

Analysis of the Freshwater Ornamental Fish Marketing System in Makassar City, South Sulawesi

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Abstrak

This study aims to identify the ornamental fish marketing system in the city of Makassar, which includes: identifying the forms of ornamental fish marketing channels, determining the roles and functions of ornamental fish marketing institutions, analyzing the marketing margin of ornamental fish, and assessing whether the marketing of ornamental fish in Makassar is efficient.

The ornamental fish marketing channels in Makassar consist of 3 forms of channels: Marketing Channel I consists of cultivators, collector traders, retail traders (raisers), and end consumers, where cultivators and collector traders are located outside of Makassar. Marketing Channel II consists of cultivators, collector traders, retail traders (raisers), and end consumers, where cultivators are located outside of Makassar, while collector traders are local traders, in this case, located in Makassar. Marketing Channel III consists of cultivators, retail traders (raisers), and end consumers, where cultivators are located in Makassar.

The marketing functions that occur in ornamental fish marketing are based on exchange functions in the form of sales activities conducted by all levels of marketing institutions, and purchasing activities conducted by all marketing institutions except for cultivators. Based on physical functions in the form of storage activities, they are conducted by all marketing institutions and collection activities are only conducted by marketing institutions such as collector traders (large suppliers). Packaging activities are conducted by all marketing institutions, while transportation activities are conducted by all marketing institutions. Meanwhile, based facility functions in the form of sorting and standardization activities, are conducted by all marketing institutions. Market information activities, financing, and risk-bearing occur in all marketing institutions.

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Based on the calculation of the marketing margin and the efficiency level of ornamental fish marketing in Makassar, it is found that the existing channels are still efficient, meaning that the marketing channels that occur are still fair, beneficial to cultivators, and do not harm end consumers. Even the profits obtained by the levels of institutions are still fair.

keywords: Marketing System, Ornamental Fish, Makassar, Marketing Channels, Marketing Margin, Marketing Efficiency.

INTRODUCTION

Ornamental fish is a potential fisheries commodity to be developed. According to the Head of Data Statistics and Information Center of the Ministry of Marine Affairs and Fisheries in 2008, Indonesia has a potential of 4,500 species of ornamental fish, which is approximately 60% of the total number of ornamental fish species worldwide, which is around 8,000 species (Latuconsina 2021). However, only about 500 species have been exported, while the local communities have only cultivated around 50 species, and around 450 species still rely on nature (De Silva and Phillips 2007). This indicates that there is still great potential for the cultivation and export of ornamental fish in Indonesia that has not been optimally utilized. It is still a significant opportunity for Indonesia to develop and utilize the potential of ornamental fish. Moreover, Indonesia's optimism to dominate the world's ornamental fish market is supported by the tropical climate in Indonesia, which is suitable for cultivating various types of ornamental fish, and it is highly possible to produce all year round.

The presence of hundreds of freshwater fish species in Indonesia does not entirely consist of native Indonesian ornamental fish (Kottelat and Whitten 1996). Most of them are imported from other countries, then bred and exported to meet the demand of foreign ornamental fish enthusiasts (Satam et al. 2018). With abundant resources, Indonesia is optimistic about becoming a producer of ornamental fish (Bailey 1988). These resources can be used as capital to achieve a greater market share. Unfortunately, not everyone sees the potential of ornamental fish as a commodity that can bring profit. Limited and simple technology is no longer a constraint as this activity can be carried out in relatively small locations.

According to (King 2019), the ornamental fish commodity can be a potentially attractive value-added business. Several factors support the pursuit of ornamental fish farming, such as its relatively easy cultivation with low costs. The fish, along with their

aquariums, are not only limited to being entertainment tools but have also developed into means of education, research, media, and conservation purposes, and have high economic value (Kasmi et al. 2023).

Along with the potential of ornamental fish and the development of ornamental fish farming in Indonesia, in addition to significant growth in Java Island, Denpasar, and some other cities, South Sulawesi is also experiencing significant development in ornamental fish farming, especially in the city of Makassar, where there has been rapid growth from year to year (Abdullah and Kasmi 2020; Andriyono 2018). This is evidenced by the increasing number of ornamental fish sales centers in several places. Some well-known ornamental fish sales centers in Makassar include Mangkura Ornamental Fish Market located on Sultan Hasanuddin Street, Hobi Market on Toddopuli Raya Street, Carefure Ornamental Fish Market on Perintis Kemerdekaan Street, and Batara Indo Aquatic on Mallengkeri Street, which is known as the largest wholesale ornamental fish center in Makassar, and there are still several other places.

