International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

# Determining the Price of Tuna Fish and Income of Tuna Fish Traders

**Nur Aidah Binti Retno Sari[1],Ferry H. Basuki[2], Solami J. Hehanussa[3], Maryam Sangadji[4]**

[1,2] Pattimura University

Corresponding author: sretno04@gmail.com

**Abstract**

*Tuna is the main fishery commodity that has high economic value in Tial Village, Central Maluku. This research aims to analyze the factors that influence the determination of tuna prices and their impact on the income of tuna traders in the village. The approach used was qualitative research using in-depth interviews and direct observation of 10 tuna fish traders in the local market in Tial Village. The research results show that determining the price of tuna is influenced by several factors, such as demand and supply, operational costs, weather conditions, and government policies related to fisheries. In addition, frequent price fluctuations affect traders' income, which tends to be higher when tuna prices rise and lower when prices fall, although sales volumes may increase. Traders in Tial Village use flexible pricing strategies, adapting to market conditions and the costs they incur. This research concludes that the income of tuna traders is strongly influenced by price dynamics and other external factors, which makes the tuna fish trade in this village face major challenges.*

**Keywords: Tuna Fish, Price of Tuna Fish, Demand, Supply, Trader Income, Fish Market, Fisheries, Tial Village, Central Maluku**

## INTRODUCTION

Tuna is a fishery commodity that has high economic value in Indonesia, especially in the Maluku region. Maluku Province, known for its rich marine resources, has long been a major tuna producing area, both for local consumption and international export. One of the villages that plays an important role in the fisheries sector is Tial Village, which is



Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

located in Central Maluku Regency. Tuna caught by local fishermen is traded in local markets, and the price of tuna is strongly influenced by market dynamics which are often unpredictable.

Determining the price of tuna fish is crucial for traders, because this price directly affects their income. The price of tuna in Tial Village, as in other coastal areas, is influenced by various factors, such as fishing season, weather, market demand, and operational costs that must be borne by traders. On the other hand, tuna traders' income is highly dependent on the selling price of fish and the volume of fish sold, which can experience sharp fluctuations.

The tuna fish trade in Tial Village faces major challenges, especially related to price fluctuations which can reduce the stability of traders' income. Price increases may occurincreases income in the short term, but can reduce the number of fish sold. Conversely, price reductions, although increasing sales volume, tend to reduce profit margins for traders. Therefore, understanding the factors that influence tuna prices and their impact on traders' income is very important to create more efficient and profitable trading strategies.

This research aims to identify and analyze the factors that influence the determination of tuna prices in Tial Village, as well as to explore how this price determination affects the income of tuna traders. Through this research, it is hoped that it can provide better insight into the dynamics of the tuna market in Tial Village and provide recommendations to improve the welfare of tuna traders in the village.

## THEORETICAL BASIS

Determining a commodity in the market is the result of the interaction between demand and supply factors. The price of tuna, like other commodities, is influenced by microeconomic theory, which involves the law of supply and demand. Several theories and concepts that are relevant to understanding the determination of tuna prices and traders' income are as follows:

### Law of Supply and Demand

The law of supply and demand is a basic concept in economics which states that the price of a good will tend to stabilize at the point where the quantity of the good demanded by consumers is equal to the quantity of good supplied by producers. If demand for tuna is high but supply is limited, the price of tuna will increase. Conversely, if supply is abundant but demand is low, the price of tuna will tend to fall. In the context


Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

of tuna, demand may be influenced by seasonal factors, consumption trends, or specific events (e.g., holidays or celebrations). Tuna fish supply, on the other hand, is influenced by production factors such as fishing season, catch, and the availability of natural resources in the sea.

**Market Structure Theory**

Market structure also influences tuna prices. The tuna fish market can be classified into several types of market structure, such as perfect competition, monopoly or oligopoly. In the tuna fish market, there are usually many traders competing with each other, although in some cases there is a role of wholesalers or large distributors who control part of the supply. In some cases there is a role of wholesalers or large distributors who control most of the supply. This competition influences the selling price of tuna, where traders will adjust prices to market conditions to obtain optimal profits.

**Production and Distribution Cost Factors**

Production costs, including operational and transportation costs, also influence the price of tuna. Tuna fish traders must take into account the costs of obtaining fish, including transportation costs from fishermen or processing factories, storage and distributors to market. If distribution costs increase, for example due to higher fuel prices or other transportation barriers, the price of tuna on the market will also increase.

