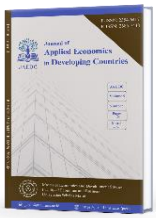

Journal of Applied Economics in Developing Countries
P-ISSN 2354 – 6417 | E-ISSN 2685 – 7448
Vol. 7 No. 2, September 2022, Page 69-72

INCOME OF SMALL-SCALE FISHERMAN IN COASTAL AREA

Meylin Rahmawati*, Rizky Agusriyanti Irna, Sulistya Rini Pratiwi
Faculty of Economics, Universitas Borneo Tarakan, Indonesia

*Corresponding author: rahmawatimeylin@gmail.com

ARTICLE INFO

Article history
Received : 9 July 2022
Revised : 31 August 2022
Accepted : 1 September 2022

Keywords
Fishermen's Income;
Improvement of the Community's Economy

JEL classification
D63; O13

ABSTRACT

This research was conducted in the Lingkas Ujung Village which aims to determine the effect of fishermen's income on improving the economy of coastal communities in Tarakan City (Case Study: Lingkas Ujung Village). This study uses a quantitative descriptive approach, using simple linear regression to explain the influence between variables. Based on the results of the analysis it was found that fishermen's income had a positive and significant effect on improving the community's economy in Lingkas Ujung Village. The value of the coefficient of determination (R2) is 0.292, this indicates that there is a strong relationship between the fishermen's income variable and the increase in the community's economy.

1. INTRODUCTION

Indonesia, with its vast archipelago, has rich marine resources. However, the coastal community in Lingkas Ujung Village, Tarakan City, struggles to leverage these resources fully. This study focuses on this village to understand the impact of fishermen's income on the local economy. Communities who live in coastal areas and work as fishermen have not been able to take advantage of the abundant wealth of natural resources, this is reflected in the welfare of coastal communities (Chen et al., 2020; Fenichel et al., 2018). The level of fishermen's welfare is largely determined by the catches obtained along with the number of catches, reflecting the amount of income that will be received by fishermen (Kar, 2021; Yang et al., 2022).

The catch of fishermen represents the income of individuals or groups of fishermen. Fishermen's activities illustrate the link between the amount of output and the number of workers to create value from the output produced (Allegretti, 2019; Pratiwi & Rahmawati, 2018; Riana et al., 2014). Empirical results show that the higher the fishermen's operational costs for going to sea, the higher their income potential (Anna et al., 2019; Tikadar et al., 2022).

The community settlements in Tarakan City are located in one of the sub-districts, namely Lingkas Ujung Village, with the majority of the population working as fishermen. Fishermen living in the Lingkas Ujung Village area consist of cultivation fishermen or capture fishermen. Basically, fishermen in the Lingkas Ujung Village still uphold the value of local wisdom, namely helping each other and mutual cooperation.

The economic conditions of people who work as fishermen experience uncertainty about income, sometimes they are able to meet their daily needs but in certain conditions fishermen are unable to fulfill their daily needs (Boubekri et al., 2022; Outeiro et al., 2018). This depends on natural conditions which are also uncertain, tidal currents are unstable (Boubekri et al., 2022), Inadequate fishing gear, high prices of goods needed (Agimass & Mekonnen, 2011; Selvaraj et al., 2022). This has an impact on people's income so that fishermen are unable to meet their needs properly.

2. RESEARCH METHODS

This research was conducted in the East Coast region of Tarakan City, namely in the Lingkas Ujung Village, which included several RT which were used as research locations which were located at RT.08, RT.16, RT.17, and RT.18 We chose simple linear regression due to its suitability for analyzing the direct relationship between fishermen's income and economic improvement. The data was cleaned and checked for normality before analysis. This study used several methods in collecting data, namely through the distribution of lifts given to each respondent who works as a fisherman and lives in Lingkas Ujung Village. Then, researchers also used data collection techniques through documentation in the form of pictures or the necessary data obtained from the local government. The basic method used is descriptive analysis and quantitative methods using simple regression analysis to determine the effect of fishermen's income on improving the economy of coastal communities in Lingkas Ujung Village. The following is a simple linear regression equation:

$$Y = a + b_1X + e$$

Description:
Y = Community Economic Improvement
X = Fishermen's Income
α = Constant
b = Regression coefficient

3. RESULTS AND DISCUSSION

Characteristics of Respondents Based on Fishermen's Income Variables

Fishermen's income from fishing is a hope for fishermen to meet their daily needs. The income of each fisherman certainly varies, depending on the productivity of the fisherman (Kar, 2021; Njoku, 2004). Based on the research results, it is known that as many as 46 fishermen or 53% of fishermen strongly agree that the income received by fishermen comes from fishing. As many as 24 fishermen or 28% of fishermen in the Lingkas Ujung Village stated that the fishermen's income comes from fishing. As many as 17 people or as many as 20% of fishermen stated that they did not agree that fishermen's income was received from fishing.

