RJOAS: Russian Journal of Agricultural and Socio-Economic Sciences
ISSN 2226-1184 (Online) | Issue 6(150), June 2024

UDC 332

FACTORS AFFECTING INTEREST IN NON-BANK CAPITAL FINANCING AMONG TILAPIA FISH FARMERS USING FLOATING NET CAGES: A CASE OF BARITO KUALA REGENCY, SOUTH KALIMANTAN, INDONESIA

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ABSTRACT
In Barito Kuala Regency, the cultivation of tilapia fish in Floating Net Cages has been rapidly growing since 2011. Fish farming groups utilizing wooden cages actively engage in the Operational Cooperation System (KSO) with grants for floating net cages, where the borrowed cages are fully managed by the fish farmers. The study aims to analyze the factors influencing the interest in non-bank business capital financing among tilapia fish farmers in Floating Net Cages in Barito Kuala Regency. The research is conducted in the Marabahan and Bakumpai Districts of Barito Kuala Regency, considering that the majority of tilapia fish farmers in Floating Net Cages are located in these two districts. The research subjects are the managers and members of fish farming groups (Pokdakan) cultivating tilapia fish in Barito Kuala Regency. The research sample is purposively selected. The key factors influencing the interest in non-bank business capital financing among tilapia fish farmers in Floating Net Cages in Barito Kuala Regency are the number of floating net cages and the source of capital. These factors need to be considered in the development of policies and financing strategies to support the sustainability and growth of tilapia fish farming businesses in Barito Kuala Regency.

KEY WORDS
Floating net cages, tilapia fish, Barito Kuala.

Fish and its derivatives are essential sources of animal protein for human needs. In addition to their delicious taste, fish meat is also free from harmful saturated cholesterol (Bangun et al., 2020). In an effort to meet the high demand for fish, humans have increased their efforts in fish capture using advanced technology. However, large-scale and unsustainable fishing practices threaten the conservation of natural fishery resources (Andriani & Cholid, 2016). One solution to meet this protein demand is by fish farming (Lama et al., 2017). Fish farming has rapidly developed, as evidenced by the national production reaching 14,648,360 tons in 2021. In Barito Kuala Regency, the cultivation of tilapia fish in Floating Net Cages has been rapidly growing since 2011. Fish farming groups utilizing wooden cages actively engage in the Operational Cooperation System (KSO) with grants for floating net cages, where the borrowed cages are fully managed by the fish farmers.

Barito Kuala Regency, with its capital in Marabahan, is an area with great potential for the development of fish farming agribusiness, especially in floating net cages. The fish farming production in floating net cages in Barito Kuala Regency from 2018 to 2023 has shown a stable trend (Purnamasari et al., 2023). However, the success of fish farming heavily depends on the availability of feed, which is a major component of fish production costs (Kurniawan et al., 2016). Capital is also a crucial factor in fish farming. The use of fish feed, as a variable capital component, increases with fish production. Difficulties in obtaining capital from commercial banks are often experienced by fish farmers, prompting them to seek alternative financing sources from non-bank financial institutions such as eFishery (Amry et al., 2018).

Fintech companies like eFishery have provided solutions by introducing fish farming business capital cooperation systems. The Kabayan program from eFishery serves as an alternative for fish farmers struggling to obtain loans from banks (Andrew & Linawati, 2014). This phenomenon is interesting to further investigate to understand fish farmers' perceptions

of non-bank business capital financing in Barito Kuala Regency (Putri et al., 2022). The research aims to analyze the factors influencing the interest in non-bank business capital financing among tilapia fish farmers in Floating Net Cages in Barito Kuala Regency.

MATERIALS AND METHODS OF RESEARCH

The research was conducted in the Marabahan and Bakumpai Districts of Barito Kuala Regency, considering that the majority of tilapia fish farmers in Floating Net Cages in Barito Kuala Regency are located in these two districts. The research subjects were the managers and members of the fish farming groups (Pokdakan) operating Floating Net Cages and cultivating tilapia fish in Barito Kuala Regency. The research samples were intentionally selected (purposive sampling).

This analytical method was employed to describe and summarize quantitative data for easier comprehension, through stages such as data collection, data organization, basic statistical calculations such as mean, median, mode, range, and standard deviation, data visualization, pattern identification, data presentation, and drawing conclusions. Furthermore, this research also utilized the multiple linear regression analysis method to address the first research objective, incorporating dummy variables as one of the variables in the combined model.

