



The Impact Of Just In Time Purchase System Implementation In Inventory Cost Efficiency. (Case Study On CV. Prima Jaya In Sidoarjo)

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Abstract. *The development in the business world with sharp competition makes companies have to think more or review their business strategies. Improvements in all areas are very important in the development of today's business world, such as increasing productivity, efficiency and service, all of which have become the key to increasing company excellence. To increase efficiency in purchasing activities can be achieved in many ways, one of which is the Just In Time purchasing system. Just In Time is a method that is essentially to reduce waste through purchases in the right amount and time supported by the best quality. According to the results of the discussion that has been carried out, it can be concluded that the factors contained in the Just In Time purchasing system can be applied at CV Prima Jaya because its application can make inventory costs more efficient. In addition, there were also obstacles to quantity, quality, and suppliers. All of that can be overcome by maintaining good relations with suppliers. The implementation of this Just In Time purchasing system cannot be done directly but must be gradual.*

Keywords: *Just In Time purchasing system, Efficiency, Purchasing System.*

1. INTRODUCTION

Background

The advancement of technology, the advancement of information delivery and communication and also the advancement of transportation make the distance between countries in this world no longer meaningful. This has led to the emergence of free competition in various fields globally. Global competition has become the focus and target in achieving the goals of every company today.

The wave of economic globalization has created greater business challenges, namely increasing competition and increasingly knowledgeable customers. This situation encourages companies to be able to process the available potential more effectively and efficiently in producing high-quality products, low costs, and on-time delivery.

One way to achieve efficiency is to apply the Just In Time method in all its activities. According to Supriyono (1999: 65), Just In Time is a philosophy that focuses on activities required by other internal segments in an organization. Thus, any activity or function that does not provide added value must be eliminated. According to Blocher (2000: 113), Just In Time is a comprehensive production system and inventory management system where materials and spare parts are purchased and produced as much as needed and used at the right time in each

stage of the production process. By implementing this system, companies will be able to reduce waste that occurs, especially in inventory management.

The Just In Time system can be applied in various functional areas of a company, namely purchasing, production, and distribution activities. Purchasing or procurement activities in a company are one of the main activities that occur routinely. As a routine activity, the opportunity for waste to occur is very large. For this reason, Just In Time in purchasing activities will try to reduce or even eliminate all kinds of activities that do not add value. Just In Time in purchasing activities or what is often called Just In Time Purchasing emphasizes purchasing inventory at the right time and the right amount so that the inventory can be produced immediately to meet demand. So that if the waste that occurs in these activities can be eliminated, efficiency can be increased and related costs can be reduced and ultimately can increase the company's net profit.

CV Prima Jaya is a company engaged in manufacturing, which is related to the metal goods industry. This company produces Material Handling Equipment. From the results of the inventory cost analysis issued by CV Prima Jaya in 2006, it turned out to be quite large so that it could affect the company's income in achieving high profits, this is because the company still uses traditional methods in calculating inventory costs.

In relation to the description above, the researcher is interested in conducting research on the Influence of the Implementation of the Just In Time Purchasing System on Inventory Cost Efficiency at CV. Prima Jaya in Sidoarjo.

Theoretical Basis

Definition of Just In Time

Just in time was first discovered by Taiichi Ohno which was applied in the production system of Toyota Motor Company in Japan. The main concern that was emphasized at that time to implement just in time was to minimize all forms of waste (eliminate of waste). Because of his success in implementing just in time, Taiichi Ohno was given the title of Father of Just In Time.

Basically, the meaning of just in time is right on time. The term right on time is used to indicate that a process can produce products in quantities that meet customer needs at the right time.

The definition of just in time according to experts, although expressed in different words, contains the same meaning. The differences in each definition of these experts are due to the broadening of each person's views on the meaning of just in time.

In his book, Blocher (2000: 113) states that the just in time system is a comprehensive production system and inventory management system where materials and spare parts are purchased, then produced as much as needed at the right time in each production process.

According to Hansen & Mowen (1997: 161), the definition of just in time is a demand pull system that aims to eliminate waste by producing a product only when needed and only in the quantity requested by customers.

Meanwhile, according to Supriyono, (1999: 65) said that just in time is a philosophy that focuses on activities required by other internal segments in an organization.

