

Practices in Financial Recording, Income Management, and Fishermen Welfare: Evidence from Barrang Caddi Island

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ABSTRACT

This study aims to analyze the effect of financial record-keeping on the welfare of fishermen and describe how income management supports the welfare of fishing communities on Barrang Caddi Island, Makassar, South Sulawesi. The study uses a mixed methods approach that combines quantitative and qualitative analysis sequentially. The quantitative stage involved 50 randomly selected active fisherman respondents, while the qualitative stage was conducted through in-depth interviews with several key informants. The results show that the implementation of financial record keeping has a positive effect on the welfare of fishermen. Fishermen who consistently record their income and expenses, separate their business and personal finances, and calculate their net profit are able to control their expenses, maintain their working capital, and build family savings. Qualitative findings show that these practices help fishermen cope with lean seasons without having to go into debt, increase their financial security, and strengthen the economic stability of their households. Simple financial record-keeping not only serves as an administrative tool, but also as a means of economic empowerment that fosters financial discipline, increases economic resilience, and supports the welfare of fishing families

INTRODUCTION

Indonesia is an archipelagic country with more than 17,000 islands and the second longest coastline in the world, with the fisheries sector playing a role in supporting national economic development (Sakharina et al., 2022) (Ujianti et al., 2024). The contribution of this sector includes not only the provision of highly nutritious food and job creation, but also increased income for coastal communities. Approximately 7 million Indonesians depend on fishing and aquaculture activities. However, behind this situation, there is still a welfare gap among fishing communities. Fishermen often face income uncertainty, dependence on the fishing season, and limitations in financial management (Sari et al., 2021)(Utomo & Sara, 2025) (Breemer et al., 2025).

One factor contributing to the low welfare of fishermen is the suboptimal implementation of financial record-keeping in economic activities (Rabbaniyah et al., 2025). Many fishermen still rely on informal and poorly documented financial systems. The lack of financial records makes it difficult for them to track cash flow, calculate profits, or identify potential losses in their fishing businesses. According to (Fauzan et al., 2025) and (Barte, 2012) In his research, he found that financial literacy, including the habit of recording transactions, plays a role in building household economic stability. However, the application of this concept is still minimal among traditional fishermen because they are generally more oriented towards daily catches than thinking about long-term financial management.

In addition, income management is also a factor that determines the welfare of fishermen. Uncertain income often leads to unstable consumption patterns, minimal savings, and low investment capacity (Pomeroy et al., 2020)(Rahman et al., 2021). Income management can help people with irregular incomes to create economic resilience for their families (Khan et al., 2012). However, fishing communities still lack planned income management, which is rarely implemented. Most of their income is used for daily consumption without long-term planning, which prevents them from escaping the cycle of poverty.

Previous studies have examined the issue of fishermen's welfare, but research examining the relationship between the implementation of financial recording and income management on fishermen's welfare has not been studied. This research gap highlights the importance of an economic approach in understanding the factors that influence the welfare of coastal communities. This study is relevant given the problem of increased income that is not accompanied by increased welfare, which must be balanced with good financial management skills.

Barrang Caddi Island in Makassar City is one of the island regions that illustrates the conditions described above. Most of the community works as traditional fishermen and depends on the sea for their livelihood. Limited access to formal financial institutions, economic education, and business record-keeping facilities means that this community of fishermen faces problems in managing their income and planning their family finances. Therefore, Barrang Caddi Island is an ideal location to study the extent to which the implementation of financial record-keeping and income management can affect the welfare of fishermen.

Based on this background, this study focuses on two main issues, namely: (1) whether the implementation of financial recording affects the welfare of fishermen, and (2) how the management of fishermen's income can support their welfare. This study is expected to contribute to the development of financial literacy among coastal communities and serve as empirical reference for local governments and empowerment institutions in designing policies to improve welfare based on sustainable financial management in island regions.

LITERATURE REVIEW

The theoretical basis of this study refers to the Household Financial Management Theory developed by Deacon and Firebaugh. According to this theory, household economic welfare is not only determined by the amount of income, but also by the extent to which families are able to manage, record, and control cash flows that occur in daily life (Johnson & Parrotta, 1998).