RESULTS AND DISCUSSION

This study analyzes various factors influencing the interest in non-bank financing among tilapia fish farmers using the Floating Net Cage (Keramba Jaring Apung) system in Barito Kuala Regency. The research aims to identify key factors driving tilapia fish farmers to seek alternative sources of financing other than banks, considering the crucial role of financing in enhancing the productivity and sustainability of fish farming businesses. Through both quantitative and qualitative approaches, the study evaluates various aspects such as financial knowledge, accessibility to financing services, farmers' economic conditions, as well as their perceptions of risks and benefits associated with non-bank financing. The research findings, based on conducted tests, are presented as follows:

Table 1 – Normality Test Results

			Unstandardized Residual
N			54
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		.68949218
Most Extreme Differences	Absolute		.155
	Positive		.067
	Negative		-.155
Test Statistic			.155
Asymp. Sig. (2-tailed)[c]			.065
Monte Carlo Sig. (2-tailed)[d]	Sig.		.067
	99% Confidence Interval	Lower Bound	.001
		Upper Bound	.003

Based on the table above, the Asymp value is known. Sig. (2-tailed) is 0.065 < 0.05, meaning that the normality assumption is met.

Table 2 – Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	Number of floating net cages	.993	1.007
	education	.994	1.006
	source of capital	.999	1.001

a. Dependent Variable: Interest Capital.

To detect multicollinearity, we set the hypotheses as follows: (1) Tolerance value < 0.10 or VIF > 10: multicollinearity occurs; (2) Tolerance value > 0.10 or VIF < 10: no multicollinearity.

Based on the table above, variable X1 (Number of floating net cages) has a Tolerance value of 0.993, X2 (Education) has a Tolerance value of 0.994, and D1 (Source of Funding) has a Tolerance value of 0.999. All variables have Tolerance values > 0.10 and VIF < 10, indicating no multicollinearity.

Table 3 – Heteroscedasticity

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.475	.196		2.422	.019
	Number of floating net cages	-.004	.026	-.021	-.157	.876
	education	.017	.015	.152	1.119	.268
	source of capital	-.173	.096	-.245	-1.805	.077

a. Dependent Variable: RES2.

If the probability value is greater than the alpha value (sig. > α), then it can be confirmed that the model does not exhibit heteroscedasticity. Based on the table above, variable X1 (Number of floating net cages) has a significance value of 0.876, X2 (Education) has a significance value of 0.268, and D1 (Source of Funding) has a significance value of 0.077. All variables have significance values greater than α (0.05), therefore it can be concluded that all variables do not exhibit heteroscedasticity.

Table 4 – Regression Test

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Ket. Taraf Sig.
1	(Constant)	1.085	.399		2.722	.009	99%
	Total Floating Net Cages (X1)	-.163	.054	-.336	-3.036	.004	99%
	Education (X2)	.048	.031	.170	1.534	.131	0%
	source of capital (D1)	-.876	.195	-.497	-4.505	<,001	99%

a. Dependent Variable: Minat_Permodalan (Y).

Based on the table above, the t-value for X1 (Total Floating Net Cages) is negative (-3.036). Therefore, a one-tailed t-test is conducted, making the t-value 3.036, with a t-table value of t(0.05/2; 54-3-1 = 2.00856). Since the t-value > t-table, it can be concluded that the Total Floating Net Cages has a significant effect on capital interest. The t-value for X2 (Education) is 1.534, and with a t-table value of 2.00856, the t-value < t-table, indicating that Education does not significantly affect capital interest. The t-value for D1 (Source of Capital) is 4.505, and with a t-table value of 2.00856, the t-value > t-table, indicating that the Source of Capital significantly affects capital interest.

The regression model from the table above is as follows:

$$Y=1.085-0.163X1+0.048X2-0.876D1+e$$

The constant (a) has a positive value of 1.085. The positive sign indicates a direct relationship between the independent variables and the dependent variable. This means that if all the independent variables, including the Total Floating Net Cages (X1), Education (X2), and Source of Capital (D1), have values of 0 percent or do not change, the capital interest in non-bank business will be 1.085 units.

The regression model indicates that the Total Floating Net Cages (X1) negatively affects the cultivators' interest in non-bank business capital. This means that each increase in the Total Floating Net Cages (X1) by 1 unit will decrease the cultivators' interest in non-bank business capital by 0.163 units.

