, the degree of influence of independent factors on the dependent is determined by the coefficient of determination.

IV. Results and Discussion

4.1. Result

Table 2. Reliability Test Results

Variable	Cronbach's	Information
Financial Literacy	0,830	Reliable
Financial Behavior	0,881	Reliable
Financial Inclusion	0,867	Reliable
Family Economic Resilience	0,819	Reliable

To evaluate the consistency of the instrument used in this study, Table 2 shows that all variables have Cronbach's Alpha values greater than 0.6. This indicates that the questionnaire demonstrates an acceptable level of reliability. Furthermore, it supports the instrument's validity in measuring the key variables under investigation—financial literacy, financial behavior, and financial inclusion—in relation to the economic resilience of fishing families. Thus, the questionnaire is deemed appropriate for use in the data collection process.

Table 3. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		265
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	4.64339515
Most Extreme Differences	Absolute	.032
	Positive	.032
	Negative	-.030
Test Statistic		.032
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Table 3 shows that the Asymp. Sig. (2-tailed) value is 0.200, which exceeds the significance threshold of 0.05. This indicates that the data in this study are typically distributed. Given that the data meet the

assumption of normality, regression analysis is an appropriate method for examining the effects of financial literacy, financial behavior, and financial inclusion on the economic resilience of fishing families.

Table 4. Multicollinearity Test Results

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.248	1.251		4.996	.000		
	Financial Literacy	.173	.055	.192	3.116	.002	.393	2.542
	Financial Behavior	.208	.063	.259	3.324	.001	.244	4.091
	Financial Inclusion	.288	.061	.387	4.739	.000	.223	4.479

a. Dependent Variable: Family Economic Resilience

Table 4 indicates that all three variables' tolerance and VIF values fall within acceptable limits. The financial literacy variable has a tolerance of 0.393 and a VIF of 2.542; financial behavior has a tolerance of 0.244 and a VIF of 4.091; and financial inclusion shows a tolerance of 0.223 and a VIF of 4.479. Since all tolerance values exceed 0.1 and all VIF values are below 10, it can be concluded that multicollinearity is not present among the variables. This means that each independent variable can be analyzed independently without significant interference from the others. These results support the validity of the regression model employed in this study for assessing the impact of financial literacy, financial behavior, and financial inclusion on the economic resilience of fishing families, which aligns with the study's objectives. In addition, a multicollinearity analysis was conducted due to the potential for strong correlations among the independent variables. Excessively high correlations between variables can compromise the accuracy of regression results. Thus, this test is essential to ensure that each variable can be analyzed independently and contributes a distinct effect in line with the research objectives.

Table 5. Heteroscedasticity Test Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.660	.768		4.764	.000
	Financial Literacy	-.030	.034	-.085	-.867	.387
	Financial Behavior	-.007	.038	-.023	-.180	.857
	Financial Inclusion	.029	.037	.103	.784	.434

a. Dependent Variable: Abs_residual

Based on the heteroscedasticity test results in Table 5, the significance values for financial literacy, financial behavior, and financial inclusion are 0.387, 0.857, and 0.434, respectively. Since all values exceed the 0.05 threshold, it can be concluded that the data in this study do not exhibit symptoms of heteroscedasticity. Therefore, the data are considered stable and meet the assumptions required for regression analysis to examine the relationships between the three variables and the economic resilience of fishing families.

Table 6. Multiple Linear Regression Test Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.248	1.251		4.996	.000
	Financial Literacy	.173	.055	.192	3.116	.002
	Financial Behavior	.208	.063	.259	3.324	.001
	Financial Inclusion	.288	.061	.387	4.739	.000

a. Dependent Variable: Family Economic Resilience

This study produced the following regression equation:

$$Y = 6.248 + 0.173X_1 + 0.208X_2 + 0.288X_3$$

Y represents economic resilience, while X_1 , X_2 , and X_3 correspond to financial literacy, behavior, and inclusion, respectively. The constant value of 6.248 indicates the baseline level of economic resilience without any influence from the three independent variables. This suggests that the presence and improvement of these variables can enhance economic resilience. The regression coefficient for financial literacy is 0.173, meaning that a 1% increase in financial literacy is associated with a 17.3% improvement in economic resilience, assuming other variables remain constant. This finding supports the study's objectives and underscores the importance of financial understanding as a key asset for fishing families in coping with uncertain income. This result is reinforced by the findings of Nur et al. (2024) and Sulkiah (2023), who state that financial literacy helps fishing families manage income and maintain long-term economic stability.