The marketing of ornamental fish in Makassar is not only to fulfill the needs of local consumers, but also consumers from outside Makassar such as Maros Regency, Palopo, Bone, Toraja, and even Kendari the province. To reach a wider market, producers cannot rely solely on direct sales to consumers. Therefore, the marketing of ornamental fish involves several marketing institutions to distribute products accurately and quickly (Aspevik et al. 2018). The role of marketing institutions is crucial in conveying production results to consumers, considering that ornamental fish has great potential to be developed to meet customer needs. This has encouraged researchers to further explore the marketing of ornamental fish in Makassar.

In the field of fisheries, particularly the ornamental fish business, marketing plays a crucial role as it affects the income of fish farmers. Having a high production rate with low prices will not be profitable. Therefore, high production does not always guarantee high profits without efficient marketing. Marketing can be considered efficient if it can deliver the production results to consumers at the lowest possible cost and can distribute the entire amount paid by consumers fairly to all parties involved in production and marketing activities (Mastuti et al. 2022). Marketing activities in delivering consumer goods from producers will incur costs, which will affect the prices paid by consumers and the prices received by producers (Abdullah et al. 2021). The high costs are due to various factors that affect the marketing process, including transportation costs, levy fees, risk costs, and others (Lagouvardou, Psaraftis, and Zis 2020). The process of delivering consumer goods by producers or marketing agencies can be channeled through more

than one marketing channel and marketing agency (Kasmi et al. 2021). The marketing problem is not only about the length of the marketing channels but also about which marketing channels provide the highest level of efficiency and can compete in the market (Kasmi et al. 2022).

The above description indicates that the issues in the marketing process of ornamental fish will significantly affect the existing marketing system of ornamental fish in the city of Makassar. Therefore, it is important to know and analyze the existing system of ornamental fish marketing. Hence, research needs to be conducted to obtain information regarding the analysis of the ornamental fish marketing system and its problems.

Problem Formulation

Based on the background, the problem formulation is as follows:

1. What is the form of the freshwater ornamental fish marketing channel in Makassar City?
2. What are the tasks and functions of the ornamental freshwater fish marketing institutions in Makassar City?
3. What is the form of the freshwater ornamental fish marketing channel in Makassar City?
4. What are the tasks and functions of the ornamental freshwater fish marketing institutions in Makassar City?

RESEARCH METHODOLOGY

Research Location and Time

The research was conducted in several largest sales centers of freshwater ornamental fish and freshwater ornamental fish breeding centers in Makassar City, South Sulawesi. The selection of the location was purposive, considering that this location is a gathering place for traders or marketing institutions and freshwater ornamental fish breeders. The research was conducted from February to November 2018.

Data Collection Techniques, Types, and Sources

The data collection techniques used in this study are documentation, interviews, and observations to collect primary and secondary data using a questionnaire as a tool (Sileyew 2019).

The data collected includes primary and secondary data. Primary data obtained from the research object is collected in the form of data needed to answer the main problems in the research, including respondent identity, the form of freshwater ornamental fish marketing channels that occur in Makassar, the marketing functions of each marketing institution, buying and selling prices at the institutional level. Meanwhile, secondary data is collected from various relevant agencies (BPS, DKP, and others) both at the central and provincial levels. This data is needed as supporting data in this research, such as general fisheries conditions data, especially freshwater ornamental fish in the city of Makassar.

Analysis Method

Based on the research problem and hypotheses proposed in this study, the following analysis methods are used:

1. To determine the form of the freshwater ornamental fish marketing channels in Makassar, descriptive qualitative analysis is used.
2. To determine the marketing functions carried out by freshwater ornamental fish marketing institutions in Makassar, descriptive qualitative analysis is used.
3. To analyze whether the distribution channels of freshwater ornamental fish are efficient or not in Makassar, several analysis tools are used as follows:

Marketing Margin

Marketing margin is the difference between the producer price and the final consumer price. The formula is: $M = R_k - R_p = BM + K$.

Where :

M: Margin

H_k: Price of ornamental fish at the consumer level (Rp/head)

H_p: Price of ornamental fish at the producer level (Rp/head)

BM: Marketing costs (Rp/head)

K: Profit of marketing institutions (Rp/head)

Market Share

$$MS = \left(\frac{H_p}{H_t} \right) \times 100\%$$

Where :

H_p: Price at the level of the actor

Ht: Total price of the channel

Farmer's Share

$$FS = \left(\frac{Hp}{He} \right) \times 100\%$$

Where :

FS: Farmer's Share

Hp: Selling price at the farmer's level

He: Selling price at the marketing institution's level

To determine whether the ornamental fish marketing in Makassar is efficient or not, an analysis of marketing efficiency is used. The economic efficiency of the marketing channels can be calculated by the percentage value of the marketing margin and the percentage value of the share received by the producer. The percentage value of the marketing margin for each marketing channel is calculated using the following formula:

Marketing Margin

$$Mm = \left(\frac{He - Hp}{Hp} \right) \times 100\%$$

Where :

Mm: Marketing margin

He: Price at the marketing level

Pf: Price at the producer level

The criteria used to determine that the marketing of freshwater ornamental fish in Makassar is considered economically efficient is that each marketing channel has a low percentage of marketing margin and a high percentage of the share received by the freshwater ornamental fish producers.

