



Management of Marine Fish Inventory at Fish Auction Place in Tenda Village, Hulonthalangi District, Gorontalo City

Hartati Tuli¹, Siti Pratiwi Husain², Febriani, Amar Bayu Syafaa³

^{1*,2,3}Department of Accounting, Faculty of Economics, Gorontalo State University

Corresponding author: hartati@ung.ac.id^{1*})

Keywords: *Fish Inventory Management*

Abstract:

This research aims to improve the welfare of the people of Gorontalo through the application/development of ways to maintain the existence of their business by managing inventory properly and correctly in accordance with applicable standards. The specific objective to be achieved is to find out how to manage marine fish stocks at the Fish Auction Place (TPI) located in the Tenda village, Hulonthalangi sub-district, Gorontalo City. This study uses a qualitative method by using interviews and observations as stages in data collection. From the results of the research that has been carried out, it shows that the management of marine fish stocks at TPI has been going well because of a good work system among all people involved in the Gorontalo Marine Fish Auction Place and good management of the fish stock caught



Introduction

Inventories are assets that exist in companies that are processed first for resale in a business process or goods that go through a production process which are then sold for use or consumption by consumers. (Kieso et al 2019) while (Rafaidah & Fatakh, 2018) explain that inventory is material or goods stored that will be used to fulfill certain purposes, for example for use in the production or assembly process, for resale, or for spare parts of an equipment or machine. Inventories can be in the form of raw materials, auxiliary materials, work in process, finished goods, or spare parts.

Related to inventory management (Rambitan et al., nd) in his research, he tried to see how the analysis of the application of inventory management at CV Indospice Manado and got the results of research that inventory control applied by CV Indospice was not optimal, by applying EOQ the company could apply the optimal amount of inventory and when to reorder. The company will reduce the frequency of ordering and ordering raw materials larger than usual so that the stored raw materials will be in the storage area longer. It means by using the EOQ method helps companies in minimizing inventory power.

In contrast to the research conducted by (Tuli et al., 2021) which tried to see how the model of implementing inventory management based on SAK EMKM in maintaining the continuity of micro and small businesses in the city of Gorontalo. Meanwhile, in the process of collecting research data through FGDs conducted by the Research Group, there are several things that were suggested by the audience, namely what was stated by Mrs. Niswatin "there are 2 perspectives that can be taken in the title of this research. First, inventory management focuses on management accounting, and inventory management. which focuses on financial accounting in this case SAK EMKM. He continued to say but judging from the importance of this research, it is suggested that this research refers to inventory management that focuses on management accounting.

A fish auction place or what is commonly called TPI is a place that serves to accommodate fish caught by fishermen before moving to consumers. The phenomenon that occurs today is that fish production often increases but the price is relatively decreased due to lack of proper management and control of supplies.

Based on this background, the authors are interested in conducting further research to find out what kind of management of marine fish in the Fish Auction Place (TPI) Tenda Village, Hulonthalangi District, Gorontalo City is carried out by the people involved in the place as well as observing the whole process of marine fish stock management activities which are usually carried out every day at TPI Gorontalo. The reason the researchers took the location at the TPI where the fish auction was in the City of Gorontalo was to support one of the leading research topic programs at the State University of Gorontalo, namely "the strategy for empowering the potential of the Tomini Bay area for strengthening and community welfare" because the TPI Gorontalo is included in one of the one area of the Tomini Bay area.

Research methods

This research uses qualitative research methods and will be applied / developed to marine fish business actors. Aspects of research studies using a qualitative approach are generally carried out when identifying and exploring stock management as a basis for designing marine fish stock management at the Fish Auction Place (TPI) Tenda Village, Hulonthalangi District, Gorontalo City. This study focuses on marine fish business actors at the Fish Auction Place (TPI) Tenda Village, Hulonthalangi District, Gorontalo City and the like.

Research Data Source

The source of the data in this study is the primary data needed, namely the results of observations and interviews for marine fish business actors at the Fish Auction Place (TPI) Tenda Village, Hulonthalangi District, Gorontalo City.

Data Collection and Data Analysis Techniques

Data collection techniques to be used consist of:

1. Observations are used to obtain data and information about marine fish business actors at the Fish Auction Place (TPI) Tenda Village, Hulonthalangi District, Gorontalo City.
2. Interviews were used to identify inventory management for marine fish business actors at the Fish Auction Place (TPI) Tenda Village, Hulonthalangi District, Gorontalo City.

