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ANALYSIS OF SUPPLY CHAIN MANAGEMENT OF SQUID SEA FISH IN TRADITIONAL FISHERMAN IN VILLAGE OF FISHERMAN INDAH MEDAN

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Abstract

This study aims to determine the problem of fishermen in carrying out the supply chain, meeting demand and supply, setting the price of squid fish in the Nelayan Indah Village, Medan Labuhan District, Medan City. The research method used is a qualitative research method by using a survey method that is describing, explaining, and interpreting a phenomenon that occurs in an object and qualitative data, namely data that is described in words or sentences according to categories to obtain a conclusion. This type of research is included in the category of qualitative research and is done in the form of observation, interviews and field interviews, library documentation and studies. Data analysis techniques in this study used descriptive analysis. This study states that the implementation of the squid sea fish supply chain in the Nelayan Indah Village, Medan Labuhan District, Medan City, is still controlled by collectors, the demand for squid fish in the Nelayan Indah Village, Medan Labuhan District, Medan City is still very high and the supply of fish squid sea depends on the harvest season, weather, techniques and technology used in fishing vessels, and pricing of squid fish in the Nelayan Indah Village Medan Labuhan District Medan City based on the demand and supply.

Keywords: Supply Chain Management, Fishermen, Squid Sea Fish

I. INTRODUCTION

Indonesia has an area of 3.25 million km² of oceans, and 2.55 million km² exclusive economic zones (ZEE). Sea gives results that make Indonesia as one of the largest fishing countries of the world. One of the Indonesian seafood is squid. Squid marine fish are widely consumed by Indonesian people. Squid Seafood is almost not separated from a variety of culinary dishes as well as home-cooked dishes and restaurants.

Seeing the high consumption demand for sea squid fish then the amount of supply and demand for sea squid fish continues to increase. However, the demand for squid sea fish cannot always be fulfilled

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because it relies heavily on the productivity of traditional fishermen. The concept of supply chain management is one of the concepts used to view the entire activity of traditional fishermen. In this research the traditional fishermen at the upstream in providing raw materials and on the downstream part of the process of distributing and marketing the product.

Researchers approach fishermen to examine takers, collectors, consumers, or to factories for export purposes (Simchi Levi, et.al, 2003:76). Kelurahan Nelayan Indah located in the sub-district of Labuhan Sumatera Utara. It is where traditional fishermen usually look for squid with a strategic place that is also beneficial for fishermen. Based on data obtained from the field data of fisherman Indah Village of Medan Labuhan Sumatera Utara, the number of squid sea fishing in the traditional fishermen in September to November 2018 suffered a drastic decline.

Declining squid sea fish catches will affect the number of squid offerings as well as impact the decline in fishermen's revenues. The cuttlefish catches of the squid are leave by many factors, one of which due to the weather in September or the end of the year is bad. Where sea water often experiences large waves due to strong winds that make the fishermen unable to sail to catch the squid. Then, the decline in the amount of squid sea fish offering not only impacted the fishermen's income but also caused the price hike of the squid sea fish in the market.

At this time many fishermen are looking for a shortcut or the fastest way to find the sea (squid), but do not think about the impact of the way. As a result, traditional fishermen (catching squid using fishing rods) experienced less catch.

II. RESEARCH METHODS

This type of research is included in a descriptive study or categorized into qualitative research methods using a survey method that illustrates, describes and interprets a phenomenon that occurs in an object and data is qualitative, i.e. data depicted with a word or sentence by category to obtain a conclusion. This type of research belongs to the category of qualitative research and is done in the form of observations, interviews and interview in the field, documentation and library studies.

III. RESULTS AND DISCUSSION

General findings

The village of Nelayanan Indah is one of the important fish-catching marketing centers in Medan City after the Belawan Ocean

Fisheries Harbor. Based on the number of fish catches, squid became a profitable fishing business opportunity, so that it will continue to influence the people of fisheries in terms of the economy in the village of Nelayanan Indah. Fishermen in the village of Fisherman Indah is classified into two types based on the ownership of the capture facilities, namely fishermen owners and fishermen workers. Fishermen owners and workers based on their time are divided into three categories, namely the full fishermen, the main fishing fishermen and additional sideline fishermen.

The full fisherman is a fisherman who only does the job of catching fish. Full-time fishing is used for the maintenance or repair of the vessel and the capture equipment. Fishermen owners are mostly the main fishing fishermen, because they have other businesses that are more prominent, such as trading. The main sideline fishermen usually have other jobs, such as trading. From the results of the research in the field, the number of fishing boats in the village fisherman Indah amounted to 30 units and each unit of the bot consists of 3 to 4 people so the number of fishermen who are interested fishermen of squid-catcher between 90 to 120 people.