RESULTS AND DISCUSSION**Characteristics of Respondents****1. Age**

Age is one of the main factors in developing a business. Age is crucial in determining the physical ability to work and the way of thinking and productivity of producers (breeders) and traders. It can be seen that young breeders and traders tend to have stronger physical abilities than those who are older, but older individuals have more

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mature thinking and actions. This is because older individuals have more experience compared to younger ones.

The results of the study showed that the age of the respondents ranged from 26 to 65 years old. Out of 25 respondents, the largest age group was 46-50 years old with 6 people (24%), followed by those over 51 years old with 6 people (24%). The age group of 31-35 years old had 4 people (16%), 36-40 years old had 4 people (16%), 41-45 years old had 4 people (16%), and 21-25 years old had 1 person (4%). The details can be seen in the following table.

Table 1. Percentage of Respondents Based on Age Level of Ornamental Fish Business in Makassar City, 2018.

Age (Years)	Number of Respondents	Percentage (%)
21 – 25	1	4.0
26 – 30	-	-
31 – 35	4	16.0
36 – 40	4	16.0
41 – 45	4	16.0
46 – 50	6	24.0
51 >	6	24.0
	25	100

Based on Table 1, shows that the majority of respondents are still in their productive age, between 21-50 years old, with a total of 19 people (76%), compared to those aged 51 and above with a total of 6 people (24%). This picture shows that the productive age for both freshwater ornamental fish farming and trading businesses is still optimal, compared to those who are aged over 50 years old and classified as non-productive whose performance begins to decline.

2. Education

The level of education is very influential in determining the pattern of thinking, behavior, and decision-making in running a business. Low education makes the majority of marketing actors only become servants (Adhanari, 2005). The education of a business owner, whether at the level of cultivators or freshwater ornamental fish traders, both formal and non-formal education, even though their activities use physical labor, will run well if supported by adequate education. The level of education will greatly determine the success of the freshwater ornamental fish business because education will certainly

provide ease in adopting and skills in managing the business. The level of education of respondents can be seen in the following table.

Table 2. Percentage of Respondents Based on Educational Level of Freshwater Ornamental Fish Business in Makassar City, 2018.

Education	Number of Respondents	Percentage (%)
Elementary School	-	-
Junior High School	4	16
Senior High School	14	56
Bachelor's Degree	7	28
	25	100

Source: Primary Data after processed, 2018.

In table 2, it shows that all respondents have completed formal education. The majority of them completed their education up to the level of high school (14 people or 56%), followed by a bachelor's degree (7 people or 28%), and junior high school (4 people or 16%). This description can affect the level of knowledge of the respondents, making it easier for them to absorb information and apply innovation.

3. Number of Dependents

The number of family members is crucial for planning and decision-making in managing a business. Respondent's family members are a source of labor in freshwater fish farming, especially those who are productive. The number of dependents referred to is the members who are under the care of the respondent and living in the same household. For more details, please refer to the following table.

Table 3. shows the percentage of respondents based on the number of dependents in their family for the freshwater ornamental fish business in Makassar City in 2018.

Dependents (Years)	Number (People)	Percentage (%)
0 - 2	9	36
3 - 5	14	56
6 - 8	2	8
8 >	-	-
	25	100

From Table 3, it can be observed that family members are generally the source of labor in the business. Thus, the availability of labor is highly influenced by the number of family members. The largest number of dependents is between 3-5 people, with 14 respondents or 56%, followed by 6-8 dependents with 7 respondents or 28%, and 0-2 dependents with 4 respondents or 16%. This indicates that the family members of the respondents have fulfilled the labor requirements needed for the business.

4. Business Experience

Business experience refers to the length of time the respondents have been engaged in the freshwater ornamental fish business, whether as breeders or traders. The relationship between the respondents' current status and their business experience can be seen in the following table.

Table 4. Percentage of Number of Respondents Based on Length of Business, Ornamental Fish Business in Makassar City, 2018.

