

Marketing Efficiency of Tongkol Fish (*Euthynnus Affinis*) at the Kasiwa Landing and Fish Management Base (PPI), Mamuju Regency

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ABSTRACT

Mackerel Tuna (*Euthynnus affinis*) is a superior pelagic fishery commodity landed at the Kasiwa Landing and Fish Management Base (PPI), Mamuju Regency, but the high production volume has not been directly proportional to the welfare of fishermen due to weak bargaining positions in the distribution chain. This study aims to analyze the costs, margins, profits, and marketing efficiency levels of tuna at the Kasiwa PPI. The study was conducted from April–June 2026 using a survey method with a descriptive quantitative approach to 30 respondents (10 fishermen, 10 traders, and 10 end consumers). Fishermen respondents were selected by purposive sampling, marketing institutions by snowball sampling, and consumers by accidental sampling. Data were analyzed using the formula for marketing costs, margins, and profits, fisherman's share, and the marketing efficiency index (EP) according to Soekartawi (2002). The results of the study indicate that the marketing of tuna at PPI Kasiwa takes place through two marketing channels, namely Channel I (fishermen–consumers) and Channel II (fishermen–collectors–retailers–consumers). In Channel I, the selling price of fishermen is Rp15,000/kg and the price at the consumer level is Rp17,000/kg resulting in a marketing margin of Rp2,000/kg, with a marketing cost of Rp1,500/kg resulting in a marketing profit of Rp500/kg. The marketing efficiency index (EP) value in Channel I is 8.82% with a fisherman's share of 88.24%. In Channel II, the selling price of fishermen is Rp15,000/kg and the price at the consumer level is Rp25,000/kg resulting in a total marketing margin of Rp10,000/kg, with a total marketing cost of Rp6,450/kg resulting in a total marketing institution profit of Rp3,550/kg. The EP value in Channel II is 25.80% with a fisherman's share of 60.00%. Both channels are considered efficient, but Channel I is the most efficient marketing channel because it has the lowest EP value and the highest fisherman's share. The short marketing channel that only involves fishermen and consumers is the main factor in achieving this efficiency in Channel I.

INTRODUCTION

As a maritime nation, Indonesia has significant potential in capture fisheries, making fish a key pillar of food security and a source of animal protein for the community. Tuna (*Euthynnus affinis*) is an economically important pelagic fish species with the highest production level in the national capture fisheries group, reaching 681,068 tons in 2024 (Ministry of Maritime Affairs and Fisheries, 2024). This high production emphasizes the strategic role of tuna in supporting the economy of coastal communities, including in Mamuju Regency, West Sulawesi Province. The contribution of large pelagic fish capture fisheries to the regional economy of Sulawesi, Maluku, and Papua also continues to increase between 2019 and 2023 (Susanto & Satriawan, 2026), making strengthening its trade system strategic.

Mamuju Regency has a productive coastal area, with the Kasiwa Fish Landing and Management Base (PPI) serving as a landing and trading center for catches. The PPI serves as a meeting point between fishermen as producers and various marketing institutions that distribute tuna to end consumers (Mamuju Regency Central Statistics Agency, 2024). In practice, the distribution of catches from fishermen to consumers requires marketing costs at each marketing institution involved, resulting in price differences between fishermen and consumers (Pasaribu et al., 2022).

Tuna is a highly perishable commodity, so quality management through a cold chain system significantly determines the product's selling value throughout the marketing chain (Sobariah et al., 2023; Al Fatich et al., 2023). Readiness and obstacles to implementing a cold chain system in the distribution of captured fish remain challenges in many regions (Ratna & Erza, 2025), including affecting the quality of tuna at landing centers (Wahyuningsih, 2019). The length of the marketing channel, along with the costs and profits incurred by each marketing agency, will affect the marketing margin and the fisherman's share. The longer the marketing channel, the greater the margin and the smaller the share received by fishermen (Mufrihah et al., 2019).

Marketing efficiency is an important indicator for assessing whether the marketing system provides equitable benefits to all stakeholders, particularly fishermen. Several previous studies have examined the marketing efficiency of tuna fish at various locations, such as the Kranji Fish Market (PPI) in Lamongan (Pasaribu et al., 2022), Cilacap Regency (Mufrihah et al., 2019), the Oeba Fish Market (PPI) in Kupang (Bulan et al., 2025), the Pemangkat Fishery Port (PPN) (Yudiansyah et al., 2025), and from the Fish Market (TPI) to Panorama Market in Bengkulu City (Feni & Pako, 2025). However, studies specifically analyzing costs, margins, institutional profits, and marketing efficiency of tuna fish at the Kasiwa Fish Market in Mamuju Regency are still lacking. The novelty of this research lies in providing the first empirical data on the channel structure, margins, and marketing efficiency of tuna fish at the Kasiwa Fish Market, which can serve as a basis for formulating fisheries trade policies in coastal areas of West Sulawesi.