The implementation of financial record-keeping is related to welfare because it plays a role in controlling family financial management (Laux, 2012)(Singh & Singh, 2023). Financial record-keeping helps fishermen monitor their income and expenses and determine the allocation of funds for productive and consumptive needs. Research (Katnic et al., 2024) shows that fishermen who implement simple financial record keeping experience an increase in household economic stability. The same is stated (Borromeo et al., 2024), that income recording helps improve business efficiency. Based on this theory and empirical findings, it can be assumed that the better the level of financial record-keeping implementation, the better the level of welfare achieved by fishermen.

Income management is a process that includes planning, controlling, and using income to achieve family welfare goals (Setyoningrum, 2021). The concept of financial literacy explains that individuals who are able to plan their expenses, set aside savings, and allocate funds for investment have a greater chance of achieving economic stability (Harahap et al., 2022). Income management is not tested through hypotheses, but is analyzed qualitatively to describe the economic behavior patterns of fishing communities in utilizing their income for long-term needs.

METHODOLOGY

Research Design

This study uses a mixed methods approach, which is a combination of quantitative and qualitative methods in sequence (Amadi, 2023). This study uses a mixed methods approach, which is a combination of quantitative and qualitative methods in sequence (Amadi, 2023). In the first stage, a quantitative approach was used to test the hypothesis regarding the effect of financial record-keeping on the welfare of fishermen. The second stage used a qualitative approach through interviews to gain a more comprehensive understanding of how the management of fishermen's income can support their welfare.

This approach was chosen because the two problem formulations have different analytical characteristics, with the first formulation being verifiable, while the second is exploratory and descriptive. Quantitative results are used to construct an interpretive framework for qualitative analysis, thereby providing a comprehensive understanding of the phenomenon of fishermen's welfare from an economic and social perspective.

Population and Sample

The population of this study was all fishermen on Barrang Caddi Island, Spermonde Islands, Makassar City, South Sulawesi Province. Based on data from the Makassar City Statistics Agency, Barrang Caddi Village, 2021, there were 333 registered heads of households. The fisherman population on Barrang Caddi Island has relatively similar socioeconomic characteristics (type of work, source of income, lifestyle, and living environment). Therefore, the simple random sampling technique is sufficiently representative for use. Using the Slovin method with a margin of error of 10% and 77 respondents, the data collected during the study only included 50 respondents who met the criteria.

Kriteria atau karakteristik responden yang dijadikan dasar pemilihan adalah sebagai berikut:

1. Works as an active fisherman on Barrang Caddi Island.
2. Has worked as a fisherman for at least five years.
3. Has implemented or is implementing simple financial record keeping.
4. Has family dependents.

Data Collection Techniques

1. Structured Questionnaire

Questionnaires were used to obtain quantitative primary data from respondents, who in this case were head fishermen on Barrang Caddi Island. The questionnaires were compiled using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree) to measure perceptions and levels of financial record-keeping (variable X) and fishermen's welfare (variable Y). The question indicators on the questionnaire for Variable X Financial Record Keeping use the following indicators: a) Income Record Keeping, b) Business Expense Record Keeping, c) Separation of Personal and Business Finances, d) Profit/Loss Calculation, e) Basis for Decision Making (Minnis & Sutherland, 2017) (Fenyves et al., 2015). Variable Y Fishermen's Welfare uses the following indicators: a) Income Level, b) Adequacy of Basic Needs, c) Asset Ownership, d) Access to

Education, e) Access to Health Care, f) Quality of Housing (Weeratunge et al., 2014) (J. E. et al., 2022).

2. Field Observations

Observations were conducted to obtain direct empirical data on the financial recording practices and income management of fishermen in the research location.

3. In-depth Interviews

Interviews were conducted to explore qualitative information that reinforced the results of quantitative analysis, specifically answering the second problem formulation: How can the income management of fishing communities support their welfare?

Table 1. Informant data

No	Name/Initials	Gender	Age (Years)	Status	Focus of Information Provided
1	Mr. Daeng	Male	52	Senior fisherman	Describe the initial conditions before implementing financial records, particularly the habit of mixing business and personal funds.
2	Mrs. Nr	Female	45	Fisherman's wife	Explain household financial management behavior.
3	Mr. Ar	Male	35	Young fisherman	Provide insights into the impact of implementing financial records on business planning, savings, and family welfare.

Table processed in 2025

Data Analysis Techniques

Data analysis was performed using the SPSS (Statistical Product and Service Solutions) statistical program. The analysis steps included: (1) testing the validity and reliability of the instruments to ensure data accuracy; (2) testing classical assumptions so that the regression model meets statistical requirements; and (3) testing hypotheses using the t-test to determine the significance of the effect, as well as testing the coefficient of determination (R^2) to determine the extent of the contribution of financial recording to the welfare of fishermen.

