Research Paper

Integration of the Vertical Market for Tilapia Fish in Karang Intan District Banjar District

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ABSTRACT

The Karang Intan sub-district area was chosen as the research subject due to the high level of tilapia cultivation production and the large number of tilapia cultivation in Karang Intan Village. The research aims to analyze marketing patterns and the level of vertical market integration of tilapia in Karang Intan District, Banjar Regency. May. This research was conducted in Karang Intan District, Banjar Regency. Marketing channel analysis using the snowball sampling method and market integration can be sought using regression analysis with the assumption that if the prices of other factors are constant, then prices at the producer level (Pf) and prices at the consumer level (Pr) are linear. The marketing pattern for tilapia fish in Karang Intan District, Banjar Regency starts from the cultivators then to collecting traders who will be distributed again to retailers and then from retailers to final consumers, the retailers in question are fish traders in the Martapura and Banjarbaru markets. The level of vertical market integration for tilapia in Karang Intan District, Banjar Regency, is the result of the vertical market integration elasticity coefficient of 0.5465 which is less than one, indicating that the tilapia market in Karang Intan District is not well integrated.

Keywords: Integration, Marketing Patterns, Tilapia Fish, Lihung Village

INTRODUCTION

South Kalimantan has large resource potential in coastal marine areas and public waters (Amri, 2008). This is supported by a large territorial water area, as well as having the potential for various types of marine biota with high economic potential (Mudjiman, 2002). One of the leading sectors in South Kalimantan Province is the fisheries and marine sector. Meanwhile, for public water areas, 48 percent of aquaculture includes marine aquaculture, ponds, ponds, cages, floating nets and rice fields (mina padi), the largest aquaculture production includes ponds, ponds and cages (Clenia, 2009). One of the efforts to increase fisheries production is that the government provides training in the form of training in fishing equipment, supervision of marine cultivation and cultivation of freshwater fish and cultivation of seawater fish (Effendi, 2004). South Kalimantan's fisheries potential includes a coastline of 1,330 km2, public waters covering an area of 1,000,000 Ha, ponds of 2,400 Ha, ponds of 53,382 Ha

and minapadi/rice fields covering an area of 3,752 Ha.

Banjar Regency has the highest fish rearing production level in South Kalimantan with 65,499 tons per year with Banjarmasin the lowest at 430 tons per year while the highest hatchery level is in Tapin Regency at 58,800 per year with the lowest being in Kota Baru Regency which does not produce fish seeds at all (Kordi, 2005).

The area that has quite large fisheries potential in South Kalimantan Province is Banjar Regency, consisting of fishing businesses in public waters and sea waters (Nazir, 2005). Fish cultivation activities carried out by the community include cultivation activities using ponds, floating net cages, cages and ponds. Banjar Regency itself has various kinds of fish commodities which are cultivated by farmers, for example there are tilapia, catfish, catfish, goldfish, pomfret fish.

There are 3 types of fish with high production levels, namely catfish with 26,599.7 tons, tilapia with 11,154.4 tons, pomfret fish with 1,304.5 tons and goldfish with 11,354.65 tons, followed by catfish with 3,567.31 tons. Karang Intan sub-district has the highest number of cultivators based on data from the Banjar Regency Fisheries Service with a total of 786 cultivators. The cultivators in Karang Intan Sub-district who cultivate the most tilapia are 105 people.

Market integration is the extent to which the price formation of a commodity at one marketing institution level is influenced by prices at other marketing institution levels (Humairoh, 2008). Therefore, market integration is influenced by several factors, including: the existence of price differences between the local market and the reference market, weak market information such as information about prices, the number of marketing institutions, lack of smooth transportation, the nature of agricultural products (perishability, bulkiness and transformability) and production location (lowland and highland). Mulyana and Khairani (2018) there are two types of market integration, namely vertical and horizontal. Horizontal market integration includes market integration between consumer areas, while vertical market integration is integration between producer areas and final consumers.

The high level of aquaculture production in Banjar district means that the price of available fish varies between prices for cultivators and consumers, so it is necessary to study the vertical integration that occurs in Banjar district so that it can provide an idea of how much power producers have over marketing institutions. The distribution of fishery products in Banjar district reaches markets inside and outside the city, the role of fisheries institutions is needed as an effort to distribute production results, the wide reach results in high marketing costs incurred by marketing institutions in efforts to distribute fishery products, resulting in high prices received. by consumers and low prices received by producers (Subagyo, 2006). A price imbalance that occurs between the prices obtained by consumers and producers.