The ideas that support just in time are as follows:

- a) Simple is better
- b) Emphasis on quality and continuous improvement.
- c) Reducing inventory that is a source of waste and hidden bad work.
- d) Any activity or function that does not add value must be eliminated.
- e) Goods are produced only when needed.
- f) Workers must have multiple skills and participate in improving product efficiency and quality.

To ensure that components or materials are available when needed, a kanban system is used. The kanban system Hansen, Don R., Mowen, Maryanne M. (1997:402) is: "An information system that controls production through the use of signs or cards".

The kanban system uses three cards, namely:

- 1) Withdrawal kanban
- 2) Production kanban
- 3) Vendor kanban

In the just in time concept, Henry Simamora, (1999:96) states that there are four aspects in the just in time concept, namely:

- 1) Eliminating all activities that do not provide added value
- 2) High commitment to quality doing everything right from the start
- 3) Continuous improvement efforts in the efficiency of company activities
- 4) Emphasis on simplifying and increasing the visibility of value-added activities

Benefits of Just In Time (JIT)

The benefits offered by implementing JIT are:

- a. Reducing raw material inventory by selecting in purchasing, in addition to reducing inventory of goods in process, and finished goods

- b. Reducing the need for space and space
- c. Improving product quality and reducing rework costs
- d. Reducing procurement costs
- e. Reducing waiting time
- f. Encouraging the creation of good relationships with suppliers.

The benefits offered by implementing the JIT system are very diverse. Because of the diverse benefits that can be obtained, the JIT system is now widely used by companies that want to achieve profits and product competitiveness in facing increasingly global competition today.

Goals of Just In Time (JIT)

To achieve optimal JIT implementation, it is necessary to know the goals to be achieved from JIT. The goal of just in time according to Blocher (2000: 113) is to produce and send products when they will be sold with a certain profit. The aim of JIT according to Gaspertsz (2000: 38) is to eliminate waste through continuous improvement.

According to Hay (1988: 9), just in time manufacturing has three main objectives, namely:

- 1) Improving the organization's ability to compete with others in the long term.
- 2) Improving efficiency during the production process
- 3) Reducing waste of materials, time and effort.

This data helps to reduce costs.

While the objectives of just in time according to Supriyono (1999: 141-143) are as follows:

- 1) Minimizing ordering costs and storage costs.
- 2) Just in time works on time.
- 3) Avoiding congestion / production stoppages and increasing process reliability.
- 4) Just in time gets cheap prices
- 5) Anticipating future price increases

Just In Time Principles

The principles of just in time in general include:

1. Maintaining long-term emphasis
2. Carrying out production according to demand (pull production)
3. Trying to keep the production schedule as stable as possible
4. Continuously improving the flow of activities with a process orientation.
5. Striving for quality perfection

6. Involving employees
7. Cooperating with suppliers
8. Improving product design

Advantages and Disadvantages of Just In Time According to Krajewsky & Ritzman (1993:749), the advantages of implementing just in time are:

1. Reducing investment in raw material inventory, goods in process and final products.
2. Reducing lead time, setup time
3. Increasing labor productivity
4. Improving product quality
5. Reducing waste
6. Simplifying the production process such as reducing workers who repeat the same process by increasing work participation.
7. Creating a more flexible system.

Every advantage must have its disadvantages. Just in time has the following main disadvantages:

1. Cultural differences in each organization that vary in each company.
2. Traditional differences that say that in manufacturing with large quantities can help during bad times.
3. Differences in the implementation of just in time because it was basically founded in Japan so that there are differences in implementing it in each country.
4. Loss of group autonomy
5. Just in time success varies from industry to industry and is therefore not universally accepted.
6. Implementing just in time means changing the entire organization.

Just in time purchasing system (Just In Time Purchasing)

Purchasing activity is a very important activity in procuring materials to meet the needs of the production process. The purchasing department that carries out this activity is responsible for the quality of raw materials, prices, and timely delivery according to the company's needs.

Meanwhile, according to Gasperzs (2001: 37) just in time purchasing is a management philosophy in making purchases of goods so that they are on time according to the right amount and time so that the goods can be received immediately to meet demand or for use.

According to A. Anshari & B. Modarres (1990: 102 - 109), the main activities in the JIT purchasing system are:

- a) Buying in lots (lot size)
- b) Few suppliers
- c) Supplier selection and evaluation
- d) Quality inspection
- e) Design specifications.