Furthermore, the financial behavior coefficient of 0.208 indicates that fishermen who demonstrate sound financial practices—such as disciplined saving and expense tracking—tend to exhibit stronger economic resilience. This aligns with the perspective of Luis & MN (2020), who assert that healthy financial behavior and self-control positively impact a family's financial well-being. Among the three, financial inclusion shows the most decisive influence on economic resilience, with a coefficient of 0.288. This suggests that increased access to formal financial services—such as savings accounts, business loans, and insurance—significantly enhances the economic condition of fishermen's families. Support from formal financial institutions also helps prevent reliance on harmful informal lending practices. These findings are consistent with research by Silviana et al. (2023), which concluded that financial inclusion fosters income growth and business sustainability for fishing communities. Overall, the analysis confirms that financial literacy, financial behavior, and financial inclusion are interrelated and essential factors in strengthening the economic resilience of fishing families. Together, they promote economic independence and resilience in coastal communities while addressing the research's core questions and objectives.

Table 7. Results of Determination Coefficient

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.782 ^a	.612	.608	4.670

a. Predictors: (Constant), Financial Inclusion, Financial Literacy, Financial Behaviour

The analysis results show an Adjusted R Square value of 0.612, or 61.2%. This indicates that 61.2% of the variation in the economic resilience of fishing families in this study can be explained by the three main variables: financial literacy, financial behavior, and financial inclusion. Thus, the model used is considered robust in illustrating these variables' relationships. The remaining 38.8% is influenced by other factors not

included in this study, such as social, environmental, or economic aspects that may be considered in future research.

Table 8. Simultaneous Test Results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8979.299	3	2993.100	137.242	.000 ^b
	Residual	5692.135	261	21.809		
	Total	14671.434	264			
a. Dependent Variable: Family Economic Resilience						
b. Predictors: (Constant), Financial Inclusion, Financial Literacy, Financial Behavior						

Based on the results of the simultaneous test presented in Table 8, financial literacy, financial behavior, and financial inclusion collectively have a significant effect on the economic resilience of fishing families. This is evidenced by an F-value of 137.242, which exceeds the F-table value of 2.639, and a significance level of 0.000, which is well below the threshold of 0.05. These findings confirm that all three variables are relevant in explaining variations in economic resilience and demonstrate that the analytical model used is appropriate for the research objectives. The economic resilience of fishing families is not influenced by a single factor, but rather by the interaction of multiple interrelated financial aspects. Financial literacy provides knowledge of financial management; however, this understanding does not necessarily translate into daily habits. A person may grasp financial concepts yet still face economic challenges if unable to apply them consistently.

Sound financial behavior typically stems from adequate knowledge, and both elements become more effective when supported by access to formal financial services. Financial inclusion enables fishing families to save, obtain business loans, and secure financial protection through insurance. When these three factors work in tandem, they help foster greater independence and resilience among fishing families facing economic uncertainties. Therefore, the results of this study directly answer the research questions and reinforce the conclusion that a combination of financial literacy, financial behavior, and financial inclusion plays a critical role in enhancing the economic resilience of fishing families.