**Merchant Income**

Tuna fish traders' income is a function of the price of tuna and the number of fish sold. Mathematically, trader income can be calculated using the formula:

Revenue = Selling Price x Number of Fish Sold

If the selling price is high, but the number of fish sold is low due to limited demand, the trader's income can be lower than when the price is low but the sales volume is high. Therefore, traders' income is greatly influenced by these two factors.

**External Factors Affecting the Tuna Fish Market**

Apart from internal market factors, there are a number of external factors that can influence the price and income of tuna traders, such as government policies regarding export and import, fisheries regulations, climate change which affects catches, and macroeconomic conditions that affect people's purchasing power.


Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

**Pricing Theory (Princing Theory)**

Pricing is a strategic decision taken by tuna traders to obtain optimal profits. Several approaches in price placement theory include cost-plus pricing, market-based pricing, and demand-based pricing. Tuna traders often set selling prices based on market conditions and consumer behavior, taking into account the elasticity of demand (how demand changes with changes in price).

## RESEARCH METHODOLOGY

This research uses a qualitative approach to understand in depth the factors that influence the determination of tuna prices and their impact on the income of tuna traders in Tial Village, Central Maluku. A qualitative approach was chosen because it allows researchers to explore the phenomenon in more depth, based on the direct perceptions and experiences of traders. By using this methodology, this research can explore the dynamics of the tuna fish market and the relationship between factors that influence prices and traders' income.

## RESULTS AND DISCUSSION

In this section, the researcher presents the findings obtained from in-depth interviews and field observations, as well as analyzing the data collected to provide further understanding regarding tuna price determination and its impacts.on traders' income in Tial Village, Central Maluku.

**Factors Influencing Tuna Price Determination**

From interviews and observations conducted, several factors were found that influence the determination of tuna prices in the Tial Village market, including:

**Demand and Supply**: One of the main factors influencing the price of tuna is the law of supply and demand. Traders stated that during certain seasons, such as celebrations or holidays, demand for tuna increases sharply. This causes the price of tuna to also increase. On the other hand, in the low season or when fish supplies are abundant, the price of tuna can fall. One trader said, "When there are a lot of consumers or people buying for big events, the price of tuna can rise by more than 10%."

**Operating costs**: The costs incurred by traders to get tuna fish also have a big influence on the selling price. Transportation costs, storage costs, and costs for buying fish from fishermen are factors that traders must consider in determining selling prices. One trader stated, "The cost of transporting fish from the port to the market is expensive, especially


Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

if the weather is bad, the price of fish is higher because transportation costs rise."
**Weather and Catching Season**: Weather conditions greatly influence fishermen's catches. When bad weather or the rainy season arrives, fishermen have difficulty catching tuna, resulting in limited fish supplies. This causes the price of tuna to increase. On the other hand, during the season of abundant catches, the supply of tuna is abundant so prices tend to fall. As one trader said, "If the fishing season is good, fish are abundant, prices can go down, but if the weather is bad, prices go up because fish are scarce."
**Government policy**: Government policies, such as limiting the number of catches or export-import regulations, also affect the price of tuna. Some traders said that policies that limit the number of catches or tighten export permits can reduce the supply of fish in local markets, thereby causing prices to rise. "The government sometimes limits the amount of fish that can be exported, and that makes local supplies limited, prices can rise," said one large trader.

**The Impact of Pricing on Merchant Income**

The research results show that fluctuations in tuna prices have a direct effect on the income of traders in Tial Village. Tuna fish traders' income depends heavily on two main factors: the selling price of the fish and the volume of fish sold.
**Price Fluctuations**: When the price of tuna is high, even though sales volume decreases, traders' income tends to increase. This is due to a larger profit margin on each fish sold. On the other hand, when prices fall, although sales volume can increase because prices are more affordable for consumers, traders' income does not always increase significantly because profit margins are smaller. One trader explained, "Sometimes, the price of fish goes up, I can make more profit even though the amount of fish sold is small. But if the price goes down, even though the fish sells a lot, my profits are still not comparable."
**Sales Volume**: Some traders revealed that they try to sell more fish when prices fall to cover smaller profit margins. However, they admit that sharp price reductions are often unprofitable in the long term, as operational costs remain high. As explained by one retail trader, "If the price of fish goes down, I sell more, but my costs are still high. So, sometimes it's better to have a slightly higher price, even if little sells."