So in general the just in time purchasing system is a system where the company makes purchases in the right amount, at the right time, and in the right place according to demand which involves long-term cooperation with suppliers.

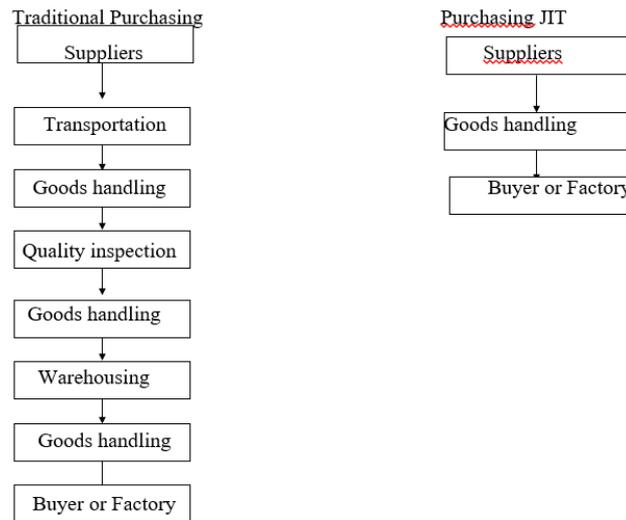
The just in time purchasing system assumes that inventory is a waste in terms of quality and cost, including storage costs consisting of maintenance costs, and investment. Thus, inventory in the just in time purchasing system can no longer be tolerated. The inventory must be eliminated.

Supriyono (1999:68) also explains that the JIT purchasing system can reduce the time and costs associated with purchasing activities by:

- 1) Reducing the number of suppliers and as a result, the company can reduce the resources devoted to negotiations with its suppliers.
- 2) Reducing or eliminating the time and costs of negotiating with suppliers. This is because in JIT long-term agreements can be made regarding purchasing requirements, including quality and possibly price, with its suppliers.
- 3) Having buyers or customers with an established purchasing program. An established purchasing plan by buyers or customers can provide information to suppliers regarding quality and delivery requirements.

Changes in activity that occur in the flow of purchasing goods until their use between the traditional purchasing system and the just in time purchasing system are shown in the picture below:

Picture Of Traditional Purchasing Systems And Jit Purchasing Systems



Source: Supriyono (1999 : 69)

Factors of Just in Time Purchasing System

According to Anshari and Modarres (1990: 52), operational factors in the implementation of the Just in Time Purchasing System are:

- 1) Understanding the philosophy of the Just in Time Purchasing System Included in the philosophy of the Just in Time Purchasing System are:
 - a) Purchase in lots (lot size)
 - b) Number of suppliers
 - c) Long-term relationships
 - d) Commitment and support from suppliers
- 2) Control of the transportation system
- 3) Efficiency in handling materials and their acceptance procedures
- 4) Determination of the schedule of raw material requirements and production schedules given to suppliers.

Characteristics of the Just In Time Purchasing System

The Just in Time Purchasing System has characteristics that are distinguished based on each subject of its view, be it in terms of quality, quantity, delivery and so on. Gaspertz (2001: 49), states the characteristics of the Just in Time Purchasing System which are shown in the table

Table Characteristics Of The Just In Time Purchasing System

No.	Description	JIT Characteristics
1.	Quality	<ul style="list-style-type: none"> • Minimum specifications • Suppliers help to meet quality requirements • Foster close relationships between buyers and suppliers through quality control teamwork • Suppliers are encouraged to use process controls rather than relying on inspection.
2.	Quantity	<ul style="list-style-type: none"> • Stable quantity levels as desired • Deliveries in smaller lots with greater frequency • Long-term contracts such as using Blanket Purchase Order (BPO) systems • Less paperwork • Deliveries can vary but remain consistent for the overall contract form • Suppliers are encouraged to pack the right quantities • Suppliers are encouraged to reduce their production lot sizes.
3.	Shipping	Scheduled delivery using a type of transportation that has been contracted for the long term.
4.	Supplier	<ul style="list-style-type: none"> • Building relationships with fewer suppliers (single suppliers) in close geographic locations • Actively using value analysis to obtain desired suppliers and maintain competitive prices. • Grouping suppliers • Establishing repeat business relationships with the same suppliers • Suppliers are encouraged to develop just in time in their purchasing activities to suppliers

