Market Share of *Groupers* through Floating Net Cage Technology in Selayar Archipelago Regency

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Abstract. Market share is one indicator of increasing marketing performance of a fishery product. To support the sustainability of the production stock and market share of grouper, cultivation technology is carried out through floating net cages. This market share is usually expressed as a percentage (%), so the analysis of the market share referred to in this study is useful to find out the percentage of market potential for grouper fishing. This research was conducted for 6 months, starting in August 2017 until January 2018 which is located in Selayar Archipelago Regency. The research method used was a survey method by taking research samples namely fishermen of grouper floating net cages, collectors, local traders, wholesalers, and exporters in Selayar Archipelago Regency. The results showed that the average local market potential of grouper fish (live and dead / fresh condition) through floating net cage culture technology was IDR 27,576,045,000, greater than the export market potential of only IDR 17,166,735,000. While the market share (local and export) of live grouper fish through floating net cage culture technology is IDR 52,046,550,000 per year (58,16%) greater than the market share (local and export) of dead grouper or fresh conditions that are only IDR 37,439,010,000 per year (41,84%).

1. Introduction

Grouper fish is one of the important economically valuable marine fish species found in Indonesian waters. Grouper fish has a high nutritional value and at present many commercial grouper aquaculture efforts have been carried out in several tropical countries. High economic value is caused by the taste of this delicious and tasty fish, so the demand for grouper on the world market is very high. The high price of these commodities is also due to their availability in nature starting to decrease. In Indonesia, the grouper fisheries activity is currently being promoted in line with the increasing demand for groupers, both to meet domestically, especially in serving international hotel and restaurant demand, and as an export commodity, which has lately been increasingly in demand in the form of life. The
destination countries for grouper exports are Hong Kong, Taiwan, China, Japan, South Korea, Vietnam, Thailand, the Philippines, USA, Australia, Singapore, Malaysia and France [1].

Grouper fish is one of the mainstay commodities in the Selayar Archipelago Regency. This is supported by the potential of a very potential coral reef, which is around 4,400 ha, which is spread over several places. Grouper has a high economic value with a very prospective export market opportunity to be developed especially for live groupers. The grouper is caught with a trap and fishing gear [2].

The high demand for grouper makes fishermen and entrepreneurs engineering technology to cultivate grouper fish, so stock availability does not always rely on catches in the wild. The most popular technology for grouper rearing is the floating net cage. The development of grouper floating net cage technology is generally carried out in public waters such as rivers, reservoirs and lakes, but in its development the floating net cage technology can also be applied at sea with certain criteria. Site selection is a major factor in grouper floating net cages, the location must be free from risk factors such as predators, natural disturbances such as currents, and pollution [3].

Research on the biological aspects of grouper has been done. Generally it examines population dynamics and reproduction. As conducted by Prasetya [4] namely research on the potential of groupers in Lasongko Bay, Buton. In addition, research on the Reproductive Grouper Biology Study of Sunu Grouper during the capture season was also conducted in the Karang Kapota waters of Wakatobi Regency [5]. Approaches from the biological aspect are generally used to evaluate fish resources but ignore the economic aspects. While the facts on the ground show that fishermen as business operators and resource users are oriented to economic principles by prioritizing maximum profits to meet their needs. Research on the study of grouper economics has also been widely carried out in Indonesia. As the study of the analysis of tiger grouper and duck grouper culture in floating net cages in Indonesia [6]. In addition, research on market share analysis has been carried out on Bonetambu Island, Makassar [7].

Kotler [8] states that market share is the size of the sales share owned by competitors in the relevant market. Market share is a part of the market that can be achieved by the company. Market share is one indicator of increasing a company's marketing performance. This market share is usually expressed as a percentage (%), so the analysis of the market share referred to in this study is useful to determine the percentage of market potential for grouper fishing. One important aspect in the study of market share is the financial analysis and marketing network of groupers. Research on financial analysis [9] and grouper marketing network [10] in the Selayar Archipelago Regency has been carried out and is the basis of further research, namely grouper market share. Based on the above background, research on the market share of grouper fish in the Selayar Archipelago Regency.

2. Methodology

This research was conducted for 6 months, starting in August 2017 until January 2018 which is located in Selayar Archipelago Regency. The research method used was a survey method. Survey research is research that takes samples from the population using questionnaires as the main data collection. The survey was conducted on grouper fish farmers (floating net cages), local traders, collectors traders and big traders of the groupers in the Selayar Archipelago Regency [11].

Method of data analysis is quantitative analysis using the following mathematical formulas: [8]

$$Q = n \times q \times p$$

where:

- $Q$ = The total market potential of grouper
- $N$ = Number of grouper buyers
- $q$ = Number of groupers purchased by the buyer
- $p$ = Price for grouper
where:

\[ MS = \frac{P}{Q} \times 100\% \]

3. Result and Discussion

The floating net cages in the Selayar Archipelago Regency, especially on Gusung Island consist of a 16 x 16 meter raft, 1 (one) raft unit containing 20 cages equipped with work floors and guard houses. The location of floating net cages is located not far from residential areas, or the owners of floating net cages, this is to facilitate the control, cleaning and feeding of groupers (Figure 1).