The price of tilapia in Karang Intan sub-district sold by cultivators is IDR 26,000 and the price received by consumers in the Martapura market area is IDR 32,000, so there is a margin of IDR 6,000. The commodity of tilapia fish in local markets is very easy to find every day, as well as the availability of tilapia fish in stalls and restaurants in the Banjar and Banjarbaru sub-districts, many of which sell various dishes made from tilapia fish, so on this basis it is necessary to know the marketing channels and market integration of tilapia fish.

The Karang Intan sub-district area was chosen as the research subject due to the

high level of tilapia cultivation production and the large number of tilapia cultivation in Karang Intan Village. Based on this, it encourages researchers to find out the relationship between the price of tilapia in each marketing chain to analyze market integration based on existing fish prices and the current marketing area for tilapia only within the province so that it is necessary to analyze the marketing patterns that occur in the region in order to obtain a suitable marketing pattern. latest. The research aims to analyze marketing patterns and the level of vertical market integration of tilapia in Karang Intan District, Banjar Regency.

MATERIALS & METHODS

Time and Place of Research

The research was carried out in Banjar Regency, South Kalimantan Province. The time required for this research is approximately 4 months, namely from December to May. This research was conducted in Karang Intan District, Banjar Regency. The research location was chosen deliberately (purposive sampling), with the consideration that the area is one of the fisheries cultivation areas.

Method of collecting data

1. Observation
2. Interview
3. Documentation

Sample Determination Method

The sampling technique in this research used sensu by taking all samples of cultivators in Lihung Village, namely 40 people.

Data analysis

Data analysis used in this research activity is as follows:
1. Marketing channel
Marketing channel analysis using the snowball sampling method, namely by exploring marketing channels in stages starting with determining the initial sample, namely fish producers/cultivators. The snowball technique is a sample selection technique by conducting interviews with a group or a relevant respondent and then the person concerned is asked to name or indicate the next potential respondent who has the same specifications or specialization (Sugiarto, 2003).

2. Market Integration Analysis
Market integration can be sought using regression analysis with the assumption that if the prices of other factors are constant, then prices at the producer level (Pf) and prices at the consumer level (Pr) are linear. The equation model is as follows Azzaino (1982):

$$Pf = \alpha + \beta\ Pr + \mu_t$$

The values of β and β can be found using the formula:

$$\beta = \frac{n\ (\Sigma Pr\ Pf - \Sigma Pr \Sigma Pf)}{\sqrt{n \Sigma Pr^2 - (\Sigma Pr\ )^2}}$$

Information:
Pr = price at the consumer level
Pf = price at the producer level
n = number of samples
β = Constant
β = regression coefficient
μt = error terms
Assessment criteria:
a). If β < 1, then the market is not integrated. The market structure is monopsony or oligopsony because an increase in the price of one unit at the consumer level is followed by a smaller price increase of one unit at the producer level.
b). If β = 1, then the market is perfectly integrated. The market structure is perfect

competition, which means that price formation between markets is more integrated with an increase in the price of one unit at the consumer level followed by an increase in the price of one unit at the producer level.

c). If $\beta > 1$, then the market is not integrated. The market structure is monopoly or oligopoly because an increase in the price of one unit at the consumer level is followed by a greater price increase of one unit at the producer level.

RESULT

General Description of Research Locations

Karang Intan District is one of the oldest sub-districts among other sub-districts in Banjar Regency. Karang Intan District has an area of 215.35 km2 with a height above sea level of 55 m. Lihung Village is one of the villages in Karang Intan sub-district with an area of 5.34 km2 and a residential area of 195 Ha. The main potential resource of this village is fisheries, especially floating net cages (KJA) because Lihung village is located on the edge of a river or watershed (DAS).

Respondent Characteristics

Respondent characteristics are a general description of the respondent's background conditions which are interrelated and influence activities in carrying out agricultural activities (Effendi, *et al.,* 2010).