To support the validity of the data, research was carried out through diligence in observations and interviews, and the adequacy of available references. The data analysis technique was carried out by qualitative analysis techniques with the stages of data reduction, data presentation, and drawing conclusions.

Results and Discussion

Inventory management is a series of activities carried out in stages, systematically and planned with the aim of maintaining the availability of goods and the fulfillment of orders for these goods. In this case, the supply discussed in this study is the supply of marine fish at TPI Gorontalo. Procurement of marine fish at TPI Gorontalo is a demand for marine fish needs for the community, especially in the city of Gorontalo so that the availability of marine fish in TPI Gorontalo must be maintained.

Work System at TPI

Overall, based on observations in the field, it shows that marine fish stock management activities at TPI have been going well because of a good work system among the people involved in TPI Gorontalo. This means that each group has done their job well. This can be seen from the tasks carried out by each individual group involved in fish supply and trade at TPI. There are groups of fishermen who go to sea to look for fish, there are also those who work as collectors where the fishermen can sell the fish they catch to this party and then

by the collectors the fish are sold again to community consumers, retail sellers or to fish management companies, especially tuna. There are also transporters or loading and unloading staff who are in charge of transporting the catch of fishermen from the ship when the ship lands at the TPI. There are also transportation service providers to transport fish that have arrived at the TPI to be brought to fish retailers outside the TPI so that it can be said that the work system that has occurred at TPI has been running smoothly.

Planning

Planning is the most important stage in carrying out an activity that can affect the outcome of the activity's objectives. Planning is part of inventory control as described by (Jan & Tumewu, 2019) namely inventory control is one of the activities of a sequence of activities that are closely sequential with each other in the entire production operation of the company in accordance with what had been planned in advance both time, amount, quantity and cost. At this stage the fishermen who will start fishing have done good planning, namely by preparing everything needed to support the fishing process which includes the needs needed for ships that become transportation tools such as diesel needs which are adjusted to the ship's engine capacity because of this related to the distance to be traveled during the process of searching for fish in the sea which takes up to days. In addition to the need for boats, fishermen have also equipped their trips by bringing fish storage or hatches, ice cubes and salt which will be useful as materials for storing caught fish to keep them durable and suitable for sale. In addition, fishermen also have a target number of catches and types of fish to be caught every day because some fishermen already have regular customers so that fishermen must always keep their catches sufficient to meet the needs of their customers, such as tuna which is a priority for fish management company. The tuna fish received by the company have criteria, which must be heavier than 30 kg per head. If less than 30 kg per head it will be released at the collector or retailer.

Number of fish caught

From the results of interviews conducted, we can find out if the number of fishermen's catches for each day varies for each fisherman. This difference in catch depends on the needs or targets to be achieved by each fisherman, in addition to the factors of transportation equipment or vessels used also affect the number of fish catches each day. There are fishermen who get at least 5 to 15 fish a day because the fish they are looking for is tuna. The number of catches is also influenced by natural factors, because according to fishermen there are certain seasons where fish production is abundant, especially for tuna species.

Unlike fishermen, fish collectors usually get more fish every day, because some of the fish brought by fishermen are sold to collectors. So in this case fishermen who are looking for fish have alternative ways to sell their catch, which can be sold to collectors, can also be sold directly to fish retailers who have been waiting at the TPI or can also be sold to fish management companies in need, in particular tuna fish.

Fish storage process

The quality and feasibility of the fish that will be sold to consumers, of course, cannot be separated from the process of how the fish caught are handled properly during storage. This can also be one of the factors that affect the quality of fish after arriving at the TPI. Given the time it takes for fishermen to find fish in the sea, it can take up to days, so the process of handling fish after being caught is a problem that must be seriously considered. To maintain the freshness and quality of the fish stored in the storage media, one of the methods used by the fishermen is to replace the water used to soak the fish with new water. This is a good way to keep fish fresh.

To store the caught fish, fishermen usually use a storage box which is generally made of styrofoam, of course this has advantages and disadvantages. Styrofoam boxes cannot maintain the required cold temperature properly, because the cover is considered not to be tightly closed so that the required cold temperature in the box is quickly reduced or the required cold temperature is reduced. This can be one of the factors that reduce the quality or freshness of the fish. We can understand the choice of using a box with Styrofoam material because it may be cheaper than using a cool box or cooler box which is more expensive, but using a cool box can better guarantee the cold temperatures needed for fish storage.