Table 9. Partial Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.248	1.251		4.996	.000
	Financial Literacy	.173	.055	.192	3.116	.002
	Financial Behavior	.208	.063	.259	3.324	.001
	Financial Inclusion	.288	.061	.387	4.739	.000
a. Dependent Variable: Family Economic Resilience						

The analysis results indicate that all three variables studied significantly influence the economic resilience of fishing families, aligning with the primary focus of this research. Financial literacy recorded a t-value of 3.116, which exceeds the critical t-value of 1.969, and a significance level of 0.002, below the 0.05 threshold. This finding demonstrates that a strong understanding of financial concepts is closely related to fishermen's ability to maintain their families' economic stability. A similar pattern is observed with the financial behavior variable, which shows a t-value of 3.324 and a significance level of 0.001. This indicates that positive financial habits—such as disciplined saving, tracking expenses, and avoiding wasteful spending—strengthen fishing families' economies.

Meanwhile, financial inclusion shows the most decisive influence among the three variables. A t-value of 4.739 and a significance level of 0.000 suggest that access to formal financial services—such as savings accounts, microcredit, or insurance—plays a vital role in supporting the economic resilience of fishing families. Access to formal financial services—savings, loans, and insurance—is crucial in helping fishing families maintain economic stability. Through financial inclusion, fishing families can better manage their income, grow their businesses, and prepare for risks such as fluctuating catch levels. From the perspective of Sustainable Livelihoods, access to financial resources is considered one of the key assets families need to sustain and improve their livelihoods. Financial services provide essential support that enhances fishing families' resilience in managing risks and maintaining long-term economic stability for their families. Overall, these findings confirm that financial literacy, financial behavior, and financial inclusion are three complementary factors that collectively enhance the economic resilience of fishing families—especially in the face of frequent economic uncertainties.

V. Conclusion

The results of this analysis suggest that financial literacy, financial behavior, and financial inclusion significantly positively influence fishing families' economic resilience. Good financial literacy is important for fishing families to be economically independent and strengthen their family's economic resilience. The ability to understand basic financial concepts reasonably also determines fishermen's resilience as family heads in uncertain economic conditions. In addition, financial behavior also makes a substantial contribution to the family's economic resilience. Based on theory and empirical evidence, individuals with higher levels of financial literacy tend to have more positive financial behavior. Access to financial services—such as savings, credit, and insurance—is essential for coastal communities. These services enable individuals to set aside income, obtain capital when needed, and protect themselves against unexpected risks such as extreme weather or poor harvests. Within the framework of Sustainable Livelihoods, such financial access is considered a form of financial capital that helps families withstand economic shocks, reduce reliance on risky informal lending, and maintain stable income over time.

These findings imply that the economic resilience of fishing families is not solely determined by how much they earn, but also by the extent to which they understand financial principles, can apply them in their daily lives, and have access to adequate financial services. The findings of this study highlight the importance of collaboration between the government, financial institutions, and community organizations in improving access to financial services in coastal areas. It is recommended that the government and financial institutions offer financial products tailored to the needs of fishing communities—such as no-minimum-balance savings accounts, low-interest loans, or insurance schemes designed explicitly for fishers. Financial literacy programs should not be limited to theoretical knowledge. However, they must also include practical training on formal financial services, enabling communities to become familiar with and confident in using them. Additionally, community empowerment organizations can utilize these findings to develop community-based training programs that promote a savings culture—particularly during times of abundant catch—as a strategy to prepare for difficult periods such as the off-season.

This study is not without its limitations. The geographical focus was restricted to the Tambak Lorok area, meaning the findings may not fully reflect the conditions of fishing families in other regions. Additionally, data collection occurred while fishing families were engaged in their primary activities, making it difficult to reach respondents comprehensively. The study employed a quantitative approach, limiting the ability to explore deeper social and cultural aspects that may influence fishing families' financial behavior. The sampling technique used was convenience sampling—selecting respondents based on ease of access—which is prone to bias and may not accurately represent the broader population. These limitations affect the generalizability of the findings, as results from one specific region may not apply to areas with different social and economic backgrounds. Therefore, future research is recommended to expand the geographical scope, adopt a mixed-methods approach combining both quantitative and qualitative techniques, use more representative

sampling methods, and consider incorporating additional relevant variables when examining the economic resilience of fishing families.

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