Every month fishermen can capture 4 to 5 trips until one year range of trips that can be carried out approximately 60 trip, this is heavily influenced by the tide factor of sea water plus also 3 to 4 days in a month the occurrence of full tide so that the fishermen can not do the activities such as normal squid production will decrease in number. The number of fishermen's catches can differ due to the unequal location factors and the personal expertise of each fisherman and the capture equipment used by the fishermen and also determine the catch.

Based on the data obtained from the informant in September 2019, there are approximately 95 to 120 traditional fishermen in the village of Fisherman Indah who became fishermen of squid. By using bots and catchment tools that are still simple as the image below, then the expected result is not maximal, this can be seen from the catches obtained by each doing the activity of the sea (the term in the village fisherman Trip). With the use of bots and catchment tools are still very simple then the number of catches per trip ranged from 44 kg per unit of bot and a year more or less as much as 2,640 kg.

The main supply chain target of the traditional fishermen's Squid village is the local factory and market, especially for the size of the factory, the size A is 15-20 cm, size B 11-14 cm, size BC 9-11, while size C

6-8 cm is special for local consumption that is for households and rice stalls.

IV. DISCUSSION

Implementation of squid sea fish supply chain

The supply chain business process can describe the entire process of business relations along the squid supply chain in the village of Fisherman Indah Medan. In the supply chain business process need integration between the members of the institution involved.

1. Business relations Supply Chain

Analysis of process chain can be done in two ways, namely cycle view and push or pull view (Chopra and Meindl 2007). At the push or pull view, the process in this supply chain depends on the action to be performed. The pull process is the process by which the response is done due to consumer demand. This process can also be said to be reactive. Reactive process is a reaction to demand. While the push process is a process that starts and is implemented to intensify consumer demand increases. This process is also interpreted as a speculative process, and speculative processes are the emergence of the results of divination.

The squid supply chain flow that occurs in the flow 1 is the process of pull (reservation), the export buyer bought from the squid collecting merchants that were previously obtained from fishermen without the auction. Supply Chain Flow 2 is the process of push (order) just like Flow 3, buyers who buy squid from wholesalers that are suppliers of restaurants and consumer households.

2. Distribution pattern

Sistem rantai pasok yang terintegrasi terdapat aliran material, aliran dana, dan aliran informasi yang terjadi antara lembaga rantai (Hidayat *et al.* 2017). Aliran material meyalurkan produksi hasil tangkapan cumi-cumi yang dihasilkan dari armada penangkapan di Kelurahan Nelayan Indah Kota Medan tanpa proses pelelangan. Cumi-cumi yang diturunkan dari kapal jaring cumi didaratkan tanpa melalui pelelangan atau biasa disebut sistem *opow*.

Fishermen land squid to the port jetty, then gatherers or ship owners accompany the calculation of the weigher. In the supply chain flow, the entire catch is distributed to the collecting merchant, and the squid are distributed entirely to cold storage for the sorted and stored. The payment process also occurs in the interaction of the goods moving upstream to the downstream. Market information is instrumental in

bringing together supply and demand. In addition, market information can list the price per commodity, fish quality, location, and sales time (Sudiyono, 2001). Supply chain resources consist of 3 sources, namely physical and technological resources, human resources, and capital resources.

3. Physical and technological resources

The physical and technological resources of the fishermen are the loan vessels of the cold storage owner, gatherer, or shipowner. Based on correspondent data, the vessel has a size of approximately 29-100 GT (8 Piston). The ship is also equipped with refrigerated hatch as an effort to preserve the quality of squid after capture. The main capture equipment used catching squid is a net and squid fishing rod with light aids and a Global Positioning System (GPS).

During the season of the squid catching, the other fishing equipment was also able to capture squid, such as a purse seine, Bubu, and several other fishing equipment. The necessary supply of fishermen is provided by the gatherer. Fishermen are only in charge of the service when all preparations are available. The physical resource on the collector consists of two types of collectors, there are collectors who have their own cold storage and there are collectors who do not have cold storage.

4. Human Resources

Human resources in the squid supply chain in traditional fishermen in the village of fisherman Indah Kota Medan involve several related parties who need one another. In such interactions will usually occur in the form of product streams, money streams, and information streams. Supply chain resources include fishermen, collectors, wholesalers, end-consumers, and weights. On this chain fishermen could not determine the chain flow, the collector became the main distribution because the collector is essentially a ship owner and warehouse owner. However, fishermen are instrumental in the provision of squid.

