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Abstract
This research was aimed at analyzing the fishery marketing patterns in Kotabaru Regency, South Borneo Indonesia. Analysis employed were (a) marketing channels using snowball sampling method, (b) farmer's share and (c) margin marketing. The results showed that (a) fishery marketing consisted of five channels, (b) price share obtained by producer was ranged from 42% until 84% of total price paid by consumers, which showed the marketing system was efficient, and (c) the marketing margin obtained by small trader was larger than that of wholesaler. Meanwhile, profit margin distribution was higher compared to the marketing cost margin distribution. It meant that the profit obtained broker trader was bigger if compared with costs of marketing and production.

Keywords: Producer, wholesaler, retailer, marketing channel, farmer's share and margin

1. Introduction

The Indonesian Sea has 5.8 million km^2 area consisting of 0.3 km^2 of territorial sea, 2.95 km^2 of archipelagic waters and 2.55 km^2 of the Exclusive Economic Zone water [1], with the potential for sustainable marine resource 6,26 million tonnes of catch per year [2]. Recently, the amount of fish catches in Indonesian marine waters reaches 5.4 million tonnes per year, it means that there is a chance to increase the total allowable catch, which is 720.000 tonnes per year [3]. The Indonesia capture fisheries have the important roles and strategic roles; it can be seen from these three roles [5], which are the source of economis growth, food sources especially animal protein [6], and job providers [7]. Fisheries create jobs and act as a "safety net" when other sources of income are failed [8].

Fishery products are decomposed quickly after being caught [9], this is because the water content in the fish's body is 76.00% causing bacteria to rapidly multiply [10]. In addition, other factors such as temperature, availability of oxygen, light, less sanitary and hygienic equipment, mishandling of raw materials can also effect the preservation and freshness of the product [11]. These weaknesses are blocking the activities of fishing communities and often cause great losses, especially when the fish production is overflow [12]. One of the way to overcome these weaknesses is speed and accuracy in marketing fishery products [13]. Each of the delay time means the quality will decrease, part of weight of the fish will also decrease [14], and in the end it will affect the selling price that received by the producers [15, 16]. Fish marketing is an important factor in delivering fishery products (i.e.catch, cultivation) from producers to the consumers [17, 18]. Kotabaru regency located in South Borneo province is the center of the biggest sea fishery producer. Sustainable fishery potential in Kotabaru regency reached at capacity of 98.000 tons/year and sea fish, which could be obtained (Maximum Sustainable Yield) was 77.600 tons per year. Those were consisted of many types of fish as follows *Scomberromo commersoni* 220.5 tons/year, *shrimp* 105 tons/year, Rastrelliger 150.8 tons/year, *Euthynnus affinis* 93 tons/year, *lobster* 96 tons/year, *sea weed* 447 tons/year as well as sea corals reserves [19]. The location of fishermen in Kotabaru Regency are located in several places that far from each other, causing high marketing costs and a weak bargaining position for fishermen in selling the fish that they catch [20]. There is a high difference in the price of fresh sea fish between the price in the fisherman area and the final consumers causing the fishermen's to be low [21], besides that most fishermen sell the fish in the middle of the sea to the middlemen inshore, and as a result, collusion can occur between middlemen which is very dentrimental for the fishermen [22].

These factors made the marketing agencies reduce the prices to the fishermen or increase the prices to the final consumers [23], so that (a) more profits for marketing agencies and (b) fishermen and final consumers not getting the fair price [24]. Effective marketing is expected to (a) be able to increase producer income, because the effective and efficient marketing will encourage the increase fishery production and (b) increase purchasing power and consumer satisfaction [25].

2. Materials and Methods

2.1 Research Approach

Kotabaru regency was chosen as place of work since it is located on the coastal area and is the area whose community depends on fishery activity. Data used was consisted of primary and secondary. The primary data was obtained by survey and interview to respondents adapted from previous work [26]. Respondents sample sampling used the method of Simple Random Sampling in which samples were producers and small traders. Meanwhile, snowball sampling technique was employed to obtain sample [27]. Secondary data was taken from literature studies and studies of data and information related to both the results of previous studies and other supporting data derived from several publications that already conduct [28], secondary data was collected from references survey and reports of related institutions and was obtained from Fishery Department in South Borneo [29].

