

## **Inventory Planning and Control Management in an Effort to Increase Warehouse Effectiveness**

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### ***Abstract***

*The research in this article aims to determine efforts to increase warehouse effectiveness in management planning and goods control. The research method used is a qualitative descriptive method, using data collection techniques used, namely interview techniques with the third informant, namely the Store Manager, Assistant Store Manager and Warehouse Supervisor. The research results show that inventory planning and control are effective. In planning inventory, it is necessary to start by planning the purchase of goods, planning proper storage of goods, and planning profits for the company. Inventory of goods must control stock taking and control over stock. Apart from that, actions are taken to minimize the level of damage to goods by checking them once a week. Actions taken to minimize expired goods are by carrying out checks on a scale and applying the FIFO (First In First Out) method. By planning and controlling inventory, the warehouse can be managed more effectively.*

**Keywords** – *Planning, Control, Warehouse, Inventory, Management*

## **INTRODUCTION**

The development of the business world is currently experiencing very rapid progress with many companies being established. In general, the purpose of establishing a company is to gain profit from the production of goods, with that the process or activity in the company must be effective and efficient according to the plan that has been set (Oktariansyah, 2019). This is influenced by the advancement of technology and information systems because accurate information can influence overcoming comparative competition. The competition faced by companies is no longer on the price of goods but also on the added value given to customers and the management of the availability of goods that need to be observed (Soeltanong & Sasongko, 2021).

Inventory is a company asset that plays an important role in business operations, so the company needs to carry out proactive management, therefore the company must be able to anticipate conditions and challenges that exist in inventory management to achieve the final target (Michel, 2014; Sukarni & Mahmud, 2024). Basically, it is very important to pay attention to managing activities in a trading company, namely the activity of planning inventory of goods, the activity of managing inventory is by planning purchases/procurement (Sari, 2022). However, in its implementation, companies often experience problems in controlling and procuring the availability of goods. In managing inventory in the warehouse, effective planning and control management is needed, because it is very important in the continuity of the production process. Inventory management aims to help companies improve and provide maximum service to consumers. Procurement of stock of goods so that there is no shortage or excess, because if there is a shortage, customers will feel dissatisfied with the business entity (Khorida, 2017).

With that, to achieve the right inventory, a purchasing planning strategy is needed by determining the quantity of inventory that will help maximize storage and profit in the company. This can be seen when there is a problem with excess inventory (overstock) which is not good for the company. Some researchers argue that inventory management is needed, where this method is to control inventory in the warehouse in order to make the right order, namely at an optimal cost (Aisyah, 2017).

## **RESEARCH METHODS**

Research methods applied in research articles on management planning and control of inventory in an effort to increase the effectiveness of this warehouse using qualitative descriptive by providing a description related to planning and controlling goods in the form of numbers or graphs which are then described in a discussion. According to (Fadli, 2021) states that qualitative research involves researchers so that they will understand the context with the situation and setting of natural phenomena according to what is being studied. Each phenomenon is something unique, different from the others because of the different contexts. The purpose of qualitative research is to understand the conditions of a context by directing a detailed and in-depth description of the portrait of conditions in a natural context (natural setting), about what actually happens according to what is in the field of study. (Azhari, 2021)

The data collection technique used was the interview technique with three informants, namely the Store Manager, Assistant Store Manager, and Warehouse Supervisor. Using the data validity test, namely confirmability, that confirmability testing is a study that is said to be objective if the research results have been agreed upon by many people. Testing confirmability means testing the research results in relation to the process carried out, if the research results are a function of the research process carried out, then the researcher has met the confirmability standard (Sugiono (2013) in (Agustin, 2022).

## **RESULTS**

### **Inventory Planning**

#### **1. Procedure for Goods Purchasing Planning Process**

Mr. Sulaiman as store manager conveyed the following:

"The first thing that needs to be prepared is that the implementation is carried out in accordance with the allowance schedule from *salesor* suppliers, they have received a schedule related to sales on each product so that when a visit is made to order goods using a checklist. In the checklist there is data in the form of a form containing the item code, item name, stock of goods in the warehouse, long stock and estimated order that has been planned."

#### **2. Managing Items in Storage**

Mr. Taufiq as Assistant Store Manager said the following:

“In adjusting the right stock we will attract *average sales* in the past 3 months, it is adjusted to the date. For example, preparing overstock inventory on the 25th to the 5th of the following month, then from the 5th to the 24th, sales are usually not too big compared to the 25th-5th. So for inventory estimates it will be more normal than usual.”