![Grouper Floating Cage in the Research Location](image)

**Figure 1. Grouper Floating Cage in the Research Location**

The floating net cage is a very good alternative in supporting the acceleration of grouper production because grouper enlargement can be controlled and harvested regularly. This of course becomes a business opportunity and contributes to the increase in grouper marketing. Market share analysis is useful to find out the percentage of market potential determination of groupers. Research shows that in addition to crabs, grouper fish species, especially those that are still alive or dead, also have a large enough market share and prices are quite high in the Selayar Archipelago Regency [12]. For marketers of grouper fish, especially live groupers and dead groupers, use grouper sales from all levels of traders (local collectors, local retailers, wholesalers, exporters), as well as for total sales in the industry that is represented by total sales of all levels of traders (local collectors, local retailers, wholesalers, exporters).

The results of data analysis of live grouper market share data can be seen in Table 1 and Figure 2, while the market share of dead / fresh grouper fish can be seen in Table 2 and Figure 3 below.
Table 1. Live Grouper Fish Market Share

| No | Trader level | Market share (IDR) | Percentage (%) |
|----|--------------|--------------------|----------------|
| 1  | Local collector | 42,260,000,000     | 27.07          |
| 2  | Local retailer  | -                  | 0.00           |
| 3  | Wholesalers    | 41,400,000,000     | 26.52          |
| 4  | Exporter       | 72,460,000,000     | 46.41          |

Figure 2. Percentage of Live Grouper Fish Market Share

Table 2. Dead / Fresh Grouper Fish Market Share

| No | Trader level | Market share (IDR) | Percentage (%) |
|----|--------------|--------------------|----------------|
| 1  | Local collector | 28,170,000,000     | 18.04          |
| 2  | Local retailer  | 64,810,000,000     | 41.51          |
| 3  | Wholesalers    | 19,320,000,000     | 12.38          |
| 4  | Exporter       | -                  | 0.00           |
Based on Figure 2 and Figure 3 above, it can be seen that the highest live grouper market share value obtained by local collectors is 46.41%, then exporters are 27.04%, large traders are 26.52% and local retailers are 0 %, while the highest market value of dead grouper fish market share was obtained by local retailers by 57.71%, then local traders by 25.09%, large traders by 17.20% and exporters by 0%, whereas in countries such as Colombia, in some areas, the fish market share is still dominated by large traders around 56% and collecting traders around 76% [13].

The comparison of the market potential value of live grouper and dead grouper based on market share values can be seen in Table 3 and Figure 4 below:

**Table 3. Comparison of Grouper Market Potential**

| No | Type of fish       | Market share   | Percentage |
|----|--------------------|----------------|------------|
| 1  | Live Grouper Fish  | Rp 52,046,550.000 | 58.16%     |
| 2  | Fresh Grouper Fish | Rp 37,439,010.000  | 41.84%     |
Based on Figure 4 above it can be seen that the market share of live groupers is greater than the market share of live dead / fresh groupers with a percentage value of the market share of live groupers of IDR 52,046,550,000 (58.16%) and dead groupers / conditions amounted to IDR 37,439,010,000 (41.48%). This shows that the market share of live grouper fish is higher because the live grouper fish is quite expensive and the demand for export purposes is high. In contrast to previous research conducted by Arfah [7] found that the market share of dead / fresh grouper fish on Bonetambu Island in Makassar was greater than live grouper.

Groupers have a good future potential as they continue to improve grouper fish in Asia [14]. In a subsequent study conducted by Petersen [15] said that grouper was one of the main species chosen by fishermen in Vietnam to be cultivated to replace shrimp species. One type of grouper that is dominantly cultivated is the *Plectropomus leopardus* species. The supply of grouper seedlings from hatcheries in Vietnam is still low (less than 1 million / year), so it still requires imports from other countries. Good seeds sourced from nature imported from Taiwan, China and Indonesia.

Trader or Collector has a very important role, because it deals directly with the Fishermen and as a determinant of the price of the grouper sunu and mud where it will be distributed Collector traders have an important role in determining the price of grouper to be sold to large traders and restaurants [16].

4. Conclusion

The average local market potential of grouper fish (live and dead / fresh condition) through floating net cage culture technology was IDR 27,576,045,000, greater than the export market potential of only IDR 17,166,735,000. While the market share (local and export) of live grouper fish through floating net cage culture technology is IDR 52,046,550,000 per year (58.16%) greater than the market share (local and export) of dead grouper or fresh conditions that are only IDR 37,439,010,000 per year (41.84%).

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