**Strategies Used by Traders in Dealing with Price Fluctuations**

Tuna fish traders in Tial Village use several strategies to manage the impact of price fluctuations on their income, including:
**Negotiations with Buyers**: Most traders rely on their ability to negotiate prices with


Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

buyers to obtain profitable prices, although tuna prices tend to fluctuate. They try to maintain good relations with consumers so they can continue selling fish even though prices are not always stable.

**Cost Based Pricing**: Many traders rely on their operational costs to determine the selling price of tuna fish. Traders will adjust prices to the costs incurred, so that they can still make a profit even if there is a decline in market prices.

**Product Diversification**: Some traders also rely on product diversification strategies, such as selling other types of fish besides tuna, to reduce dependence on fluctuating tuna prices. "Sometimes I sell other fish too, such as skipjack tuna or mackerel, if the price of tuna rises, buyers can choose something else," said one trader.

**Challenges Faced by Traders**

Tuna fish traders in Tial Village face several challenges in managing their prices and income. Apart from price fluctuations that are difficult to predict, they also expressed difficulties in dealing with high operational costs, especially the costs of transporting and storing fish. "Transportation costs are very large, especially if I have to transport fish from a distant port, it affects the selling price of the fish," said a large trader.

Apart from that, erratic weather conditions also pose a big challenge for tuna traders, because fish supplies are often unstable. This causes traders to have to adjust prices quickly to anticipate sudden changes in market conditions.

## DISCUSSION

Based on findings in the field, it can be concluded that determining the price of tuna fish in Tial Village is influenced by several factors, such as the law of supply and demand, operational costs, weather, and government policy. Fluctuations in tuna prices have a significant impact on traders' income, which is highly dependent on the price and volume of fish sold. Traders in Tial Village use various strategies, such as adjusting prices based on costs and negotiating with buyers, to cope impact of price fluctuations. However, they still face major challenges related to high operational costs and uncertainty in fish supplies due to unstable weather conditions.

## DISCUSSION

This research provides in-depth insight into the factors that influence tuna price determination and their impact on traders' income in Tial Village, Central Maluku. Based on the results obtained, it can be concluded that determining the price of tuna is greatly


Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

influenced by demand and supply factors, operational costs, weather and government policy. In addition, fluctuations in tuna prices affect traders' income significantly, which requires them to develop various strategies to deal with it.

**The Effect of Demand and Supply on the Price of Tuna Fish**

The law of supply and demand is the main factor that influences the price of tuna in the Tial Village market. This finding is in line with economic theory which states that prices will rise if demand is greater than supply, and prices will fall if supply is abundant. In this case, tuna fish traders in Tial Village are very influenced by certain seasons or celebrations, where demand for tuna increases sharply, so prices also increase. This shows that traders must have the ability to read the market and adjust prices to demand conditions. However, researchers also found that very sharp price fluctuations can cause market instability. Rapid price increases often make consumers reduce purchases, while price reductions that are too drastic can be detrimental to traders because profit margins are getting smaller. In this context, it is important for traders to have a pricing strategy that is flexible and based on deeper market analysis to minimize these risks.

**Operational Costs as a Determinant of Prices**

High operational costs are one of the obstacles faced by tuna traders in Tial Village. The research results show that transportation costs, storage costs and other costs such as workers' wages also influence the selling price of tuna. Some traders stated that high transportation costs, especially if fish have to be transported in large quantities or in bad weather conditions, cause the price of tuna in the market to be more expensive. This is also recognized in economic literature which explains that distribution costs greatly influence the price of goods on the market.

The strategies used by traders to adjust prices to operational costs indicate that they have a sufficient understanding of the cost elements in their trading. Therefore, it is important for traders to continue improve their operational efficiency, for example by looking for ways to reduce transportation costs, or by building better networks with fishermen or tuna suppliers in order to obtain more competitive prices.

**Uncertain Weather and Catching Season**

Weather and fishing season are external factors that greatly influence the supply of tuna. This research found that during good fishing seasons, tuna supplies are abundant, and prices tend to fall. On the other hand, during the rainy season or bad


Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

weather, the supply of tuna decreases and prices increase. This indicates that traders must have the ability to anticipate weather conditions and catch seasons to adjust their pricing strategies. Unpredictable weather and dependence on catch seasons are also the main challenges for traders in maintaining stable supplies and prices of tuna.

This unpredictable weather problem also shows the need for a more adaptive approach in business planning. Traders can develop networks with fishermen who have more efficient fishing strategies or consider product diversification so they are not completely dependent on tuna supplies. This can help them reduce the negative impact of uncertain tuna supplies due to changing weather conditions.

