Study of Inventory Control and Quality Control of Raw Materials

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Abstract: Balance is very necessary in this inventory control activity. If the inventory in the warehouse is excessive or overstocked, there will be an increase in various costs for storing and maintaining goods in the warehouse. Therefore, this will result in waste. This research aims to determine and examine Inventory Control and Raw Material Quality Control at Suki Muchu Restaurant. The method used in this research is descriptive. The population in this study was 35 employees in the production department. The results of this research show that control of raw material supplies based on responses from respondents/employees as a whole is in the quite good category, and control of the quality of raw materials shows responses from respondents/employees as a whole are in the quite good category too. A very prominent indicator in the Raw Material Inventory Control variable is that the prevention of a shortage of raw materials can be done properly. Meanwhile, the indicator that is considered deficient in this variable is planning for the use of raw materials that are not following the production schedule determined by the company, thereby hampering production process activities.
Keywords: Inventory Control; Raw Material Quality Control

INTRODUCTION

In today's era of globalization and the rapid development of technology, competition in the business world is becoming increasingly fierce, this can be seen by the increasing number of business actors, in trading companies, factory companies, and service companies in Indonesia. In conditions of increasingly tight competition, companies need to have a competitive advantage so they can continue to compete and maintain their survival. The diverse needs of humans give rise to many business opportunities to buy and sell these basic needs in the form of goods or services. Many people take advantage of these business opportunities to gain profits by fulfilling human needs. Based on this, it can be said that there are many entrepreneurs and those who run their businesses by trying to compete as much as possible to meet human needs. The more competition there is, the more companies create products that are superior to other companies' products in terms of meeting consumer needs. Every human being certainly needs many products to meet their needs. Among the many needs that humans need, one of them is primary needs, namely the needs that people need most to fulfill their daily needs, this need is the need for food.

Pradana and Jakaria's research (2020) illustrates that in controlling the supply of sugar raw materials, PT. Singa Mas Indonesia requires maximizing the capacity of sugar raw material storage warehouses so that sugar purchases can be made with larger (optimal) order quantities with a low order frequency per production period, this is to minimize total inventory costs, including ordering costs and storage costs.

PT. Surya Indah Food Multirasa controls raw material inventory using a fairly simple method, namely orders are based on the number of requests for products, and orders are made when the raw materials are close to running out. This resulted in a shortage of raw materials for potatoes and curly potatoes at a time when demand for these two products was increasing (Hidayat et al., 2019).

The availability of raw materials that are relatively easy to obtain has made the banana chips industry one of the growing industries in Lampung Province and one of its superior products. The large availability of raw materials for banana chips in Lampung Province is being utilized by the local government of Bandar Lampung City to develop a chips industrial center area on Jalan Pagar Alam, All Mider Village, West Tanjung Karang District, Bandar City, Lampung. Currently, Bandar Lampung City is known as the center for banana chip souvenirs in Lampung Province (Safitri et al., 2020). Raw material inventory control is a series of activities to determine inventory such as purchasing time and the amount of inventory that must be provided (Pradana and Jakaria, 2020). The following types of inventory Hidayat et al. (2019): (1) Raw Materials Inventory; (2) Work in process/ WIP; (3) MRO (Maintenance Repair Operating); (4) Finished goods inventory.

To take an opportunity to meet the needs of society, a company must be able to have good management in managing the flow of its production process from upstream to downstream. In managing a production process flow from upstream to downstream, of course, it must be supported by utilizing the resources owned by a company. The use of these resources must of course be balanced with good operational management to get maximum results so that you can achieve a goal that has been determined by the company. One of the most important factors that can enable a company to survive, maintain consistency in running its business, and meet consumer needs and desires, is to maintain a smooth production process, so that the products produced have continuity in meeting consumer desires.

Bella and Wagiyo (2020) state that inventory is a resource owned by a company, in the form of goods that will be used for future needs. Inventories include company-owned merchandise that can be resold or used in the production process. Inventories can be in the form of raw materials, semi-finished goods, and finished goods that are ready for sale.). Rasyid et al. (2023) conclude that inventory is an asset that includes goods owned by a company to be sold within a certain business period, or inventory of goods that are still in the manufacturing or production process, or an inventory of raw materials waiting to be used in a business. production process.