Based on the description, this study aims to answer the following problems: (1) how much is the marketing cost of tuna fish at the PPI Kasiwa, Mamuju Regency; (2) how much is the marketing margin of tuna fish at the PPI Kasiwa,

Mamuju Regency; (3) how much is the profit of the tuna fish marketing institution at the PPI Kasiwa, Mamuju Regency; and (4) how efficient is the marketing of tuna fish at the PPI Kasiwa, Mamuju Regency. The results of the study are expected to be a reference for fishermen, marketing institutions, and stakeholders in developing a more efficient and equitable fisheries trade system.

RESEARCH METHODS

Time and Place

The research was conducted at the Kasiwa Fish Landing and Management Base (PPI), Mamuju Regency, West Sulawesi Province, in April–June 2026. The location was chosen purposively with the consideration that PPI Kasiwa is one of the active and representative centers for landing and marketing of skipjack tuna in the coastal area of Mamuju Regency.

Types and Approaches of Research

This study uses a descriptive quantitative approach with a survey method. This approach was chosen to systematically describe the channel structure, costs, margins, profits, and marketing efficiency of tuna based on data collected in the field.

Data Sources and Respondent Determination Techniques

The data sources consist of primary and secondary data. Primary data were obtained through direct interviews with fishermen, marketing institutions (collectors and retailers), and end consumers of tuna fish at the Kasiwa Fish Market (PPI). The number of respondents was 30 people, consisting of 10 fishermen, 10 traders (collectors and retailers), and 10 end consumers. Fishermen respondents were determined by purposive sampling with the criteria of making tuna fishing their main business; marketing institutions were determined by snowball sampling by tracing the distribution flow of fish from fishermen to end consumers; and end consumers were determined by accidental sampling, namely consumers who happened to be found buying tuna fish during the research. Secondary data were obtained from the management of the Kasiwa Fish Market (PPI), the Department of Maritime Affairs and Fisheries, the Central Statistics Agency of Mamuju Regency, and relevant scientific literature.

Data collection technique

Data collection was carried out using three techniques, namely: (1) observation of fish landing and trading activities; (2) in-depth interviews using structured questionnaires regarding purchase prices, selling prices, cost components, and volume of fish marketed at each institution; and (3) documentation in the form of notes, photos, and transaction data.

Data Analysis Techniques

The data were analyzed descriptively and quantitatively using marketing costs, marketing margins, marketing agency profits, fisherman's share, and marketing efficiency. The formula used is as follows:

1. Marketing margin: $Mp = Pr - Pf$; with $Mp = Ci + \pi$
2. Marketing institution profit: $\pi = Mp - Ci$
3. Fisherman's share: $Fs = (Pf/Pr) \times 100\%$
4. Marketing efficiency: $Ep = (\text{Total marketing costs} / \text{Value of products marketed}) \times 100\%$

Description: M_p = marketing margin; P_r = price at the consumer level; P_f = price at the fisherman level; C_i = marketing costs of the i -th institution; π_i = profit of the i -th institution; F_s = fisherman's share; E_p = marketing efficiency. A marketing channel is said to be more efficient if it has a smaller marketing efficiency value (approaching zero) and a higher fisherman's share (Mufrihah et al., 2019; Feni & Pako, 2025).

RESULTS AND DISCUSSION

1. Channels and Marketing Institutions for Skipjack Tuna

The results of the study show that the marketing of tuna at PPI Kasiwa, Mamuju Regency, takes place through two marketing channels, namely:

Channel I: Fishermen → Consumers

Channel II: Fishermen → Collectors → Retailers → Consumers

In Channel I, fishermen sell tuna directly to consumers near the landing site, while in Channel II, tuna passes through two marketing institutions before reaching the final consumer. The marketing institutions involved are collectors who purchase fish in bulk from fishermen, and retailers who sell the fish to consumers in the market. The presence of intermediaries in Channel II results in a larger price difference between fishermen and consumers (Yudiansyah et al., 2025).

2. Costs, Margins, and Profits of Marketing Skipjack Tuna

Marketing costs represent all costs incurred by marketing agencies in distributing tuna from fishermen to consumers, including ice, bags/containers, levies, labor, and transportation. Details of costs, prices, margins, and profits for each channel are presented in Tables 1 and 2.

Table 1. Costs, Margins, and Profits of Marketing Skipjack Tuna on Channel I
(Rp/kg)

No.	Description	Value (Rp/kg)
1	Selling price at the fisherman level (P_f)	15,000
a	Ice costs	400
b	Bag/container fee	200
c	Retribution	200
d	Labor	400
e	Transportation	300
	Total marketing costs (C_i)	1,500
2	Purchase price at consumer level (P_r)	17,000
3	Marketing margin ($M_p = P_r - P_f$)	2,000
4	Marketing profit ($\pi = M_p - C_i$)	500
5	Fisherman's share (F_s)	88.24%
6	Marketing efficiency (E_p)	8.82%

Source: Processed Primary Data (2026)