Length of Effort (Years)	Number (People)	Percentage (%)
1 – 5	7	28
6 – 10	2	8
11 – 15	4	16
15 – 20	4	16
21 – 25	3	12
26 >	5	20
	25	100

Table 4, shows that respondents who have experience in the business, between 1-5 years, amounted to 7 people or 28%, 6-10 years amounted to 2 people or 8%, 11-15 years amounted to 4 people or 16%, 15-20 years amounted to 4 people or 16%, 21-25 years amounted to 3 people or 12%, and above 26 years amounted to 5 people or 20%. This illustrates that the average ornamental freshwater fish business respondents have been running their business for more than 6 years up to 30 years, as many as 18 people or 72%. This proves that the freshwater ornamental fish business has become a hereditary business carried out by respondents as a livelihood, even no less than respondents consider this business as a hobby and pleasure. In its development as a

promising livelihood, almost all respondents develop their business by selling accessories and equipment related to the maintenance of ornamental freshwater fish, and even some respondents also provide services such as making aquariums, landscape arrangement of aquariums, and aquarium cleaning services.

5. Marketing Channels

The organization or individual that conducts marketing activities in which goods move from producers to consumers is called a marketing institution. The movement of these goods will form marketing channels involving other parties. In the city of Makassar, the marketing of freshwater ornamental fish involves marketing institutions such as breeders, collectors, end consumers, and exporters. This is in line with Rasyaf's statement (2001) that marketing channels start from the release of products by producers until they are received by end consumers. The marketing channels that occur for the freshwater ornamental fish business in Makassar include:

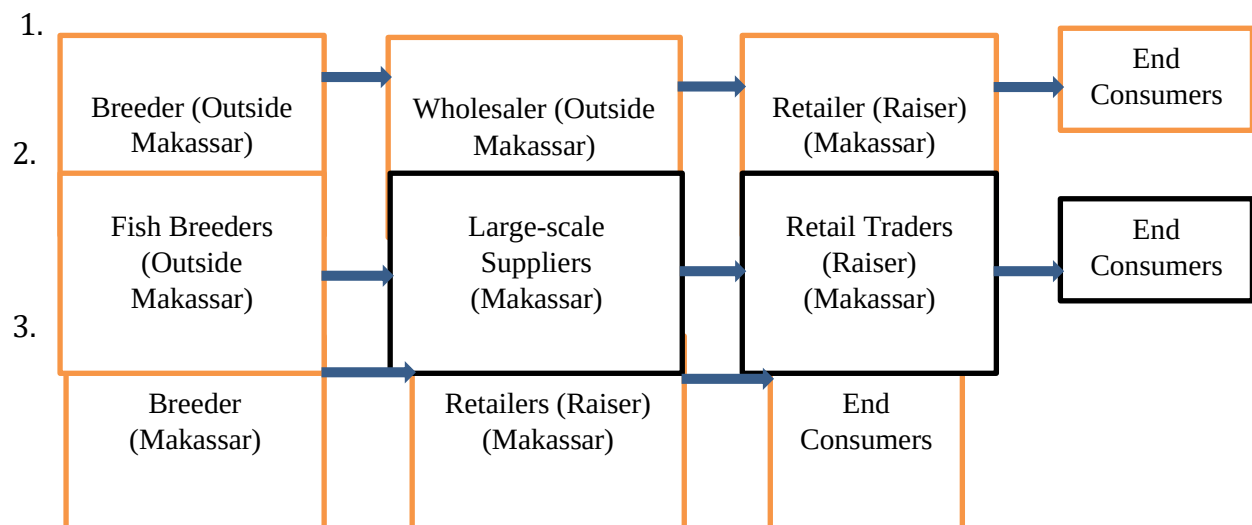


Figure 1. Marketing Channels of Freshwater Ornamental Fish in Makassar.

From the marketing channels above, it can generally be said that there are three forms of marketing channels involving three related marketing institutions in Makassar, namely the breeders, the collectors, and the retailers categorized as raisers by the researcher. This is in line with the statement by (Van Huong 2020) that marketing channels can be formed simply or can be very complex, depending on the type of

commodity and the market system. The movement of freshwater ornamental fish from the producer (breeder) to the end consumer, where the breeder (producer) referred to in both Channel I and II or non-local breeders outside Makassar and within Makassar are individuals/institutions that cultivate freshwater ornamental fish from breeding (spawning) until they are ready for sale. The collectors for local Makassar and non-local outside Makassar are individuals/institutions that take the commodity of freshwater ornamental fish from the breeders and resell them to the retailers (raisers) without intermediaries in Makassar. Meanwhile, the retailers (raisers) in Makassar are individuals/institutions who directly market the commodity of freshwater ornamental fish to the end consumers, whereas the retailers in Makassar are categorized as raisers by the author because they also cultivate fish but do not carry out breeding (only growth), and the sales system carried out is usually in the retail or wholesale form. In Makassar, three places are categorized as the largest raiser centers that act as retailers, namely the Hobby Market located in the Tamalate area, the Carrefour Supermarket area on Perintis Kemerdekaan Street, and the Mangkura Freshwater Fish Market located between Lamadukelleng and Sultan Hasanuddin streets.