Inventory control can be interpreted as the efforts carried out by the company, including in making decisions so that the need for materials for the production process can be met optimally. This control aims to ensure that finished goods or the results of the production process follow what consumers want, both in terms of quality and quantity, during buying and selling transactions, so that no inventory is too large or a shortage of inventory, thereby creating the smallest possible risk. If the inventory is too large and does not match the needs, waste will occur because a lot of capital has been spent in the form of inventory, and will cause a buildup caused by inventory that is not balanced with the amount ordered by the customer. A large amount of inventory will also result in large capital but in the form of raw materials that do not rotate or vice versa, if there is a shortage of inventory it will disrupt the smooth production so that the accuracy of delivery has become an agreement with the consumer cannot be fulfilled, this will also cause the consumer to move to another company.

High-quality raw materials can produce quality products that meet good quality standards, thereby achieving satisfactory results following the plans and expectations set by the company (Erdi & Haryanti, 2023). In terms of procuring raw materials, the company's success depends on efforts to carefully search for and select the raw materials to be used in the production process. The theoretical explanation is that the better the quality of the raw material, the higher the quality of the production results (Pratiwi & Sugiyarti, 2022).

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PT. Super Box Industries is a company that produces corrugated paper and sources raw materials from abroad, so sometimes when sending raw materials to the company there is damage to the raw materials, for example, the raw materials are wet because the shipping container is leaking or the supplier could also be late in sending the raw materials. So, production was delayed. Constraints during the production process are lower while constraints on material quality are higher. For example, when high levels of glue are used, the water content tends to be high, which can result in the cardboard becoming soft. Meanwhile, using a little glue has an impact on the cardboard not sticking together. Then, when the production process of the printing machine is too high, it causes the paper to become soft. And when the machine makes a design according to the customer's wishes, it cannot match 100% because the printed results will be slightly different in the desired color (Wahyuni & Efriyenti, 2021).

From the description above, it is necessary to carry out inventory control, which is an effort to provide the materials needed to carry out a production process so that production can run smoothly that there is no shortage of materials, and can minimize losses in a company's inventory costs. Inventory is one of the most expensive assets owned by a company, so the company must be able to monitor and control this inventory well so that it can optimize production results and maintain a balance between inventory and consumer levels, so that it can support the smooth production process, both within the company big or small.

Zainul (2019) stated that inventory is material savings in the form of raw materials, goods in process, and finished goods. Inventory control is the activity of maintaining the amount of inventory on hand. desired level. In goods products, inventory control is emphasized on material control. In service products, control is prioritized less on materials and more on supply services because consumption often coincides with the procurement of services and so does not require inventory. Managed Inventory, Because Inventory is an investment that requires large capital, it affects service to customers. It influences operations, marketing, and financial functions. There are 2 types of inventory, namely the inventory of finished goods usually depends on market demand, and the inventory of semi-finished goods and raw materials is determined by the demands of the production process and not by market desires.

Novitasari (2022) stated that organizations or companies usually store hundreds to thousands of items, both small (screws, bolts, stationery) and large, such as construction tools, machines, and vehicles. The type of business determines the number of items stored. For example, a manufacturing company stores raw materials, spare parts, semi-finished goods, and finished goods. Whereas in a service company, supplies may be used as part of the service delivery system (e.g., disposable equipment for a hospital operation), or part of a tangible component of the service itself (e.g., brochures for a car insurance policy). Inventory is a stock or warehouse of goods that are stored and will be used to fulfill certain purposes, for example: for use in the production/assembly process or for resale (Stevenson, 2018). Inventory can be raw materials, auxiliary materials, goods in process, finished goods, or spare parts. A quantity of inventory that is too large will result in inventory costs, but if the quantity of inventory is small it is likely to result in an inventory shortage.