1. Fishermen fishing nets and squid fishing rods have adequate handling knowledge in handling squid, so that the squid obtained can be exported. The squid are captured using a fishing rod and the squid nets in a living state, then the squid is sorted into several sizes and inserted into the refrigerated hatch. In this process the squid is separated from 50-100 kg into the blong/plastic drum. Meanwhile, cold storage companies employ employees to handle fish and squid well, so that the squid stay awake quality and sorting the squid that are not worth exporting. The owner of the warehouse or cold storage

company will also be sorting the squid size A and B special export while the size below for the consumption of restaurants and consumer households (sold to wholesalers).

5. Capital Resources

Fishery activity is identical to investing. The amount of necessity in conducting arrests requires fishermen to borrow capital from Toke (gatherer), banks, this also happens to traditional fishermen in the village of Fisherman Indah Medan City, fishermen acquire capital arrest from financiers who also serve as collectors (owner/warehouse owner). All the needs of the sea are prepared by the collector (Owner/warehouse owner). On the other hand, collectors earn funds from borrowing to banks or personal funds. The capitalization on a single capture activity requires considerable capital (tens of millions of rupiah). In addition to the high FUEL requirements, the fishermen also need supplies during the sea, while the sea activity lasts an average of 20-26 days in a month (1 time to go at 10 days to 13 days).

Other actors, wholesalers, acquiring capital from Toke wholesale owners. After obtaining the proceeds, the merchant made a deposit to the wholesale owner. As for some wholesale owners who choose to join the sale to get a higher profit than to leave the wholesale.

Squid sea fish demand and supply

Based on the information presented by the informant in this research, that the offering of sea fish squid not only comes from the beautiful fishing village but also from some areas outside of the city of Medan such as Sibolga, Tanjung Balai, Bagan Siapi-API, also from some coastal Aceh province. According to what was presented by Hutapea (2018), namely: "While one of the fish traders found in the market Horas Pematangsiantar, admitted the increase in fish prices due to lack of supply from fish agents from Sibolga, Tanjung Balai and Belawan." The supply of fish from agents in Sibolga, Tanjung Balai and Belawan is indeed reduced so the purchase price of the agent also rises, and the sales to the buyer also goes up, "called Fendy one of the fish traders in the market Horas Pematangsiantar. (AKR) ".

For fishermen, the sea fishing fish catcher along with the rising price of the bid amount will increase, but the amount of the offer itself is not easy to fulfill because there are several factors caused, such as harvest season, weather, squid capture storage capacity, and the size of the vessel that affects the number of catches and the reach of the catchment area. According to what Akhmad Pide said (2014:34) states that:

"As the bid amount increases with the rising price, it can be said that the bid amount relates positively to the price level. The relationship between the price and the amount of this offer applies to most types of goods in the economy, so it is referred to as the law of supply. If everything is assumed to be the same, when the price of an item increases, then the amount offered will increase, otherwise when the price drops, then the amount offered will be decreased".

Squid Sea Fish Pricing

The price Margin is the difference in the price that is obtained by the end consumer and the price received by fishermen as a producer according to Friedman (Sudiyono, 2001). This concept involves several marketing institution activities during the marketing process, so that can be analyzed marketing margins among the marketing institutions. In price theory, sellers and buyers are assumed to meet in person. Prices can be determined from supply strength and demand in aggregate.

Orientation fishermen of sea squid fish in village fisherman Indah is earning a more than just home capital (breakeven). Squid sea fish is seen to provide better income due to the high demand of fishermen who go to the sea to catch squid fish trying to make squid sea fish catches according to the available storage capacity. For fishermen who rely on storage using ice, must pay attention to the mileage to maintain the quality of the catches. This is different from ships that have cold storage that can maintain the capture quality with a longer time.

Consumers are the ultimate goal of marketing chain activities. Consumers have the criteria for making a purchase. According to Hapsari (2014) Before consumers buy fish, consumers need to consider the quality of fish, the freshness of fish, and the price offered from the seller. The selling price of squid is evenly distributed every institution, because the price determination of squid in the village of Fisherman Indah Medan is not through the auction (OPOW) first. Meanwhile, producer prices are derived from the average selling price of each supply chain agency. The price difference in each institution is influenced by the different operational costs incurred and the handling process.

V. CONCLUSION

1. The implementation of the Squid Sea fishes supply chain in the village of Fisherman Indah Medan, Labuhan Kota Medan, is still controlled by the collector.
2. The request of Squid sea fish in the village fisherman Indah

Medan District Labuhan Medan is still very high and offers squid sea fish depends on the harvest season, weather, techniques and technology used ships in fishing.

3. The price of squid marine fish in the village fisherman Indah Medan Labuhan Kota Medan based on the request and supply that occurred.

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