If we observe the marketing channels for freshwater ornamental fish in Makassar City, it can be described that most of the business is carried out by entrepreneurs categorized as retailers or raisers, rather than breeders. The number of breeders is very limited, and so far, breeders of freshwater ornamental fish are still dominated by those from outside Makassar, namely from Java Island. Based on information obtained from respondents, most of the freshwater ornamental fish traders in Makassar are sourced from East Java, West Java, and Jakarta. There are even some who come from local breeders outside Makassar, namely from Maros, Pangkep, and Gowa districts.

6. Marketing Functions

According to (Mendoza 1995), one approach that can be used to analyze marketing channels is by using the functional approach, which studies the marketing functions carried out by market participants involved in marketing.

Marketing functions are activities that are necessary to facilitate the process of delivering goods or commodities from producers to end consumers (Sheth and Parvatiyar 1995). Marketing functions include exchange functions, physical functions, and facilitation functions. The exchange function consists of buying and selling activities.

The purchasing function involves the distribution of goods from producers to consumers to meet consumer demand. On the other hand, the sales function includes

sales decisions, selecting the best marketing channels, and determining the right time and place to reach potential consumers.

Physical functions include transportation, processing, and storage. The transportation function is carried out to ensure that commodities are available in the right place. The processing function involves activities that transform the basic form of a commodity to increase its usefulness. While the storage function involves time utilization activities to increase the storage time of a commodity before it is marketed.

Facilitation functions include standardization, payment, risk-bearing, and market information. Standardization is the activity of grouping commodities according to consumer specifications. Payment is the use of money for various aspects of marketing. The risk-bearing function is the acceptance of the possibility of loss in marketing commodities, which consists of two parts, physical risk, and price risk. Physical risk occurs due to commodity damage, while price risk occurs due to changes in the market value of commodities.

7. Fish Breeders

The marketing function carried out by fish breeders is the exchange function, which includes sales activities that involve planning in production, although few breeders implement this. In addition, local Makassar breeders tend to choose to market their products directly to collectors and retailers because of their proximity. However, non-local breeders outside of Makassar tend to market their products directly to the nearest collectors, who then market the ornamental fish to retailers outside their area.

The physical function includes packaging and transportation activities, and some breeders engage in these activities. The usual packaging method used by breeders is to pack the harvested ornamental fish into transparent plastic bags measuring 40 x 60 cm, which have been filled with water as the living medium for the fish, and then adding oxygen in a ratio of 1:3 of water, and tying the bag with a rubber band at the end of the plastic. Transportation involves delivering the packaged harvest to marketing institutions such as local collectors and retailers.

Transportation activities are not always carried out by fish farmers, so this activity is conditioned by the buying institution and prior agreements. The facilities' function includes sorting activities, risk sharing, market information, and financing. Sorting activities are not only carried out during the harvest season but also maintenance because it is closely related to the survival rate/risk sharing of the fish or commodity being cultivated.

Other risk-sharing includes the risk of death of freshwater ornamental fish due to disease outbreaks or can occur due to supporting facility factors, for example, there has been a prolonged power outage that causes the ornamental fish to run out of oxygen in the aquarium. Additionally, fish farmers are at risk of loss if the selling price of the ornamental fish they are raising decreases. Financing for freshwater ornamental fish farming is almost entirely self-funded, as most farmers operate on a small scale. However, for larger businesses, especially those that have already marketed on an export scale, financing is obtained not only from self-funding but also through bank loans.

8. Collector Traders

The marketing function performed at the level of collector traders includes purchasing and selling functions, physical functions such as collection, storage, packaging, and transportation, and facility functions such as sorting, risk bearing, market information, and financing (Hasanuddin 2021).