Table 2. Costs, Margins, and Profits of Marketing Skipjack Tuna on Channel II
(Rp/kg)

No.	Institution / Description	Value (Rp/kg)
1	Fisherman	
	Fisherman's selling price (Pf)	15,000
2	Collector Trader	
	Purchase price	15,000
	Ice costs	800
	Bag/container fee	400
	Retribution	300
	Labor	700
	Transportation	1,250
	Total cost (Ci)	3,450
	Selling price	20,000
	Margin (Mp)	5,000
	Profit (π)	1,550
3	Retail Traders	
	Purchase price	20,000
	Ice costs	700
	Bag/container fee	400
	Retribution	300
	Labor	800
	Transportation	800
	Total cost (Ci)	3,000
	Selling price (Pr)	25,000
	Margin (Mp)	5,000
	Profit (π)	2,000
4	Total marketing costs	6,450
5	Total marketing margin	10,000
6	Total profit of the institution	3,550
7	Fisherman's share (Fs)	60.00%
8	Marketing efficiency (Ep)	25.80%

Source: Processed Primary Data (2026)

Based on Tables 1 and 2, the total marketing cost for tuna in Channel I is IDR 1,500/kg, while in Channel II it is IDR 6,450/kg. Marketing costs in Channel II are higher because it involves two marketing institutions (collectors and retailers), each of which incurs operational costs of IDR 3,450/kg for the collectors and IDR 3,000/kg for the retailers. This finding aligns with Pasaribu et al. (2022) who stated that the more marketing institutions involved, the higher the marketing costs.

The marketing margin is the difference between the price paid by consumers and the price received by fishermen. In Channel I, the marketing margin is IDR 2,000/kg, while in Channel II the total marketing margin reaches IDR 10,000/kg, consisting of a collector's margin of IDR 5,000/kg and a retailer's margin of IDR 5,000/kg. The large margin in Channel II indicates that the length

of the marketing chain results in a higher price difference between fishermen and consumers. This condition is consistent with the results of research by Mufrihah et al. (2019), Kamaruddin & Novitasari (2023), and Feni & Pako (2025) that longer marketing channels tend to have larger marketing margins.

Marketing institutions' profits are derived from the difference between marketing margins and marketing costs. In Channel I, the profit earned by fishermen as direct marketers is IDR 500/kg. In Channel II, the total profit of marketing institutions is IDR 3,550/kg, consisting of a profit of IDR 1,550/kg for collectors and IDR 2,000/kg for retailers. Retailers earn the largest profits because they deal directly with end consumers and bear the risk of fish quality degradation. The distribution of profits, which tends to be concentrated in these intermediary institutions, emphasizes the importance of strengthening fishermen's bargaining position (Bulan et al., 2025).

3. Marketing Efficiency of Skipjack Tuna

Marketing efficiency is calculated by comparing total marketing costs to the value of the marketed product. The marketing efficiency value of Channel I is 8.82% ($\text{Rp}1,500 \div \text{Rp}17,000$), while Channel II is 25.80% ($\text{Rp}6,450 \div \text{Rp}25,000$). Both values are relatively small, so both channels are considered efficient. However, Channel I is the most efficient channel because it has the smallest marketing efficiency value (8.82%) and the highest fisherman's share (88.24%), which means fishermen receive a larger share of the price. These results are in line with Yudiansyah et al. (2025) and Feni & Pako (2025) who concluded that shorter marketing channels with a high fisherman's share are the most efficient channels. Although both channels are efficient, shortening the marketing chain and strengthening fishermen's institutions are still needed to increase the share of the price received by fishermen.

CONCLUSIONS AND SUGGESTIONS

Marketing of skipjack tuna (*Euthynnus affinis*) at PPI Kasiwa, Mamuju Regency, takes place through two marketing channels, namely Channel I (fishermen-consumers) and Channel II (fishermen-collectors-retailers-consumers). In Channel I, the marketing cost is Rp1,500/kg, the marketing margin is Rp2,000/kg, and the marketing institution's profit is Rp500/kg, with a marketing efficiency (EP) value of 8.82% and a fisherman's share of 88.24%. In Channel II, the total marketing cost is Rp6,450/kg, the total marketing margin is Rp10,000/kg, and the total marketing institution's profit is Rp3,550/kg, with an EP value of 25.80% and a fisherman's share of 60.00%. Both EP values are relatively small so that both channels are declared efficient, but Channel I is the most efficient marketing channel because it has the lowest EP value and the highest fisherman's share, as a result of the short marketing chain which only involves fishermen and consumers without intermediary institutions.

It is recommended that fishermen shorten the marketing chain and strengthen institutions (e.g., fishermen's groups or cooperatives) to increase their bargaining power and share of the price received. Local governments need support in the form of providing cold chain facilities, improving the Kasiwa Fisheries and Fisheries Port (PPI) infrastructure, and stabilizing prices. Future research is recommended to increase the number of respondents and the

observation period so that the results of the marketing efficiency analysis can be more widely generalized.

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