RESULTS AND DISCUSSION

1. The Relationship between the Implementation of Financial Recordkeeping and Fishermen's Welfare

a. Simple Linear Regression Analysis

Multiple regression analysis is an analysis that aims to measure the effect of independent variables on dependent variables. This measurement of effect involves independent variables (X) and dependent variables (Y).

Table 2. Regression Analysis Test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.899	1.440		10.344	<.001
	Financial Recording	.379	.134	.324	2.824	.006
a. Dependent Variable: Fishermen's Welfare						

Based on Table 4.12 above, the results of the simple linear regression obtained can be formulated into a regression equation model as follows:

$$Y = a + bX$$

$$Y = 14.899 + 0.379X$$

b. Hypothesis Testing

The t-test was conducted to examine the relationship between the variables of fisherman income and economic improvement so that the regression results obtained could be explained. The test was conducted by comparing the calculated t-value with the table t-value, as well as the significance level of <0.05, which was then compared with the data processing. The table t-value in this study was 0.2787.

Table 3. T-test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.899	1.440		10.344	<.001
	Financial Recording	.379	.134	.324	2.824	.006
a. Dependent Variable: Fishermen's Welfare						

The t-test was conducted as a step in causality analysis to test the significance of the influence of the independent variable Financial Record Keeping (X) on the dependent variable Fishermen's Welfare (Y). Based on the

table above, it can be explained that the financial recording variable has a t-value of 2.824, while the t-table value is 0.2787 and the sig value is 0.06. This shows that $t\text{-value} > t\text{-table}$ ($2.824 > 0.2787$) and the sig value of $0.06 < 0.05$. It can be concluded that the implementation of financial recording has a positive and significant effect on the welfare of fishermen on Barrang Caddi Island.

c. Determination Coefficient Test (R²)

The Determination Coefficient Test (R²) aims to determine the extent to which independent variables explain dependent variables. An R Square value is considered good if it is between zero and one.

Table 4. Coefficient of Determination Test

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.324 ^a	.105	.092	3.40567
a. Predictors: (Constant), Financial Recording				
b. Dependent Variable: Fishermen's Welfare				

Based on the table above, the R Square coefficient (R²) value is 0.105 or 10.5%. Thus, financial records affect the welfare of fishermen by 0.105 (10.5%). The remaining 89.5% is influenced by other variables not examined in this study.

2. How Managing Fishermen's Income Can Support Their Welfare.

a. Confirmation of Initial Problems

The interviews confirmed the main problems before the implementation of record keeping. Fishermen did not separate business funds from personal funds, which led to unexpected waste. As revealed in the interviews, a senior fisherman (Mr. Daeng, 52 years old) provided an overview of how fishermen managed their money before financial records were kept. His statement in the Makassar language:

"In the past, when we got our catch, we would immediately spend it on snacks. We would buy regular items with the money we earned. We would immediately go to the market. We would buy whatever we needed, whatever we wanted, whatever we needed for capital." (Mr. Daeng, 52 years old).

b. Separate Financial Management

The interviews showed that the indicators of Separation of Business and Personal Cash and Preparation of Simple Reports were key in changing Expenditure Control behavior. From the results of an interview with a fisherman's wife (Mrs. Nr, 45 years old) in Makassar:

"Anjo is the most strict, assuunna nipa'gaukang, he immediately nipa'belekki anjo doi'na. Se're patti untu' doi' ma'lella (capital), se're patti pole untu' doi' dapureng. Anjo catatang allo-alloa nupattantumi pira hasille barasikna (net profit) anjo bura'neku. Jari, punna ero' angngalli apa-apa, ku'kasia riolo anjo catatang kasa', te'nami na angngalli pa'battu-battu." Mrs. Nr, 45 years old).

Meaning:

"The most important thing is that after being taught [to record], the money is immediately separated. One box is for money for going to sea (capital), one box is for kitchen money. These daily records allow me to know how much my husband's net profit is. So, if I want to buy something, I look at the cash records first, I don't just take the money."

c. Planning and Resilience

The interview data also clarifies the impact of business planning capabilities, which lead to improved family welfare (resilience). As stated by a young fisherman (Mr. Ar, 35 years old) in the interview:

In the past, during the lean season, we would definitely borrow money from middlemen because we had run out of capital. Now, because our capital is recorded and capital for the next trip has been set aside, we are more relaxed. We have small savings. Even if the weather is bad for a week, there is no need to panic anymore. This is what makes us feel more prosperous than last year." (Mr. Ar, 35 years old).