The exchange function performed by collector traders is the purchase and sale of ornamental freshwater fish. They purchase ornamental fish from breeders. The physical function performed by collector traders includes collection, storage, packaging, and transportation. Collector traders collect various types of ornamental freshwater fish from breeders that have been sorted based on the size of each type of fish. They store similar-sized types of ornamental fish in aquariums with a certain density depending on the size and characteristics of the fish. The duration of storage depends on how quickly the ornamental fish are sold. The ornamental fish to be shipped are packed in transparent plastic bags measuring 40 x 60 cm. The ratio of oxygen to water as a living medium for ornamental fish that is filled into the bag is 1:3 in volume. The density of ornamental fish packed in the bag depends on the size and biological nature of each type of fish. For long-distance shipments, styrofoam is usually added, then the styrofoam is put into a cardboard box and labeled. This is done to keep the water temperature stable. If the sales are in a short distance and small in quantity, a two-wheeled motorized vehicle is usually sufficient. However, if the sales must travel far outside the province and in large quantities, the required transportation is a car or plane.

The facility function of collector traders includes sorting, standardization, risk-bearing, market information, and financing. The sorting activity includes the separation of ornamental freshwater fish by type, size, and quality that is by consumer demand. The ornamental fish that are sold meet good health standards. The financing that is issued includes the cost of purchasing, packaging, transportation, and labor.

9. Retailer/Raiser

The marketing function performed by retailers is the exchange function, which includes the functions of buying and selling, physical functions such as collection, storage, packaging, and transportation, and facility functions such as sorting, risk bearing, market information, and financing (Ghafoor, Badar, and Maqbool 2017).

The exchange function performed by retailers is buying and selling. Retailers purchase ornamental fish from breeders and collectors and sell it directly to end consumers. The payment system for purchases and sales is cash-based. Based on observations, it is noted that there are several retailers, especially in the city of Makassar, who act as raisers. They act as entrepreneurs who raise ornamental fish seedlings but do not engage in breeding. To obtain the ornamental fish seedlings to be raised, raisers initially contact breeders, and if the desired seedlings are available, the raiser then picks them up. Sales include production planning activities, although only a few raisers carry out this function. Even retailers who act as raisers sell their products in addition to selling in the retail category to end consumers, especially for ornamental fish enthusiasts, such as offices, official residences, restaurants, cafes, and households. Raisers also sell in bulk to retailers outside of Makassar, such as Kendari, Palu, and others. The physical function carried out by retailers is storage, packaging, and transportation. Retailers store ornamental fish of the same species and size in aquariums with a certain density, depending on the size and characteristics of the particular ornamental fish. The duration of storage depends on how quickly the ornamental fish are sold. Packaging for ornamental fish that will be sold to consumers varies depending on the size and quantity of fish purchased by the consumer. The larger the size of the fish and/or the greater the number of ornamental fish purchased, the larger the plastic bag used. The ratio of oxygen to water as a living medium for ornamental fish filled into bags is 1:3 by volume of the bag. The density of ornamental fish packaged in bags depends on the size and biological nature of each type of ornamental fish. If consumers purchase in bulk for long distances, styrofoam is usually added, then the styrofoam is put into a box and labeled. This is done to keep the water temperature in the package stable.

The facilities function of retailers involves risk-taking, market information, and financing. The death of ornamental fish in the display aquarium is a risk for the retailer, and to keep the fish alive in the aquarium, additional food must be provided. Retailers use their capital. The selling price information at the retailer level is determined by market mechanisms.

10. Exporter

An exporter of freshwater ornamental fish is a person or institution that sends the commodity to foreign countries (Sinansari and Priono 2019). Although this study does not look at the distribution channels to the exporter of freshwater ornamental fish retailers, it can also be described that the exporter also performs marketing functions. The marketing functions performed by the exporter are exchange functions, namely buying and selling, physical functions such as collection, storage, packaging, and transportation, and facility functions such as sorting, risk bearing, market information, and financing.

The exchange function performed by the exporter is buying and selling. Exporters purchase ornamental fish from large-scale collectors and very rarely buy directly from level of breeders. Exporters purchase based on orders from importers. Exporters usually have large-scale collectors who act as trusted suppliers in fulfilling importers' demands. Exporters have contractual ties with importers (regular customers).

The physical functions carried out by the exporter are collection, storage, packaging, and transportation. The collector's suppliers collect various types of ornamental fish from the breeding level based on orders, namely the types of freshwater ornamental fish favored by importers. The exporter stores similar-sized and similar-shaped ornamental fish in an aquarium with a certain density, depending on the size and biological characteristics of each type of ornamental fish. The storage period is very short because ornamental fish must be quickly shipped. Repackaging is also done when the exporter receives ornamental fish from the large collector level. Ornamental fish packaging varies. The packaging affects the durability of the ornamental fish to be shipped. The ratio of oxygen to water as a living medium for ornamental fish filled into the bag is 2:3 of the bag's volume. The density of ornamental fish packaged in the bag depends on the size and biological nature of each type of ornamental fish. The shipment is added with styrofoam, then the styrofoam is put in a cardboard box and labeled. This is done to keep the water temperature in the packaging stable. Transportation abroad requires official document equipment such as invoices, packing lists, PEB (Export Goods Notification), and fish health certificates, through cargo services, until the determination of transportation costs. For export outside the country, airplane services are used.