Age

Respondents aged between 41-50 years, namely 10 people (32.5%) and those aged at least 21-30, namely 6 people (15%), this means that the average tilapia fish farmer in Lihung Village, Karang Intan District, Banjar Regency is still are in the productive age group for farming because a person's ability to work is greatly influenced by age factors. According to Law No. 13 of 2003 Chapter 1 paragraph 2, productive age begins at the age of 15 years to 64 years (Sugiyono, 2011. Respondents aged

between 41-50 years, namely 10 people (32.5%) and the least aged 21-30, namely 6 people (15%), this means that the average tilapia fish farmer in Lihung village, Karang Intan District, Banjar Regency is still in the productive age group for farming because a person's ability to work is greatly influenced by the age factor. According to Law No. 13 of 2003 Chapter 1 paragraph 2 that productive age begins at the age of 15 years to 64 years (Sugiyono, 2011).

Level of education

The education level of most tilapia farmers is elementary school, namely 15 people with a percentage score of 37.5%. Meanwhile, the education level of tilapia cultivator respondents is at least S1 with a percentage of 10%, this is because most rural communities are limited to a higher level of education due to relatively low educational awareness and the cost of going to school and young people choose to work even though they still have very little education. low (Taufiqurrahman, 2019).

The number of dependents

Respondents have family dependents ranging from 1-7 people. The highest number of dependents was 3 people, namely 11 respondents (27.5%). Meanwhile, the smallest number of family dependents is 7 people, namely 1 respondent (2.5%).

Number of Cages

The highest number of cages was 19 people with 6-10 cages (36.7%) while the least number of cages was 2 people with 11-15 cages (6.7%).

Tilapia Marketing Patterns in Karang Intan District

The marketing pattern of tilapia in Karang Intan District, Bajar Regency is a reflection of the dynamics of the local economy and the consumption habits of local people (Fauziyah, 2011). The study carried out included marketing of tilapia fish through traditional channels, such as traditional

markets and local retailers. This condition shows that even though there has been progress in infrastructure and technology, there is still a strong preference among the public to transact directly with local traders. The marketing pattern of tilapia in Karang Intan District is also influenced by seasonal factors and weather, where in certain seasons the supply of tilapia can increase significantly, so prices tend to be lower (Kotler, 2016).

The marketing channel pattern for tilapia fish starts from cultivators then to collecting traders who will be distributed again to retailers and then from retailers to final consumers. The retailers in question are fish traders in the Martapura and Banjarbaru markets.
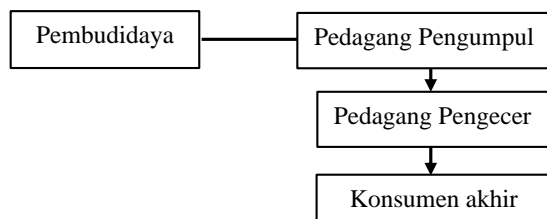
The marketing pattern for tilapia fish is as follows:

Figure 1. Tilapia Marketing Pattern

The marketing pattern for tilapia in Karang Intan District, Banjar Regency, shows the existence of vertical market integration with retail traders, especially those operating in the Martapura and Banjarbaru markets. This vertical market integration involves various stages in the tilapia supply chain, from tilapia producers or cultivators to final consumers. Analysis of this vertical market integration pattern can provide an overview of how tilapia distribution occurs at the local level and how this influences marketing patterns in the Martapura and Banjarbaru markets.

In the first stage, tilapia producers or cultivators in Karang Intan District have an important role in providing a supply of tilapia. Then, this tilapia is sold to retailers at the Martapura and Banjarbaru markets. These retailers act as intermediaries between producers and final consumers.

Retailers buy tilapia in large quantities from producers at agreed prices, and then resell them to end consumers in traditional markets or directly to homes.

The results of marketing patterns show that retailers in the Martapura and Banjarbaru markets have a significant role in determining the price and availability of tilapia for final consumers. Retailers can influence the supply and demand for tilapia at the local level by setting the selling prices and marketing strategies they employ. This vertical market integration also affects final consumers' access to tilapia, because it depends on the presence of retailers in local markets. Tilapia marketing patterns in Karang Intan District need to involve vertical market integration analysis to understand the role and impact of retailers on distribution and market access for final consumers (Kotler, 2016).

This marketing pattern is in line with the explanation by Kotler and Armstrong (2018) that distribution is an activity that manages the flow of goods and services from producers to consumers. In this case, the distribution pattern of catfish in Beringin Village prioritizes distribution from the cultivator to the final consumer. This also refers to the theory of Kotler and Keller (2016) that distribution is one of the key factors in marketing that influences consumers' decisions to buy products.