Source : Gaspertz (2001 : 49)

Partnership or Supplier

In a just in time purchasing system, a long-term partnership relationship between suppliers and buyers is very important. This is one of the success factors in implementing a just in time purchasing system. The partnership relationship aims to:

1. Eliminate unnecessary activities, such as checking and receiving orders that are sent
2. Eliminate inventory in the factory
3. Eliminate inventory in transfers
4. Eliminate bad suppliers

The steps that need to be taken to select suppliers are as follows:

a. Selecting and evaluating suppliers

In selecting, many companies use different criteria from each other. However, it is necessary to pay attention to important criteria in selecting suppliers, including:

- General reliability of prospective suppliers
- Buyer relationships with prospective suppliers
- Price structure

- Quality of products produced
- Delivery performance

b. Negotiating with suppliers

- Relationships with Suppliers

1) External relations

Some of the main principles that need to be considered in relations with external suppliers are:

- a) Suppliers must be treated as business partners
- b) The JIT philosophy encourages a commitment to long-term and closer relationships with fewer suppliers
- c) Making direct contact with suppliers to prevent further problems
- d) Once a long-term relationship has developed, the company that has implemented the JIT system can invite its suppliers to also implement the JIT concept.

2) Internal Relations

It is necessary to pay attention to the form of communication and information links that concern the following:

- a) Material planning
- b) Production schedule
- c) Design engineering
- d) Customer service or sales
- e) Accounting
- f) Personnel department

c. Supplier Value Analysis

Value analysis is a creative approach to identifying and eliminating unnecessary costs from products and their production. The principle of value analysis is that each product is broken down into components, then the value provided by each component to the overall production is analyzed. Value analysis provides the same or better performance at a lower cost level, without reducing the quality and reliability of the product. Using the basic principles of value analysis on products, the principles of value analysis can also be applied to material suppliers, by using a checklist where the purchasing department must concentrate on the following:

- 1) The purchasing department must be sure that material suppliers understand the principles of Just In Time.
- 2) Provide knowledge related to technical value analysis and its application to suppliers.
- 3) Create a list that makes it easy for suppliers to contribute ideas in value analysis.
- 4) Involve suppliers in making material purchasing decisions.
- 5) Determine together with suppliers regarding the attributes that need to be analyzed from suppliers.
- 6) Rate suppliers based on the value analysis.
- 7) Select suppliers based on the highest value achieved in the value analysis.
- 8) Give appropriate recognition to suppliers for their assistance in supporting the just in time purchasing system.
- 9) Always monitor supplier performance based on the value analysis that has been agreed upon together.

d. Inventory Cost

Hansen and Mowen (1997: 750) classify inventory costs into three, namely:

1. Ordering costs
2. Setup costs
3. Carrying costs

JIT is an approach to minimizing total storage and preparation costs that is very different from the traditional approach. The traditional approach recognizes setup costs and then determines the order quantity that is the best balance of the two cost categories (Economic Order Quantity (EOQ)). On the other hand, JIT does not recognize setup costs or ordering costs, but instead JIT tries to reduce these costs to zero. If setup costs become insignificant, then the remaining cost to be minimized is the carrying cost, which will be done by reducing inventory to a very low level.

e. JIT Measurement Model in EOQ Environment

According to the EOQ model, to determine the total cost which is the sum of ordering cost and carrying cost, use the formula (Schinerjans, 1993: 38):

$$\text{EOQ (Q*)} = \sqrt{\frac{2 \cdot O \cdot D}{C}}$$
$$\text{EOQ Total Annual Cost (T*)} = \text{Ordering Cost} + \text{Carrying Cost}$$
$$= \frac{D}{Q^*} \cdot O + \frac{Q^*}{2} \cdot C$$

Where :

- Q^* = Number of units ordered each time an order is placed
 O = Ordering cost each time an order is placed
 D = Demand in units
 C = Storage cost per unit
 T^* = Total ordering cost

In conclusion, the use of the EOQ model will be derived on the basis of the desired JIT operation. So, for conditions where the environment is still EOQ, then :

$$\text{JIT/EOQ Total Annual Costs } (T_{\text{JIT}}) = \sqrt{\frac{Q^*}{n}} \cdot \sqrt{\frac{1}{n} \cdot \frac{Q^*}{n} \cdot C} + \frac{Q^*}{n} \cdot O$$