The exporter's facility function comprises sorting, standardization, risk assumption, market information, and financing. Sorting activities include separating ornamental fish based on type, size, and quality that are appropriate for consumer demand (importers). The ornamental fish to be shipped have met a sufficiently good

health standard. The death of ornamental fish upon arrival at the importer is the responsibility of the exporter, so the exporter must be correct in sorting by type, size, and health. The exporter has the most important role in determining prices at the collector level for the breeders. The types of costs usually incurred by the exporter are purchasing, packaging, labor, transportation, and risk. The capital must be strong because the payment received by the exporter from the importer is different, some pay after three shipments, some pay before shipping, and the shipment scale is not small, so sufficient capital is needed. An analysis of the marketing function can be used to evaluate marketing costs. The marketing functions are carried out by ornamental fish marketing institutions in the city of Makassar. A description of the marketing functions of the freshwater ornamental fish business in Makassar can be seen in Table 5.

Table 5. Marketing Function of Freshwater Ornamental Fish Business in Makassar, 2018.

No.	Marketing Function	Marketing Institute			
		Cultivator	Large Suppliers	Merchant Retailers (Raiser)	Exporter
1.	Exchange Functions				
	-Purchase	-	v	v	v
	-Sales	v	v	v	v
2.	Physical Functions				
	-Storage	v	v	v	v
	-Collection	-	v	-	v
	-Packaging	v	v	v	v
	-Transportation	v	v	v	v
3.	Facility Functions				
	-Sorting	v	v	v	v
	-Standardization	v	v	v	v
	-Risk Bearing	v	v	v	v
	-Financing	v	v	v	v
	-Market Information	v	v	v	v

-Other Support	-	-	-	-
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Based on Table 5, it is shown that marketing institutions involved in the marketing of ornamental fish from breeders to retailers have different functions.

Marketing Efficiency

1. Market Share

Market share refers to the portion of the market that is controlled by a business out of the total potential sales, generally expressed as a percentage. It is the percentage of a company's total sales of a particular product within a specific industry. Additionally, market share can be interpreted as the percentage of the selling price applied to marketing channels with the total selling price of the marketing channels. The market share for each freshwater ornamental fish marketing channel can be seen in the following table 6.

Table 6. Market Share in Freshwater Ornamental Fish Marketing Channel in Makassar, 2018.

Market Participants	Selling Price and Market Share	Channels		
		I	II	III
Breeder	Selling Price (Rp) MS (%)	8,284 21.64	13,233 21.85	14,797 41.30
Collector Traders	Selling Price (Rp) MS (%)	11,500 30.04	19,535 32.26	- -
Retailers	Selling Price (Rp) MS (%)	18,500 48.32	27,788 45.89	21,030 58.70

Based on the table above, it can be seen that the largest market share value of 58.70% is held by marketing channel III, with local cultivators and retailers (raisers) in Makassar as the marketing players. Meanwhile, marketing channel I hold a market share of 48.32% with non-local cultivators (outside Makassar), non-local collectors (outside

Makassar), and retailers (Makassar) as the marketing players, and the smallest market share of 45.89% is held by marketing channel II with non-local cultivators (outside Makassar), local collectors (Makassar), and local retailers (Makassar) as the marketing players. Overall, it can be concluded that the market share for all three marketing channels has a very good opportunity to reach the market, especially for freshwater ornamental fish businesses. This is due to the increasing number of freshwater ornamental fish enthusiasts and the increasing potential of freshwater ornamental fish production each year, as evidenced by the growing number of freshwater ornamental fish traders appearing each year, especially in Makassar. Comparing the three channels, channel III has the largest market share, indicating that if the number of local cultivators increases in Makassar, then the market share or market opportunities will be very good and able to reach both local and non-local markets, even leading to the emergence of freshwater ornamental fish exporters in Makassar.

2. Marketing Margin, Farmer's Share, and Marketing Efficiency

Farmer's share is the percentage of the price received by farmers compared to the selling price at the retailer level. A farmer's share in a marketing activity can be used as a basis or benchmark for marketing efficiency. The higher the percentage of farmer's share received by farmers, the more efficient the marketing activity is considered to be. Conversely, the lower the percentage of farmer's share received by farmers, the lower the level of efficiency of marketing activity. Farmer's Share has a negative relationship with the marketing margin, meaning that the higher the marketing margin, the lower the share that farmers will receive. The farmer's Share can be calculated using the following formula:

$$Fs = \left(\frac{Pf}{Ps} \right) \times \% 100$$

Where:

Fs: Farmer's Share

Pf: Price at the farmer level (producer)

Pr: Price paid by the end consumer

Farmer's share pada masing-masing saluran pemasaran ikan hias air tawar disajikan pada tabel 6.