1. The Relationship between Financial Record Keeping and Fishermen's Welfare

The regression analysis results show that financial record keeping has a positive and significant effect on the welfare of fishermen on Barrang Caddi Island. The calculated t-value of 2.824 > the table t-value of 0.2787 with a significance of 0.006 < 0.05 indicates that the better the implementation of financial record keeping, the higher the level of welfare felt by fishermen.

The meaning of the causal relationship in this study lies in the economic behavior facilitated by record keeping. Financial record keeping, particularly through the indicator of separating business and personal cash, serves as a means of controlling income so that business funds and consumption funds are kept separate (Chung et al., 2005). Based on the results of qualitative interviews with informants regarding the implementation of record keeping, fishermen, often represented by their wives as household financial managers, are able to calculate net profit. Money is no longer spent based on physical availability in the wallet, but is limited by the recorded net profit margin.

This control of expenditure and protection of working capital results in the accumulation of funds into savings, or what is known as resilience funds. Financial resilience is at the core of improved welfare, due to the ability to withstand external shocks (such as lean seasons or bad weather) without having to incur debt (Zahedi et al., 2022). Controlling expenses and protecting working capital results in a surplus of funds that accumulates into savings, known as resilience funds. This financial resilience is central to the observed improvement in well-being, as the ability to withstand external shocks (such as crop failure or bad weather) without having to incur debt directly reduces the level of financial vulnerability, creates a sense of security, and increases peace of mind, which are important elements of non-monetary well-being.

2. How Managing Fishermen's Income Can Support Their Welfare

Good income management through the implementation of financial records has an impact on improving the welfare of fishermen (Enayati et al., 2024). Based on the characteristics of the informants, all respondents were fishermen who had been working for more than five years and had family dependents, so the economic burden on their households was quite high. This

condition requires good financial management skills so that fluctuating income from fishing can be optimized for family needs and business sustainability. Before financial records were kept, most fishermen did not separate business funds from personal funds. As stated by Pak Daeng (52 years old), the money earned from fishing was immediately used for daily consumption without considering the capital for the next fishing trip. This situation shows that fishermen tend to have unmanaged cash flow, so that during lean seasons they often lose capital and depend on loans. This phenomenon is in line with the opinion (Li et al., 2024) that low financial literacy in the community leads to weak cash flow management skills, which has implications for low family welfare.

After implementing simple financial records, there was a change in financial behavior among experienced fishermen. Based on an interview with Mrs. Nr (45 years old), the wife of an active fisherman, the practice of separating business and personal cash was key to maintaining family economic stability. Money earned from fishing is now separated between business capital and household needs, while daily records are used to determine net income and control expenses. This practice is particularly relevant for fishermen with families, as it helps them prioritize needs and control consumption.

In addition, interviews with young fishermen such as Mr. Ar (35 years old) show that financial record-keeping also fosters planning skills and family economic resilience. By setting aside part of their income for future fishing capital and emergency savings, they are now better prepared to face lean seasons or extreme weather conditions without having to rely on middlemen. This is very important for fishermen with families to support, as financial peace of mind has a direct impact on the stability of household welfare. These findings are in line with the results of a study (Kumar et al., 2023) which states that individuals with good financial planning skills tend to have stable welfare in the face of economic pressures. Thus, simple financial record-keeping encourages more focused financial behavior, strengthens family economic resilience, and reduces vulnerability to seasonal income shocks.

CONCLUSION AND RECOMMENDATION

This study concludes that the implementation of simple financial record-keeping has a positive and significant effect on the welfare of fishermen on Barrang Caddi Island. Fishermen who separate their business and personal finances are able to control their expenses, protect their working capital, and provide reserve funds that increase their families' financial resilience. The implementation of record keeping also encourages a shift in economic behavior from consumptive to more productive and planned. Thus, simple financial record keeping serves not only as an administrative tool, but also as a means of economic empowerment and improving the welfare of fishermen.

FUTHER STUDY

This research still has delays, so it is necessary to conduct further research related to the topic Practices in Financial Recording, Income Management, and Fishermen Welfare: Evidence from Barrang Caddi Island in order to improve this research and add insight for readers.

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