Where:

- Q_n = Number of order units per “n” deliveries in the JIT system
 n = Number of deliveries during 1 year
 Q^* = Number of order units each time an order is placed in the EOQ system
 T^* = Total ordering cost in the EOQ system
 q = Number of units per delivery
 T_{JIT} = Total ordering cost in the JIT system

Companies that have competence in the fields of marketing, manufacturing and innovation can make it as a source to achieve competitive advantage (Daengs GS, et al. 2020:1419). The research design is a plan to determine the resources and data that will be used to be processed in order to answer the research question. (Asep Iwa Soemantri, 2020:5). Standard of the company demands regarding the results or output produced are intended to develop the company. (Istanti, Enny, 2021:560). Time management skills can facilitate the implementation of the work and plans outlined. (Rina Dewi, et al. 2020:14). Saat mengumpulkan sumber data, peneliti mengumpulkan sumber data berupa data mentah. Metode survei adalah metode pengumpulan data primer dengan menggunakan pertanyaan tertulis (Kumala Dewi, Indri et al., 2022 : 29).

2. RESEARCH METHOD

Research Approach

The approach used in this study is a qualitative approach, namely a research model that presents fairly long descriptions scientifically. A qualitative approach is an approach that seeks to find out or answer various questions about human views (a group of people) on a problem. This research is preceded by observation of the research object and the results obtained will be compared with existing theories with the aim of finding a solution to the problem and drawing conclusions.

The method used in this study is the case study method. In general, this case study is a study that seeks to answer questions, where researchers only have a very small opportunity or no opportunity at all to control the event.

Scope of Research

This research was conducted at CV Prima Jaya using purchasing cost data, storage cost data, and inventory usage data. The three data are data from 2006. This data was taken due to time constraints and access to data sources.

This research will be limited to the purchasing section and the author only takes the main raw material, namely steel plate. Because the need for steel plates in the manufacture of Material Handling Equipment reaches 45% of the need for other materials used to apply the factors contained in the JIT purchasing system in order to achieve efficient inventory costs.

Research Design

In compiling a case study, according to Yin (1993: 29) there are five very important components, namely:

1. Research questions
2. Research proportion
3. Unit of analysis

The unit of analysis used as the object of research is:

- a. Case study of research on the purchasing and production departments of CV Prima Jaya.
 - b. Order cost data or purchasing costs
 - c. Storage cost data
 - d. Inventory usage data
4. Logic that links data to proportions
 5. Criteria for interpreting findings

Types and Sources of Data

The types of data used are:

1. Qualitative data, namely the condition and general description of the object being studied
2. Quantitative data, in the form of data and records related to the object being studied.

While the data sources come from:

a. Primary Data

Primary data sources are obtained from direct interviews or interviews with the head of purchasing and the head of production.

b. Secondary data

Secondary data is data obtained from company documents and related literature.

3. RESULTS AND DISCUSSION

Research Results

a. Manufacturing System

The production process at CV Prima Jaya is one of the important concerns in the company's strategy. The purpose of designing the process at CV Prima Jaya is to find a way to produce goods that meet consumer desires and product specifications that are within cost constraints and other managerial constraints. The manufacturing system used at CV Prima Jaya seen from the strategy of responding to consumer demand is a discontinuous production process (process focus). This system can be seen from the product design and several standard materials in the inventory system and from previously made products.

The process of producing products is specific and adjusted to the orders of each customer. The customer cycle begins when the customer specifies the product ordered, then continues with a price offer and also determining the delivery time based on customer request.

When the proposal regarding the price offer is agreed upon, the company will start the product manufacturing process and then send it to the customer. In process focus, the company and the customer discuss finding alternatives to the possibility of reducing costs, reducing delivery times or meeting the actual needs of customers.

b. Purchase of Materials and Components

The main purpose of purchasing materials and components is to maintain continuity from suppliers to meet the schedule. Providing materials and components that meet or exceed the specified quality level to the manufacturing department to be processed into final products to meet customer demand, obtaining the required items at the lowest possible cost but still consistent with quality requirements, delivery times and other performance.

The purchasing system used in this company involves two things, namely the purchase of the main raw material, namely Steel Plate and the purchase of supporting raw materials. Purchases of raw materials can be submitted by the head of the purchasing department with the authority of the head of the financial department through the approval of the director for purchases in sufficient quantities for the company.