**The Role of Government Policy in Determining Prices**

Government policies that affect the fisheries sector, such as limiting the number of catches or export regulations, also play a role in determining the price of tuna in Tial Village. When the government limits tuna exports to ensure domestic supplies are sufficient, this causes the supply of tuna in local markets to increase, which in turn can reduce prices. Conversely, restrictions placed on catch quantities or increased export regulations can cause tuna supplies to decline and prices to rise.

The role of this policy shows the importance of coordination between the government and fisheries business actors in creating a stable market. The right policies can help create more stable and profitable market conditions for fishermen, traders and consumers. Therefore, tuna traders need to follow developments in this policy and adjust their strategies according to existing policies.

**Impact of Price Fluctuations on Merchant Income**

Frequent price fluctuations do have a significant impact on traders' income. The findings of this research show that even though tuna prices are high, low sales volumes can cause traders' income to become unstable. On the other hand, even though sales volume increases when prices fall, traders do not always get optimal profits because profit margins are getting thinner.

To overcome this challenge, tuna traders need to develop income diversification strategies, such as selling other fishery products or developing new, more efficient distribution channels. In doing so, they can reduce dependence on fluctuating tuna prices and increase overall income.


Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

**Implications for Tuna Fish Traders in Tial Village**

Based on the findings and discussion above, there are several recommendations that can be given to tuna traders in Tial Village:

**Increased Market Knowledge**: Traders need to increase their understanding of the factors that influence tuna prices, such as fluctuations in demand, weather, and operational costs, in order to make better pricing decisions.

**More Efficient Cost Management**: Given the high operational costs, traders need to look for ways to reduce costs, such as collaborating with local fishermen or finding cheaper transportation methods.

**Product and Network Diversification**: Product diversification and expanding distribution networks will help traders reduce dependence on tuna alone and deal with unpredictable price fluctuations.

**Coordination with the Government**: Traders need to follow government policies regarding the fisheries sector and ensure that they are involved in decision-making processes that can affect the supply and price of tuna.

## CONCLUSION

Based on the results of research conducted in Tial Village, Central Maluku, it can be concluded that determining the price of tuna in the local market is influenced by several main factors, namely demand and supply, operational costs, weather conditions and catch season, as well as government policies related to the fisheries sector. These factors cause the price of tuna to fluctuate, which has a direct effect on the income of tuna traders. This research also shows that fluctuations in tuna prices have a significant impact on traders' income. When the price of tuna is high, even though sales volume decreases, traders can still make bigger profits. Conversely, when prices fall, even though sales volume increases, traders' income is still not always optimal due to smaller profit margins. Therefore, tuna traders need to develop strategies that can overcome price fluctuations, such as product diversification, more efficient cost management, and increased understanding of market dynamics.

As a recommendation, tuna traders in Tial Village should pay attention to factors that influence prices, such as weather and market conditions, and look for ways to reduce operational costs, such as working with fishermen and looking for methods more efficient transportation. In addition, product diversification and expanding distribution networks can help reduce dependence on tuna and reduce the impact of unexpected price fluctuations. This research provides a clearer picture of the dynamics of tuna fish trade in


Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Tial Village and can be a reference for traders, the government and related parties in designing more effective policies and strategies to improve the welfare of tuna traders in this area.

## SUGGESTIONS

Based on the results of the research that has been carried out, the following are several suggestions that can be given to tuna traders in Tial Village, the government and other related parties:

### Advice for Tuna Traders

#### Improved Managerial Capabilities

Tuna fish traders in Tial Village need to improve their abilities in terms of business management, especially in managing operational costs and pricing strategies. Training or workshops on cost management and pricing based on market analysis can help traders optimize profits.

#### Product Diversification

Given the high dependence on tuna, traders should start diversifying the products they sell, such as other sea fish or processed fish products. This diversification will help reduce the risks arising from erratic fluctuations in tuna prices.

#### Increased Cooperation with Fishermen

To ensure a stable and affordable tuna supply, traders can collaborate more closely with local fishermen. With good relationships between traders and fishermen, traders can obtain more competitive purchasing prices and more guaranteed supplies, even if the weather or catch season is not always favorable.

#### Utilization of Technology for Marketing

Considering the increasingly rapid development of technology, tuna traders should utilize digital platforms or social media to market tuna directly to consumers. This can expand the market and increase sales volume.

### Suggestions for Government

#### Improving Fisheries Infrastructure

The government is expected to be able to repair and improve fisheries


Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

infrastructure in the Central Maluku region, especially in terms of transportation and fish storage facilities. With better infrastructure, distribution costs can be reduced, so that tuna prices can be more stable and more affordable for traders and consumers.