There are several factors that inventory management takes into account and can affect the company's inventory levels Zainul (2019), such as: (1) The amount of funds available, the availability of funds owned are very influential priorities for purchasing supplies, what items are urgent to buy and what items are pending can be postponed; (2) Lead time, the waiting time for the goods ordered until the goods are received; (3)

Frequency of use, the more often it is used, the smaller the available inventory; (4) Inventory durability, supplies that have weak durabilities such as fruit, meat, and similar goods must be removed/sold/used quickly.

When looking at the type of inventory, several factors influence each inventory type, such as: (1) Raw materials, Raw materials, or ingredients can be influenced by the nature of the raw material, seasonal or not, perishable quickly or not. Apart from that, production estimates, availability of goods supplied, production scheduling, and purchasing also affect inventory raw materials; (2) Goods in process, Goods in process, or semi-finished goods are goods resulting from material production standards but still not fit for sale. This work in process can be affected by the length of production time from when raw materials begin to be processed until they become finished goods; (3) Finished goods, finished goods are goods in process that have been completed and are ready for use for sale. These finished goods can be affected by sales. The more sales, the less finished goods are stored.

Companies can set up facilities that focus on products only with standardization and quality control effective. An organization that produces the same light bulbs, or hot dogs every day can arrange the facilities around the product. An organization has the inherent ability to set standards and maintain a certain quality, which is inversely proportional to the organization producing unique products every day, such as printing or public hospitals.

Quality control is responsible for ensuring that the quality of the product and its components meets specified standards. This quality control function must be implemented in a total and integrated manner and is referred to as an integrated quality control step (Total Quality Control). Materials or components received from external suppliers must be checked and tested for quality before processing (phase incoming quality control). The quality control step is to ensure that every product made is following what is requested by the user. This concept is commonly known as fitness for use (Novitasari, 2022).

Novitasari (2022) also explains that inventory control here is to guarantee that products are always available at all times to meet customer demand. This inventory control function must not only be applied and aimed at final products (finished goods) but also at raw materials or semi-finished materials. Inventory planning and control must strike a balance between the risk of holding too little inventory and the possibility of a stock-out and the amount of investment that is stalled/stopped due to too large an inventory.

Starting from the owner who likes Japanese food and cuisine, especially suki and grill dishes. He has tried almost all the restaurants that sell suki in Bandung. From the results of comparing almost all suki & grill restaurants in Bandung, try making your recipe to save on expenses for eating suki & grill. Considering how unpleasant it is to eat suki at home, in the end, every time I make suki dishes I always invite friends to eat at home and they respond that suki and grills made at home are worth selling because the taste is not much different from the suki and grills found in restaurants around Bandung. Raya. Armed with the opinions of these friends, I was given the courage to open a Suki & Grill outlet called Suki Muchu. Muchu itself means "addicted" which is located in Jatinagor Town Square.

In running the Suki Muchu restaurant business, several problems stand out, namely regarding the supply and quality of raw materials. Inventory is very important in a production process, sometimes the supply of the main raw material, namely beef, is too much, and often there is a shortage. Good inventory must be compatible or there should not be too big a gap between demand and supply. The second problem is

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regarding the quality of raw materials, the quality of which is not suitable or not the same as expected by the Suki Muchu Restaurant, which still happens.

Based on the background of the problem that has been described, this research aims to find out how to control the supply of raw materials at the Suki Muchu Restaurant and how to control the quality of raw materials at the Suki Muchu Restaurant.

METHODS

In this research, the author used a descriptive analysis method. Analysis is used to describe information that can be extracted from comprehensive data by describing the data in various ways. Several methods used in the descriptive analysis method include presenting data using tables and graphs, explaining and summarizing data related to concentration measures, and data variations or forms of data distribution. This descriptive analysis is used because the researcher wants to obtain an overview of each unit of analysis on the data of interest. The data that will be used in this research is quantitative data or data that is measured on an interval scale and a ratio scale. The descriptive analysis method in this research will analyze: (1) Control of raw material supplies (X1); (2) Control of raw material quality (X2).