## **Inventory Control**

### **1. Stock Opname Check**

Mr. Sulaiman as store manager conveyed the following:

“Checking *inventory taking* only done once a year, except for partial goods, then stock opname is only done once a month. Partial goods are usually for fruit and meat products.”

### **2. Action On Over Stock**

Mr. Sulaiman as Store Manager said the following:

“When there is overstock, we usually submit a return by submitting a promotion to the central marketing or distributor, and offering it to other stores that are also in the same company so that there is a possibility that there is a store that needs the item.”

### **3. Actions on Damaged Goods and Expired Goods**

Mr. Taufiq as Assistant Store Manager said the following:

“To minimize damage to goods by placing or separating the products themselves away from sharp objects, and not sticking to the wall to reduce friction. Usually damage is caused by pests that damage goods.”

“If for handling goods *expired* is the first when checking incoming goods with a minimum expiration date of 1 year or more, we do this periodically. We also do FIFO, with that we emphasize to the team because if it doesn't work there will definitely be expired goods.

## **Methods of Storing Goods in Warehouses**

### **1. Goods Receipt Procedure**

Mr. Arip as Warehouse Supervisor said the following:

“This item can be input if everything is in accordance with the criteria. After the inspection results are complete, all are checked if the goods will be input according to the established procedures, which must have a PO, the invoice must be in accordance with the name of the item, the item code or the quantity of the item is all in accordance, the goods will be input according to the hard copy. If there is a problem with the goods, it will usually

be coordinated with the checker team as the recipient of the goods, so it must be received first before being transferred to the receiving team.

## **2. Goods Storage Method**

Mr. Arip as Warehouse Supervisor said the following:

“For the method we use a layout with a dedicated storage method. This is to facilitate storage, entry and exit of goods, and searching for goods will be easier if the goods have been grouped.”

## **DISCUSSIONS**

### **1. Inventory Planning**

The inventory planning process can be grouped into three categories, namely purchasing planning, storage planning, and profit planning. The company has a procedure in its purchasing planning process. First, estimating the need for inventory for 1 week is done by suppliers, warehouse staff and display staff. Furthermore, the estimate will be checked by the store manager by looking at the suitability of the inventory purchase request with the average sales for the previous three months. If the estimate exceeds the average sales, then the estimate will be reduced, while if the estimate is less than the average sales, the estimate will be added. If it is in accordance with the estimate and approved, then a PO is made for the suppliers.

Based on the statement above, it can be concluded that the purchase planning carried out is based on the conformity between the estimate and the average sales per three months previously (Hidayatullah et al., 2024). However, there are obstacles in carrying out the procurement of inventory because the availability of goods from the supplier is out of stock, so that the goods sent by the supplier do not match the estimated demand and are constrained by the delivery time (Sari, 2022). The arrangement of goods types has also been grouped based on their categories. For example, for milk products from various brands are placed in one place.

A design or plan for a warehouse layout will never be made effective if supporting data on various factors that influence the layout itself is not collected properly. To keep production in the factory running smoothly, the warehouse must play its role for the smoothness. At the time of purchasing goods, there are at least three main objectives such as checking, namely regarding the certainty of safe products. The selector, as a maintainer or restorer in

the warehouse area so that the product is maintained for its quality (Yanyuni & Widjajati, 2022).

## **2. Inventory Control**

From the results of interviews conducted by researchers on proper inventory control for the company, the inventory control process is carried out by conducting stock opname and controlling overstock of goods. The company conducts stock opname in order to adjust the calculation of the amount of physical stock with the stock in the system. The implementation of stock opname is carried out only once a year, but for fresh products such as fruit and meat it is carried out once a month and there are also goods that are subject to daily stock opname for daily products such as fresh milk and tofu.

But sometimes in doing stock opname there is a calculation error, there is a difference between the physical stock and the stock in the system. In overcoming this problem, partial stock opname is carried out which means the calculation is carried out continuously. According to (Anshary et al., 2023; Aqsha et al., 2022) stock opname is an examination of the physical stock available in the warehouse and comparing it with the recorded stock (on the computer). Usually done at certain periods, for example once a month, six months, even once a year. This examination depends on the number of types of goods. Stock opname is important to carry out control, so that the company can monitor and know the assets owned (Wajdi et al., 2023; Wince, 2017).