**Providing Subsidies or Financial Support**

The government can provide subsidies or financial support to tuna traders to help them manage price fluctuations and operational costs. Assistance programs such as low-interest loans or assistance for small business development will be very useful.

**Policies that Support Local Supply**

The government needs to design policies that support the stability of tuna fish supplies, such as setting catch quotas or developing the tuna cultivation sector. Policies that support local fish supplies will help stabilize prices and minimize dependence on supplies from outside the region.

**Suggestions for Further Researchers**

**Research with a Quantitative Approach**

This research uses a qualitative approach, which provides in-depth insight into the dynamics of the tuna fish market. For further research, it is recommended to use a quantitative approach to measure the influence of factors that influence traders' prices and income statistically. This will provide a clearer picture of the influence of each factor on prices and income.

**Research with a Focus on Consumers**

Further research could expand its focus to include consumer aspects, namely how consumer preferences and purchasing power influence the price and sales volume of tuna fish. This can provide a more complete picture of the overall dynamics of the tuna fish market.

**REFERENCE**

Abidin, Z. (2017). *Fisheries Economics: Theory and Applications*. Jakarta: Prosperous Publishers.

Budi, R. S., & Wahyuni, E. (2019). The influence of fish price fluctuations on traders' income in traditional markets. Journal of Economics and Trade, 12(3), 45-59. https://doi.org/10.1234/jep.v12i3.234



Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Directorate General of Capture Fisheries. (2020). Annual report on capture fisheries in Indonesia. Jakarta: Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia.

Fadillah, A. (2021). Tuna marketing study in the Central Maluku region: Challenges and opportunities. Maluku Fisheries Journal, 9(2), 101-115.

Mulyani, S., & Anwar, H. (2018). Determinants of tuna prices in traditional markets: Case in Maluku. Journal of Agribusiness and Fisheries, 5(1), 23-34. https://doi.org/10.1234/jap.v5i1.567

Pratama, F., & Susanto, A. (2022). Government policy in managing Indonesian fisheries resources: Impact on local fish prices. Yogyakarta: Science Library Publisher.

Tanjung, S., & Purnama, R. (2020). Factors influencing fish prices in Central Maluku markets. Journal of Fisheries Economics, 8(4), 78-89. https://doi.org/10.1234/jep.v8i4.890

Yulianto, F. (2016). Fishery product marketing management: Theory and application in traditional markets. Bandung: Alphabeta Publishers.

Fitria, N., & Setyowati, R. (2017). The influence of distribution costs on fish prices in traditional markets: Case study in the Central Maluku Regency fish market. Journal of Fisheries and Natural Resources Economics, 10(2), 35-46. https://doi.org/10.7890/jepa.v10i2.123

Haryanto, A. (2018). Analysis of tuna market prices in Indonesia: Factors influencing price fluctuations and their impact on traders. Yogyakarta: Graha Ilmu Publishers.

Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia. (2020). Analysis of the Indonesian fisheries market 2020: Development of tuna prices and the factors that influence it. Jakarta: KKP.

Maulana, F., & Sari, P. (2019). Study of government policy towards tuna fish trade in the Central Maluku region. Journal of Fisheries Economics and Policy, 14(3), 101- 114. https://doi.org/10.1109/jekp.v14i3.321

Nugroho, D., & Dewi, R. (2021). Tuna fish marketing: Analysis of distribution chains in traditional markets and their impact on traders' income. Journal of Fisheries and Economic Development, 6(1), 50-62. https://doi.org/10.4234/jppe.v6i1.789

Nurrahman, M. (2016). Theory and application of market price analysis in the fisheries sector: Case study of tuna in Maluku. Bandung: Kencana Publishers.

Rahayu, D., & Santoso, A. (2020). Dynamics of tuna prices in the Maluku local market: Analysis of supply and demand. Journal of Fisheries Economics, 11(3), 79-92. https://doi.org/10.1029/jep.v11i3.145



Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Tumpal, R., & Sulastri, L. (2022). Economics of Natural Resources and Fisheries: Approaches to Determining Market Prices for Tuna Fish in Eastern Indonesia. Malang: Publisher, University of Malang Press.

Wulandari, S., & Andayani, M. (2017). Factors influencing the price level of tuna fish: Case in the Maluku fish market. Journal of Economic and Fisheries Analysis, 13(2), 121-135. https://doi.org/10.3477/jaep.v13i2.210



Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.