Characteristics of Respondents Based on Community Economic Improvement Variables

The people who live in the coastal area of Lingkas Ujung Village work as fishermen, this is done in the hope of being able to meet their daily needs. Based on the results of the research, it was found that as many as 31 people strongly agreed or equivalent to 36% of fishermen who thought that the income earned from fishing activities was to meet their daily basic needs. As many as 38 fishermen or the equivalent of 44% agreed that the income from fishing activities was to meet food needs. As many as 17 people or the equivalent of 20% stated that they did not agree that the income derived from fishing activities was to meet food needs. Meanwhile, 1 fisherman or as much as 1% was of the opinion that they strongly disagreed that the income derived from fishing activities was to meet food needs.

The Effect of Income on Community Economic Improvement

Based on the results of data processing using the SPSS program, a simple linear regression equation is obtained, namely:

$$Y = 3{,}307 + 0{,}234X + e$$

Based on the results of the regression equation, it shows that the constant value is 3.307, if the value of the independent variable is equal to 0. The regression coefficient value is 0.234. This shows that the value of increasing the community's economy has a positive sign where every time there is an increase in economic value by 1%, the income value of fishermen in Lingkas Ujung Village increases by 0.234 percent assuming that fishermen's income is fixed or constant.

Coefficient Determination Test (R^2)

The coefficient of determination shows how much the dependent variable can be explained by the independent variable. Based on the results of simple linear regression analysis, the coefficient of determination (R2) is 0.085. This means that the fishermen's income variable affects the community's economic improvement variable by 8.5%, the remaining 91.5%, which means that it is influenced by other factors that do not enter into in models. Although fishermen's income significantly impacts economic improvement ($R^2 = 0.085$), this low value indicates other influential factors. These could include access to education, healthcare, alternative employment opportunities, and infrastructure development, which warrant further investigation.

T Test (Partial Test)

Based on the results of partial or individual significance tests, it is known that the tcount is 2.812 with a significance value of 0.0006. The income variable shows that the tcount value of 2.812 is greater than the ttable so it can be concluded that fishermen's income has an effect on improving the community's economy in Lingkas Ujung Village (Gamarra et al., 2023; Wekke & Cahaya, 2015).

4. CONCLUSION

Based on our findings, we recommend that the local government implement programs to provide better fishing equipment and training on sustainable fishing practices. Additionally, establishing cooperatives could help fishermen negotiate better prices for their catch and reduce vulnerability to market fluctuations. Fishermen's income has a positive and significant effect on improving the community's economy in Lingkas Ujung Village. If fishermen's income increases, there will be an increase in the community's economy, which will have an impact on community activities, assuming that the fishermen's income variable remains fixed. Based on the test results of the coefficient of determination (R^2), the coefficient value is 0.085. This means that the fishermen's income variable affects the community's economic improvement by 8.5%, while the remaining 91.5% is influenced by other variables not included in the model.

Based on the results of the research, there are several suggestions that the author conveys. First, in an effort to improve the welfare of fishermen in Lingkas Ujung Village, the City Government should focus on and provide assistance to low-income fishermen. Second, efforts to increase the income of fishermen in Lingkas Ujung Village need to be supported by counseling from relevant agencies regarding the feasibility of marine activities.