Suliyanto (2018), states that data is the raw material for information, so information is the result of data processing which can be used to increase knowledge for the recipient." In this research, the type of data used is internal data. Internal data is data obtained or sourced from within a company so that the information obtained does not go through intermediaries. The data used in this research are primary data and secondary data.

The location of this research was carried out at the Suki Muchu Restaurant in Jatonangor, Bandung Regency, West Java 40275. This research provides information about company data, especially in the production sector. The respondents of this research are 35 production employees who are directly related to the production process, so this research uses population data because the number of respondent data is only small and under 100.

RESULTS AND DISCUSSION

The results of this research are an illustration of the results of research data to expand the discussion, through interviews that are delivered, and the results of respondents can be known regarding responses to the variable statements given. To make it easier to interpret all variables, a method was carried out, namely categorizing the respondents' response scores using the actual score method which will later be depicted on a continuum line. To find out the overall response from employee respondents regarding raw material inventory control, you can see the results of the recapitulation of respondents' responses in the table:

Table 1. Recapitulation of Respondents' Responses to Statements Regarding Raw Material Inventory Control

Questions	Alternative Answers					Actual Score	Ideal Score	%	Average	Category
	SA (5)	A (4)	QA (3)	DA (2)	SD (1)					
P1	0	8	8	17	2	92	175	52,6	2,63	Quite Good
P2	0	2	11	14	8	77	175	44	2,2	Not Good
P3	1	4	22	7	1	103	175	58,8	2,94	Quite Good
P4	1	2	25	7	0	106	175	60,6	3,02	Quite Good
P5	1	11	7	15	1	101	175	57,7	28,8	Quite Good
P6	0	3	7	17	8	75	175	42,8	2,14	Not Good
P7	0	14	9	10	2	105	175	60	3	Quite Good
P8	0	11	19	5	0	111	175	63,4	3,17	Quite Good
P9	0	19	16	5	0	134	175	76,6	3,83	Good
P10	0	15	18	1	0	102	175	58,3	2,91	Quite Good
P11	0	5	11	12	7	84	175	48	2,4	Not Good
P12	0	12	11	10	2	103	175	58,8	2,94	Quite Good
Total						1.193	2.100	56,80	59,98	

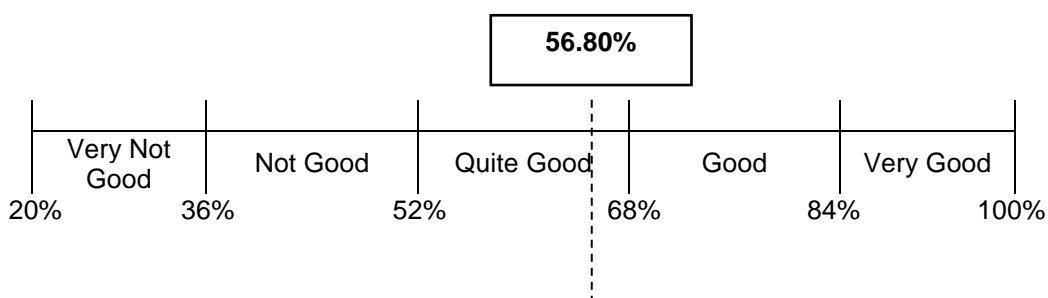Source: Data that has been processed (2022)

Overall, from the table, a total score of 1193 was obtained from the ideal score of 2100 so that a percentage value of 56.80% was obtained, which was then entered into a continuum line with the following measurements:

Maximum index value = 5 x 12 x 35 = 2100
Minimum index value = 1 x 12 x30 = 420
Interval distance = (Maximum Value – Minimum Value: 5)
= (2100 – 420): 5
= 336
Score Percentage = [Total score : Maximum value] x 100%
= (1193 : 2100) x 100%
= 56.80%

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Figure 1. Continuum Line for Raw Material Inventory Control Variables
Source: Data that has been processed (2022)

The percentage value obtained is 56.80% when referring to the assessment criteria in the quite good category, so it can be seen that the Control of Raw Material Inventory at Suki Muchu Restaurant is considered quite good. This research is in line with research by Hidayat et al. (2019) with the results of controlling the supply of potato and curly potato raw materials at PT. Surya Indah Food Multirasa can reduce total inventory costs so that the costs incurred by PT. Surya Indah Food Multirasa has become more economical.