2.2 Marketing Analysis

Analyses used an approach as follows: the first was analysis of marketing channel, which was qualitative. It employed to know the marketing channel of fish that formed from fishermen (producer) until consumers. Method used in this analysis was *snowball sampling* whose initial sampling numbered small and then respondents invited their friends joining in this work (sample). If it works, the sample gradually expands likes snowball [30].

The second was a Farmer's Share Analysis, which used a mathematics analysis, or quantitative approach. Since locations of fishermen are in remote areas and are far away from marketing center cause many institutions involved. This condition impacts to small traders (brokers) existence [31]. The longer the marketing chain is the higher the cost of marketing that causes the bigger of marketing margin and the farmer obtained profit low [32]. The *Farmer's share* analysis is formulated following: Fs = Pf/Pr x 100% [33]. Where, Fs is Farmer's share; Pf is the price at producer (fishermen) and Pr is the price in traders. Previous report, if the share price that received by the farmers/fisherman is higher than 40%, then the marketing system can be said as efficient. [34]. The third was the marketing margin analysis that was the difference between the price of fishermen and consumers. The price theory is assumed that seller and buyer directly meet so the price was only determined by bargaining and demand power [35]. It is concluded that no difference the price of fishermen and traders, or consumers. Based on a fishery economic research showed that there was a price difference of traders and fishermen, which was called marketing margin[36]. The resultant marketing margin is determined by using a formula: M = Pr – Pf [37], where, M is the marketing margin; Pr is consumer price and Pf is fishermen price.

3. Results and Discussion

3.1 Marketing Channel

Based on data obtained at a research place showed that the marketing channel of sea fish of fishermen to consumers in Kotabaru shown in Fig.1, describes that 83% of fishermen sold their fish to collector traders and 16.6% to offshore traders and then 25% and 75% of fish were distributed to companies/exporters and retailer traders, respectively. The 46% and 53.8% of fish obtained by offshore traders were distributed to companies/exporters and inter-island traders. The sale of fresh fish from fishermen to consumers only accounted 0.4% and was carried out in the village whose fishermen and buyers lived together. Sometimes external consumer visited the fishermen village and bought some fish for self-consuming.

Distribution system as shown in Fig. 1 reveals that collector traders were the biggest buyers that is possible since the other marketing institutions capability is limited buying a specific fish [38]. Company was only buying an export quality fish (like shrimp), while, inter-island traders a special fish, such as, *Euthynnus affinis*, *Scomberromo commersoni* and *Rastrelliger* [39]. In this research, marketing institutions were involved as follow the wholesaler traders, retailer traders and exporter company**.** Generally, wholesaler traders self-funded product transportation from fishermen villages to big traders and retailers.

The wholesaler traders, generally, have enough capital and trapped fishermen by lending money, or other needs used by fishermen under agreement stipulating that all catchers should be sold to lenders **[40]**. Though credit was handed by lenders under agreement, the fishermen considered that ways was easy and fast process and it could be paid by installment with fish whose the price was previously set by traders. The fishermen just followed the rules and the lower price was not problem because easy and fast treatments given by trader were more important [41].

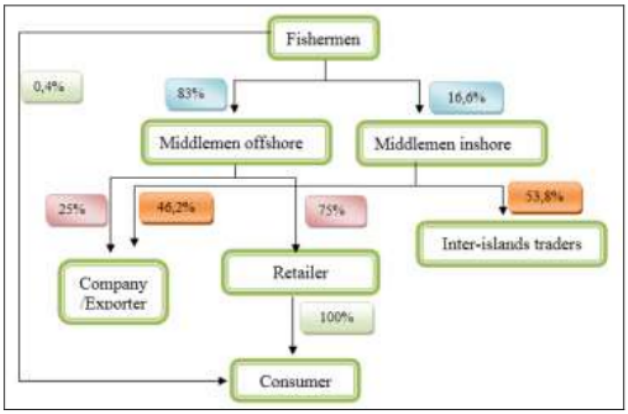

Fig 1: The marketing channel of sea fish in Kotabaru regency

Retailer traders buy fishery product from wholesaler traders who have related for year and they have corporated under agreement. The fishermen were difficult to turn to other traders since they were known and needed each other. Market concentration was established naturally between fishermen and small traders, collector traders and company. While, the retailer traders did not fund the transportation cost nor took a risk [42]. Generally, retailer traders determining the price referred to buying price and expenditure costs that meant if in bargaining process had been getting a profit, the product would be sold. Either company or exporter in purchasing fish acted similar to that of retailer traders to fishermen in which company bounded the small traders by lending money or basic needs (machine, fuels and ice) so collector traders sold fish to big company. In purchasing fishery products, the company has been conditions, which should be fulfilled by small traders, such as the fish was high quality [43].