The margin of marketing is the difference between the selling price and the purchasing price and is one of the indicators used to measure the level of efficiency of a marketing system. The margin of marketing consists of marketing costs and the profit of the marketing institution. In this discussion, the marketing margin will be explained

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starting from the level of fish breeders, and collectors to retailers in each marketing channel of freshwater ornamental fish. The marketing margin for each channel is presented in Table 7.

Table 7. Marketing Margin (MM) and Farmer's Share in the Marketing Channels of Freshwater Ornamental Fish in Makassar, 2018.

Market Ac-tors	Selling Price, Buying Price, and Marketing Margin	Channels		
		I	II	III
Breeder	Selling Price (Rp)	8,284	13,233	14,797
Collector Traders	Selling Price (Rp)	11,500	19,535	-
	Buying Price (Rp)	8,284	13,233	
	MP (Rp)	3,216	6,302	
	EP (%)	38.82	47.62	
Retailers	Selling Price (Rp)	18,500	27,788	21,030
	Buying Price (Rp)	11,500	19,535	14,797
	MP (Rp)	7,000	8,253	6,233
	EP (%)	60.87	42.25	42.12
	Farmer's Share (%)	44.78	47.62	70.36
	Efficiency (%)	49.85	44.94	42.12

Based on Table 7, it is known that the overall marketing of freshwater ornamental fish marketed through three marketing channels has been efficient. This can be seen from the farmer's share in each channel, which is 44.78% for a channel I, while for channels II and III it is 47.62% and 70.36% respectively. Channel III is more efficient compared to channels II and III, as the channel is shorter, from the farmer directly to the retailer, and the percentage of prices received by the farmer is higher than that received by the retailer.

From Table 7, it is known that the largest marketing margin is obtained by the retailer in channel II, which is Rp. 8,253,-, followed by the retailer in a channel I at Rp. 7,000,- and the local collector in channel II at Rp. 6,233. In channel II, this is due to the high price of the farmer's fish, so the price received from the local collector is also high. This is caused by additional costs incurred by the farmer outside Makassar, such as packaging and shipping costs. Meanwhile, in a channel I, the retailer buys freshwater ornamental fish from non-local collectors (outside Makassar) at a reasonable price, as there are marketing costs incurred by non-local collectors due to packaging and shipping to Makassar.

According to (Deepak and Jeyakumar 2019), marketing efficiency is achieved when marketing costs are lower than the value of the product being marketed. The lower the marketing costs compared to the product value, the more efficient the marketing process. Price efficiency concerns the price of freshwater ornamental fish commodities from the farmer to the collector and the final consumer at each marketing channel.

Based on the analysis of marketing efficiency levels, it was found that the overall marketing channels for freshwater ornamental fish in Makassar are still efficient, as shown by the efficiency levels being below 50%. However, of the three marketing channels, the most efficient was channel III with a margin percentage of 42.12%, followed by channel II with 44.94%, and channel I with 49.85%. This means that all institutions involved in each marketing channel operate fairly, with no institution making excessive profits, and the producers (farmers) and final consumers are not disadvantaged. The farmers receive a good percentage of the price, while the final consumers do not feel that they are paying too high a price.

CONCLUSION

Based on the research findings, it can be concluded that the three channels of marketing for freshwater ornamental fish in Makassar are efficient. The first channel involves non-local farmers, non-local suppliers, local raisers, and end consumers. The second channel consists of non-local farmers, local suppliers, local raisers, and end consumers. Meanwhile, the third channel involves local farmers, local raisers, and end consumers. The marketing institutions involved in the process from farmers to local raisers all perform the same functions, except for the fact that farmers do not engage in purchasing and raisers do not participate in the fish collection. All marketing institutions perform sorting, standardization, risk-bearing, financing, and market information functions.

The third channel proves to be the most efficient with a percentage margin of 42.12%, and the highest share of the farmer's price at 70.36%. This channel also has the highest market share at the raiser level with 58.70%. Furthermore, this channel has the shortest route in the marketing process. The study suggests that all institutions involved in the marketing of freshwater ornamental fish in Makassar operate fairly, with no single institution gaining too much profit at the expense of others. The farmers receive a reasonable price for their produce, while the end consumers can purchase the fish at an affordable price.

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