**Table 2. Recapitulation of Respondents' Responses to Statements Regarding Raw Material Quality Control**

Questions	Alternative Answers					Actual Score	Ideal Score	%	Average	Category
	SA (5)	A (4)	QA (3)	DA (2)	SD (1)					
P1	0	5	11	18	1	90	175	51,4	2,57	Quite Good
P2	0	2	12	13	8	78	175	44,6	2,23	Not Good
P3	0	19	16	0	0	124	175	70,8	3,54	Good
P4	0	4	24	7	0	102	175	58,3	2,91	Quite Good
P5	0	5	24	6	0	104	175	59,4	2,97	Quite Good
P6	1	11	10	12	1	104	175	59,4	2,97	Quite Good
P7	0	13	17	5	0	113	175	64,6	3,23	Quite Good
P8	0	15	14	6	0	114	175	65,1	3,26	Quite Good
P9	0	3	11	15	6	81	175	46,3	2,31	Not Good
P10	1	17	19	3	0	136	175	77,7	3,88	Good
Total						1.046	1.750	59,77	29,87	

Source: Data that has been processed (2022)

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Overall, from the table, a total score of 1046 was obtained from the ideal score of 1750 so that a percentage value of 59.77% was obtained, which was then entered into a continuum line with the following measurements:

Maximum index value = 5 x 10 x 35 = 1750
Minimum index value = 1 x 10 x 35 = 350
Interval distance = (Maximum Value – Minimum Value: 5)
= (1750 – 350): 5
= 280
Score Percentage = [Total score : Maximum value] x 100%
= (1046: 1750) x 100%
= 59.77%
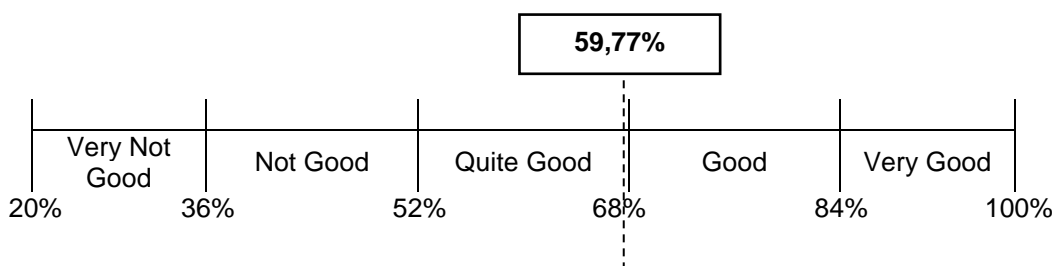
Figure 2. Raw Material Quality Control Continuum Line
Source: Data that has been processed (2022)

The percentage value obtained at 59.77% refers to the assessment criteria that are included in the Fairly Good category, so it can be seen that the Quality Control of Raw Materials at Suki Muchu Restaurant is considered quite good. This is following research by Erdi and Haryati (2023) which states that there is a positive and significant relationship between the quality of raw materials and product quality.

CONCLUSION

Raw material inventory control at the Suki Muchu Restaurant shows that the overall employee response results are in the quite good category. The most prominent indicator in the Raw Material Inventory Control variable is that the prevention of a lack of raw materials can be done well. Meanwhile, the indicator that is considered deficient in this variable is planning for the use of raw materials that are not following the production schedule determined by the company, thereby hampering production process activities. Control of the quality of raw materials at the Suki Muchu Restaurant shows that the overall response from employee respondents is in the quite good category, with the most prominent indicator being that they have planned anticipation in case the quality of goods is not good. Meanwhile, the indicator that is considered lacking in this variable is the lack of inspection of the products produced so that they do not comply with the targets implemented.

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