3.2 Farmer's Share

Analysis result of *Farmer's Share,* or price obtained by farmer is seen in Table 1, which describes that 50% to 84% paid by consumers were fishermen shares in which marketing system was efficient.

Table 1: Farmer's Share analysis of fresh fish in Kotabaru regency

No.	Type of fish	Producer price (Pf)	Consumer price (Pr)	Farmer's Share (%)
1.	*Scomberromo commersoni*	60,315	71,740	84.000
2.	*Euthynnus affinis*	14,924	30,000	50.000
3.	*Rastrelliger*	24,966	35,000	71.000
4.	*Shrimp*	29,750	42,395	70.000

Source: processed primary data, 2019

From table 1, we can see that the share of prices received by producers ranges from 50% to 84% of the price that paid by consumers, this value indicates an efficient marketing system. The amount of the price received by producers is closely related to the marketing system that has been formen between producers and marketing insitutions (i.e. middlemen, retailer) [44]. This is because (a) they want to get a profit without any risk and (b) the average producer has limited production yields, causing them to feel that it is better for them to cooperate with marketing agencies rather than selling it themselves to the retail market. Such condition made the services of middlemen is still needed so that the products can reach to the final consumers [45].

3.3 Marketing Margin

Table 2 shows that the amount of marketing margin varies according to the type of the fish; it can be seen from the amount of marketing margin for each different type of fish. The value of the marketing margin received by retailers is greater than the middlemen, because the marketing costs incurred by the middlemen are greater than the marketing costs incurred by retailers due to the long distances involved in delivering the fishery products [46]. In addition, retailers' profits are bigger than middlemen's profit, because middlemen with large sales volumes only take small profit per unit and retailers with small sales volumes take large profits per *rupiah* costs [47]. If it is seen from the amount of fish that being traded, middlemen still get bigger profits than the retailers [48]. Overall, from the traders (i.e. middlemen, retailers) point of view, it can be concluded that the distribution of profits is bigger than the distributor of marketing costs. The profit obtained by intermediary traders is higher compared to the amount of marketing costs incurred; this indicates that marketing from the side of mitermediary traders can be said as efficient [49].

Table 2: The marketing margin analysis of fresh fish in Kotabaru regency

No.	Stakeholders	Scomberromo commersoni		Euthynnus affinis		Rastrelliger		Shrimp	
		IDR/kg	Margin Dist. (%)	IDR/kg	Margin Dist. (%)	IDR/kg	Margin Dist. (%)	IDR/kg	Margin Dist. (%)
1.	Producer								
	Sold price	60,315		14,924		24,966		29,750	
2.	Collector price								
	a. Buying price	60,315		14,924		24,966		29,750	
	b. Marketing cost	1,832	24	2,710	18	681	27	2,710	21
	c. Sold price	64,857		22,357		28,357		35,192	
	d. Profit	2,710	16	4,723	31	2,710	7	2,732	22
	Marketing margin	4,542	40	7,433	49	3,391	34	5,442	43
3.	Retailer trader								
	a. Buying price	64,857		22,357		28,357		35,192	
	b. Marketing cost	1,861	16	1,861	12	1,861	19	1,861	15
	c. Sold price	71,740		30,000		35,000		42,395	
	d. Profit	5,022	44	5,782	38	4,782	48	5,342	42
	Marketing margin	6,883	60	7,643	51	6,643	66	7,203	57
4.	Consumer price	71,740		30,000		35,000		42,395	
	Total marketing margin	11,425	100	15,076	100	10,034	134	12,645	100

Source: Processed primary data, 2019

4. Conclusions

The sea fishery marketing pattern was analyzed successfully in Kotabaru regency South Borneo introducing marketing channels, *snowball sampling method*, farmer's share and margin marketing.

It was investigated that the fishery marketing consisted of five patterns in which wholesaler traders was the biggest buyer, while other player was limited. The price obtained by producer was ranged between 50% and 84% of that paid by consumers that was indicative the marketing system was efficient.

Comparison of profit margin and the marketing cost margin distributions for all fish, which were traded, showed that the

profit marginal distribution was higher compared with the marketing cost marginal distribution. It meant that the profit gained by middlemen and processing traders was bigger if compared with the cost of marketing and production. It was an indication that the marketing on broker trader was efficient.

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