The pattern of marketing channels for tilapia in Karang Intan District also shows that there is cooperation between cultivators in order to meet local market needs and increase the income of catfish cultivators. This is in line with the explanation by Mulyana and Khairani (2018) that cooperation between actors in the distribution channel can increase the effectiveness and efficiency of distribution, as well as increase profits for all actors in the distribution channel (Lubis, 2009).

Level of Integration of the Tilapia Vertical Market in Karang Intan District
The level of vertical market integration for tilapia in Karang Intan District can be

moderate to high, depending on how close the relationship is between producers (tilapia farmers) and retailers in markets such as Martapura and Banjarbaru, as well as the extent of control and influence of retailers in the chain. supply of tilapia. Tilapia producers directly sell their cultivated products to retailers without going through other intermediaries, so vertical market integration tends to be high. For collectors or purchasing agents who buy fish from farmers and then sell it to retailers, vertical market integration tends to be moderate. The results of the analysis of tilapia market integration in Karang Intan District are as follows

Market integration can be sought using regression analysis with the assumption that if the prices of other factors are constant, then prices at the producer level (Pf) and prices at the consumer level (Pr) are linear. The equation model is as follows Azzaino (1982):

$$Pf = \alpha + \beta\ Pr + \mu_t$$

That is, β= 0.5465 < 1 then;

β< 1, then the market is not integrated. The market structure is oligopsony because an increase in the price of one unit at the consumer level is followed by a smaller price increase of one unit at the producer level.

The result of the elasticity coefficient of vertical market integration is 0.5465 which is less than one, indicating that the tilapia fish market in Karang Intan District is not well integrated. This indicates that there are limitations in the flow of information and dependency between the producer and final consumer levels. These results indicate that the tilapia market tends to experience oligopsony, where a few large buyers or a few large buyers control the market. The price increase received by producers is not comparable to the price increase received by final consumers, indicating that there is imperfection in the market mechanism and greater market power is in the hands of collectors.

The pattern of smaller price increases at the producer level compared to price increases at the consumer level indicates the existence of unequal bargaining power between producers and retailers. This indicates that retailers have more power in determining selling prices to final consumers than producers in setting selling prices to retailers. Price increases at both levels, but retailers can obtain greater profit margins compared to producers, indicates a market structure that tends to be profitable for retailers or large buyers in the tilapia fish market in Karang Intan District.

Factors that influence the integrity of the tilapia market, namely price negotiations, stock control, and purchasing policies from retailers can influence the level of vertical market integration. The existence of direct sales options by cultivators to final consumers can also influence the level of vertical market integration. Therefore, it is necessary to carry out further analysis involving factors to determine more precisely the level of vertical market integration of tilapia in Karang Intan District.

Sjaifullah (2018) tilapia market integration in Indonesia by examining market structure and performance at the district/city level. The elasticity of market integration, which provides a deeper understanding of its relationship to tilapia market conditions at the local level, as is the case in Karang Intan District. Analysis of market structure and performance at the local level is important in formulating policies and strategies to increase efficiency and economic welfare in the fisheries sector, especially in the context of tilapia marketing. The focus is more on the district/city level, but the findings from this article can provide valuable insight in understanding the dynamics of the tilapia market at the local level such as Karang Intan District.

Sumner and Zulauf (2019) market integration is not directly related to the

tilapia fish market in Indonesia, but market structure and integration can provide useful insights in understanding tilapia market conditions from other commodity markets, such as sweet corn, can provide additional perspectives in understanding challenges and potential for increasing tilapia market integration at the local level, as well as the relevance of concepts that can be applied in the Indonesian fisheries context.

CONCLUSION

Analysis of the vertical market integration of tilapia in Karang Intan District, Banjar Regency can be concluded as follows:

1. The marketing pattern for tilapia fish in Karang Intan District, Banjar Regency starts from the cultivators then to collecting traders who will be distributed again to retailers then from retailers to final consumers, the retailers in question are fish traders in the Martapura and Banjarbaru markets.

2. The level of vertical market integration for tilapia in Karang Intan District, Banjar Regency, namely the result of the vertical market integration elasticity coefficient of 0.5465 which is less than one, indicating that the tilapia market in Karang Intan District is not well integrated.

Declaration by Authors
Acknowledgement: None
Conflict of Interest: The authors declare no conflict of interest.

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