According to (Jeremi & Herwanto, 2021) to determine the amount of stock opname for a company is very important, because stock opname has a direct effect on the company's profits. The purpose of conducting stock opname is to find out for sure whether the value is really the same or there is a difference in excess/deficiency of merchandise inventory. If a difference is found between the amount of inventory or the cash value of inventory, the company must repeat the check to find out if there is a possibility of a transaction that has not been recorded or an error occurred when recording (Rasyid et al., 2023). However, if what is found is a lack of difference, there are usually two possibilities, namely, making an adjustment journal for the shortage and then it will be charged to the company (Mubarak et al., 2023).

### **3. Minimize the level of damage to goods and expired goods**

In minimizing the level of damage to goods, first by placing or separating the product itself which is away from sharp objects, and not sticking to the wall so as to reduce friction. Usually damage is caused by pests that damage goods.

In minimizing expired goods, the first step is when the goods are about to enter the warehouse, the warehouse staff checks the expiration date of at least one year and above, withdraws goods several months before the expiration date by conducting promotions and submitting returns to suppliers. In this case, it is undeniable that the company also experiences expired goods in the warehouse which are caused by something being missed during the check, in addition to implementing the FIFO (First In First Out) method when releasing goods. The FIFO (First In First Out) method can run well if supported by adjustments to the warehouse layout. The layout must be considered carefully because it directly affects the activities in the warehouse, a good layout can shorten the process time of activities in the warehouse (Agustin, 2022; Yuliani et al., 2023).

### **4. Increasing the Effectiveness of Goods Storage in Warehouses**

In carrying out the storage of goods, it begins with the receipt of goods and ends with the storage of goods. The company has a procedure in the process of receiving goods. First, before inputting data when receiving goods, the staff checks the delivery note or PO first, whether it is in accordance with the criteria and quantity of goods (Faridah et al., 2023). If it is in accordance with the criteria and in accordance with the invoice, then the staff signs the delivery note. Then the data will be input into the system according to the invoice, name of goods, item code and quantity of goods. The process of receiving goods is carried out by warehouse checker staff, receiving staff, and warehouse staff. (Hidayat et al., 2023)

The storage method used is the dedicated storage method. Dedicated storage or also known as a fixed storage location (fixed slot storage), uses a specific location or storage place for each item stored. Dedicated storage is a strategy for choosing or determining permanent product placement by having a place in a certain location. This strategy is balanced to be superior in terms of ease when searching for a product, the suitability of the location with its shape and access that can be reached easily (Kusumadewi et al., 2022).

The company has arranged the layout of goods according to their categories, and for now the layout is permanent, unless there is a revision due to the addition or reduction of the warehouse area. By using the dedicated storage method, it is easier for staff to organize the

entry and exit of goods and search for goods. The results of this study are in line with research (Sentia & Rahman, 2017; Yusuf et al., 2023) which shows that the dedicated storage method can make warehouse layout design more effective in moving products in the warehouse. (Hidayati et al., 2023)

## **CONCLUSION**

The company has established a policy on inventory planning that has been implemented well by conducting company procurement related to estimating inventory needs for one week carried out by suppliers, warehouse staff, and display staff. Policy companies related to controlling inventory by conducting stock opname once a year, but for fresh products such as fruit and meat it is done once a month and there are also goods that are subject to daily stock opname for daily products such as fresh milk and tofu. There are obstacles in the implementation of stock opname, namely errors in calculating the contents of goods in boxes caused by human error. In overcoming this problem, partial stock opname is carried out, which means that the calculation is carried out continuously. In addition, the return of goods to suppliers and submitting promotions to the central marketing.

In minimizing the level of damage to goods and expired goods, it has been running well, by taking action by employees, namely tidying up goods once a week by avoiding goods from sharp objects and rubbing against walls and when goods arrive, an expiration date of at least one year or more is checked besides implementing the FIFO (First In First Out) method when issuing goods. Sometimes expired goods occur because they are missed when checking the goods so they cannot be returned to the supplier and cannot be promoted to stores that are still in the same company. So that the implementation of inventory planning and control management is very effective in increasing warehouse effectiveness, by using a storage method in the form of dedicated storage and arranging the layout of goods according to category.

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