In addition to storage areas, ice cubes and salt are also a necessity that must be used by fishermen for fish storage. Ice cubes will help the fish in the storage area to always be fresh. Preserving fish with ice cubes is one of the safest ways because it does not use harmful chemicals. In addition, the price of ice cubes is much cheaper and easy to use. The use of ice cubes will not cause damage to the fish if done properly. With ice cubes, the condition of the fish's body will still feel cold and moist. The process of decay is also hampered so that the shelf life of fish is longer than usual. The resulting melted ice cubes function to wash away bacteria, mucus, and blood that sticks to the surface of the fish's body so that the fish products become cleaner.

In addition to ice cubes, salt is also a very important requirement in the process of storing or preserving caught fish. Salt may be one of the costs incurred in the process of catching fish, considering the important role of salt in fish preservation. The more the number of catches obtained, the more salt needed as described above. Salt and ice cubes are absolute costs incurred by fishermen and collectors in the fish storage process. Based on research conducted by (Dede suhendro et al) regarding the effect of adding salt to *C. chrysozona* fish, it is known that the higher the salt concentration given, the better the quality of the *C. chrysozona* fish. The addition of 10% salt was still able to maintain the quality of *C. chrysozona* fish, so it was suitable for consumption up to 48 hours of marketing.

The process of catching fish by fishermen until the fish are distributed to collectors or retailers or consumers, researchers did the observation of the management of the fish supply later when the fish have arrived on land. Even though the fish that have been caught are stored in the hold and chilled with ice cubes, in managing fish stocks at the TPI, it is better if fishermen who are looking for fish in the sea have implemented good management methods when new fish are caught or caught considering that the fishing process sometimes reaches

5 days. This means that when it comes to land the quality of fish is not the same. Some are new and some have been stored for several days. The researcher's suggestion is that the FIFO (First In First Out) method is used. This means that the fish to be stored are separated based on the day of catching or the day of acquisition. For example, fish caught on the first day should not be combined with fish caught on the second or third day and so on when storing them. At the time of lowering at the TPI, it would also be better to separate them. So that we know the quality when selling or releasing to collectors, prioritize the fish caught on the first day.

Conclusion

From the results of the discussion above, the researcher can conclude that the management of marine fish stocks at TPI Gorontalo has been going well. These indications can be seen from the good planning by fishermen from the first activity carried out to find fish until the caught fish are sold to consumers through the Fish Auction Place and the existence of a good management process by everyone involved in TPI Gorontalo, especially in fish storage process. Fishermen who work at TPI have decades of experience in carrying out their activities to meet fish needs for the community. Although there are still some shortcomings as described above that need to be improved, the overall management process has been going well. The existence of a good cooperation system between the parties involved in activities at TPI makes the availability of marine fish in TPI well maintained to meet the needs of marine fish for the community, especially those in the Gorontalo area and its surroundings.

References

- Jan, AH, & Tumewu, F. (2019). Analysis of Economic Order Quantity (Eoq) Inventory Control of Coffee Raw Materials At Pt . Fortuna Inti Alam Analysis Of Economic Order Quantity (Eoq) Control Of Coffee Raw Materials At Pt . Fortuna Core Nature. 7(1).
- Niswatin, & Rusuli, L, O. (2021). Development of a Social, Cultural, and Islamic Religion-Based Accounting Economics Curriculum Model. Immanence: Journal of Islamic Economics, Management, and Accounting, 6(1), 43-54. <https://doi.org/10.34202/imanensi.6.1.2021.43-54>
- Application, A., Inventory, M., Cv, P., & Manado, I. (nd). Analysis Of Application Of The Inventory Management On Cv . Indospice. 6(3), 1448–1457.
- Tuli, H., Si, M., & Ahmad, S. (2021). Model of Application of Inventory Management Based on SAK EMKM in Maintaining the Continuity of Micro and Small Enterprises in Gorontalo City. 6(2020), 111–118.
- Utama, F., Putra, D., & Maksum, AH (2022). Analysis of the Implementation of Kyea Arm Rear Brake Raw Material Inventory Management with the EOQ Method. VII(1), 2561–2570.

Wijaya, D., Mandey, S., Sumarauw, JSB, Management, J., Sam, U., & Manado, R. (2016).
Analysis of Fish Raw Material Inventory Control at Pt . Celebes Minapratama Bitung
Analysis Of Fish Raw Materials Inventory Control In Pt . Celebes Minapratama Bitung.
4(2), 578–591.