The Education variable (X2) positively affects the cultivators' interest in non-bank business capital. This means that each increase in the Education variable (X2) by 1 unit will

increase the cultivators' interest in non-bank business capital by 0.048 units. Meanwhile, the Source of Capital variable (D1) negatively affects the cultivators' interest in non-bank business capital. This means that each increase in the Source of Capital variable (D1) by 1 unit will decrease the cultivators' interest in non-bank business capital by 0.876 units.

The next step is to determine the percentage (%) influence of the variables Source of Capital (D1), Education (X2), and Total Floating Net Cages (X1) simultaneously on the variable Capital Interest (Y), which can be referred to by the R Square value found in the multiple regression analysis results, specifically in the Model Summary table.

Table 5 – Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,901[a]	,811	,804	3,468	2,440

a. Predictors: (Constant), Capital Sources (D1), Education (X2), Amount KJA (X1).
b. Dependent Variable: Capital Interest (Y).

Table 5 – ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.304	3	5.435	10.785	<,001[b]
	Residual	25.196	50	.504		
	Total	41.500	53			

a. Dependent Variable: Interest Capital.
b. Predictors: (Constant), Capital Source, Education, Number of floating net cages.

The study analyzed various factors influencing the interest in non-bank financing among tilapia fish farmers using Floating Net Cages in Barito Kuala Regency. The research aimed to identify key factors driving tilapia fish farmers to seek alternative financing sources other than banks, considering the pivotal role of funding in enhancing productivity and sustainability in fish farming. Through a quantitative and qualitative approach, the study evaluated aspects such as financial literacy, accessibility to financing services, farmers' economic conditions, as well as their perceptions of risks and benefits of non-bank financing.

The multiple regression test identified that the Number of Floating Net Cages (X1) and the source of funding (X3) significantly influenced the interest in financing, while education (X2) showed no significant effect. The formed regression model (Y = 1.085 - 0.163X1 + 0.048X2 - 0.876X3) indicated that an increase in the Number of Floating Net Cages and access to non-bank funding sources significantly increased the interest in financing among tilapia fish farmers. The ANOVA test showed that the independent variables collectively had a significant influence on financing interest, with the computed F-value much greater than the critical F-value.

The Number of Floating Net Cages and the funding source are key elements that need to be considered in developing policies and financing strategies to support the sustainability and growth of tilapia fish farming in Barito Kuala Regency. Strategies to enhance fisheries financing should not only focus on macroeconomic variables affecting Islamic banking but also address the specific needs of the fisheries sector such as the Number of Floating Net Cages and access to funding sources, which can support the sustainability and growth of tilapia fish farming businesses. Lailia and Tanjung (2020) emphasized the need for increased attention to the fisheries sector in Indonesia, particularly in improving fisheries efforts with limited financial access. Islamic banking can play a significant role in providing financing for national fisheries development. Research on factors influencing fisheries financing in Islamic banking indicates that Non-Performing Financing (NPF) and Interbank Money Market Based on Sharia Principles (PUAS) have negative short-term impacts on financing, while inflation (INF), NPF, PUAS, and Islamic Bank Indonesia Certificate Rewards (ISBIS) have negative long-term effects. Meanwhile, the Capital Adequacy Ratio (CAR) and Financial to Deposit Ratio (FDR) have positive impacts (Laili and Tanjung, 2020).

Gustina et al. (2023), who analyzed production factors affecting tilapia fish production in Titian Modang Village, in the context of Barito Kuala, highlighted that the Number of Floating Net Cages and access to non-bank funding sources are the main determinants of financing interest, similar to how pond area and feed types affect production in Kuantan Singingi. Factors such as feed, lime, and labor significantly influence production with high correlations. Both physical production factors and financial access are crucial in enhancing output and the sustainability of farming businesses (Umiyati et al., 2017). Therefore, the development strategy for financing policies in Barito Kuala should consider increasing the Number of Floating Net Cages and expanding access to non-bank funding, optimizing the management of production factors such as feed and labor for technical and economic efficiency (Silviana and Rokan, 2022).

CONCLUSION

The factors influencing the interest in non-bank financing among of tilapia fish farmers using Floating Net Cages in Barito Kuala Regency are the Number of Floating Net Cages and funding sources. These are key elements that need to be considered in developing policies and financing strategies to support the sustainability and growth of tilapia fish farming businesses in Barito Kuala Regency.

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