5. REFERENCES

Agimass, F., & Mekonnen, A. (2011). Low-income fishermen's willingness-to-pay for fisheries and watershed management: An application of choice experiment to Lake Tana, Ethiopia. *Ecological Economics*, *71*, 162–170. https://doi.org/https://doi.org/10.1016/j.ecolecon.2011.08.025

Allegretti, A. (2019). "We are here to make money": New terrains of identity and community in small-scale fisheries in Lake Victoria, Tanzania. *Journal of Rural Studies*, *70*, 49–57. https://doi.org/https://doi.org/10.1016/j.jrurstud.2019.05.006

Anna, Z., Yusuf, A. A., Alisjahbana, A. S., Ghina, A. A., & Rahma. (2019). Are fishermen happier? Evidence from a large-scale subjective well-being survey in a lower-middle-income country. *Marine Policy*, *106*, 103559. https://doi.org/https://doi.org/10.1016/j.marpol.2019.103559

Boubekri, I., Mazurek, H., Djebar, A. B., & Amara, R. (2022). Social-ecological dimensions of Marine Protected Areas and coastal fishing: How fishermen's local ecological knowledge can inform fisheries management at the future "Taza" MPA (Algeria, SW Mediterranean). *Ocean & Coastal Management*, *221*, 106121. https://doi.org/https://doi.org/10.1016/j.ocecoaman.2022.106121

Chen, J.-L., Hsu, K., & Chuang, C.-T. (2020). How do fishery resources enhance the development of coastal fishing communities: Lessons learned from a community-based sea farming project in Taiwan. *Ocean & Coastal Management*, *184*, 105015.

Fenichel, E., Abbott, J., & Yun, S. (2018). The nature of natural capital and ecosystem income (Vol. 4, pp. 85-142). *In Handbook of Environmental Economics*, *4*, 85–142.

Gamarra, N. C., Costa, A. C. L., Ferreira, M. A. C., Diele-Viegas, L. M., Santos, A. P. O., Ladle, R. J., Malhado, A. C., & Campos-Silva, J. V. (2023). The contribution of fishing to human well-being in Brazilian coastal communities. *Marine Policy*, *150*, 105521. https://doi.org/https://doi.org/10.1016/j.marpol.2023.105521

Kar, D. (2021). *Community-based fisheries management in different continents and countries across the world*. Cambridge: Academic Press.

Njoku, I. F. (2004). The information needs and information-seeking behaviour of fishermen in Lagos State, Nigeria. *The International Information & Library Review*, *36*(4), 297–307. https://doi.org/https://doi.org/10.1016/j.iilr.2003.10.013

Outeiro, L., Villasante, S., & Sumaila, R. (2018). Estimating fishers' net income in small-scale fisheries: Minimum wage or average wage? *Ocean & Coastal Management*, *165*, 307–318. https://doi.org/https://doi.org/10.1016/j.ocecoaman.2018.09.002

Pratiwi, S. R., & Rahmawati, M. (2018). Nilai Tambah Pada Industri Ikan Kering Tipis Di Juata Laut. *Jurnal Ekonomi Pembangunan (JEP)*, *7*(2), 223–238.

Riana, I. G., Wiagustini, N. L. P., & Meydianawathi, L. G. (2014). Master Plan UMKM Berbasis Perikanan untuk Meningkatkan Pengolahan Produk Ikan yang Memiliki Nilai Tambah Tinggi. *JURNAL EKONOMI KUANTITATIF TERAPAN*, *7*(2), 102–119. https://doi.org/https://doi.org/10.24843/JEKT.2024.v17.i01

Selvaraj, J. J., Guerrero, D., Cifuentes-Ossa, M. A., & Guzmán Alvis, Á. I. (2022). The economic vulnerability of fishing households to climate change in the south Pacific region of Colombia. *Heliyon*, *8*(5), e09425. https://doi.org/https://doi.org/10.1016/j.heliyon.2022.e09425

Tikadar, K. K., Islam, M. J., Saha, S. M., Alam, M. M., Barman, S. K., & Rahman, M. A. (2022). Livelihood status of small-scale fishermen and determinants of their income: Insights from north-eastern floodplains of Bangladesh. *Geography and Sustainability*, *3*(3), 204–213. https://doi.org/https://doi.org/10.1016/j.geosus.2022.06.002

Wekke, I. S., & Cahaya, A. (2015). Fishermen Poverty and Survival Strategy: Research on Poor Households in Bone Indonesia. *Procedia Economics and Finance*, *26*, 7–11. https://doi.org/https://doi.org/10.1016/S2212-5671(15)00962-4

Yang, T.-Y., Chiang, T.-F., & Liu, W.-H. (2022). Small-scale fishers' catch production in Taiwanese coastal areas. *Marine Policy*, *143*(3), 105182. https://doi.org/10.1016/j.marpol.2022.105182