Purchases are made based on the production capacity owned by the company. Based on data obtained from the company and a description of the production process, production capacity can be determined, which is then used to determine the quantity of goods purchased.

Purchases are made in different quantities and supplied by the manufacturer as inventory, with several deliveries. There is no purchase agreement contract with suppliers so that price changes can occur at any time based on increases in raw material prices.

c. List of Raw Material Suppliers

The suppliers mentioned below are not fixed suppliers, it's just that the company is used to buying raw materials in these places. The following is a list of suppliers of main raw materials and supporting raw materials used by CV Prima Jaya:

Table Supplier List

No.	Nama Pemasok	Material	Lokasi Pemasok
1.	PT. Matahari Yuda Perkasa	Iron / Steel Plate	Surabaya
2.	PT. Timur Jaya Steel	Iron / Steel Plate	Surabaya
3.	PT. Sentral Besi	Iron / Steel Plate	Surabaya
4.	Toko Asean	Bearing, Seal	Sidoarjo
5.	Toko Sakura	Bearing, Seal	Surabaya
6.	Toko TNT	Chain	Surabaya
7.	PT Denko Wahana Sakti	Wheel	Surabaya
8.	UD. Enam Jaya	Wheel	Surabaya
9.	UD. Rangka Jaya	Wheel	Surabaya
10.	CV. Karya Subur	Paint	Surabaya
11.	CV. Aneka Raya	Hydraulic Oil	Surabaya
12.	PT. Sentosa Flowtech	Hard Chrome Axle	Surabaya
13.	PT. Sutindo	Hard Chrome Axle	Surabaya

Source: Company Internal Data

d. Inventory Cost

Inventory cost in CV Prima Jaya includes:

- a. Ordering cost
- b. Carrying cost

Discussion

In relation to the implementation of the just in time purchasing system, for companies that have not implemented JIT itself, many obstacles are found. The implementation of the just in time purchasing system requires an accurate production planning process as well as good communication and relationships with suppliers and their participation in the implementation of JIT.

In technologically advanced countries, the manufacturing environment for traditional, large-batch, and high-setup cost companies has changed a lot in the last decade. Companies in these countries offer high-quality, lower-cost products with specialized features, creating very heavy pressure on traditional companies with high set-up costs to be able to improve quality and also to reduce their total costs.

Therefore, the discussion will be carried out by comparing the EOQ that has been implemented by the company with the just in time purchasing system in increasing inventory cost efficiency at CV Prima Jaya.

Factors of Just In Time Purchasing System

Implementing JIT purchasing system is the same as simplifying the purchasing system. Because the company will simplify the existing purchasing system by eliminating non-value-added activities with operational factors in the JIT purchasing system. Based on the theoretical basis, there are four operational factors, namely:

1. Understanding the philosophy of the just in time purchasing system, which consists of:
 - a. Purchase in lots (lot size)
 - b. Number of suppliers
 - c. Long-term relationship
 - d. Commitment and support from suppliers
2. Control of the transportation system
3. Efficiency in handling materials and their acceptance procedures
4. Determination of the schedule of raw material requirements and production schedules given to suppliers.

The following will discuss one by one the five factors above and then will be adjusted to the current state or situation of the company.

Understanding the Philosophy of the Just In Time Purchasing System

Included in the understanding of the philosophy of the JIT purchasing system are:

- a. Purchase in lots (lot size)
- b. Number of suppliers
- c. Long-term relationship
- d. Commitment and support from suppliers

Transportation System Control

The main thing in this transportation system is the commitment of suppliers and shipping services to make deliveries on time. If the delivery is late, the company's production process will also be hampered. As a result, the response to consumers will also be late.

So far, the delivery schedule for raw materials has been determined by the supplier. The company will estimate when the raw materials will arrive at its warehouse. Although the supplier is located in Surabaya, which is close to the company's location, the possibility of the company running out of main raw materials is very possible. If the steel plates run out, the company cannot run its production process. The number of steel plates purchased will affect the type of transportation used and the transportation costs.

In the JIT purchasing system, the company determines when the steel plates arrive at the factory, not the supplier. The supplier will be notified or informed when production will start. So that the supplier can estimate the time to make the delivery so that the raw materials can arrive on time.

Efficiency in Material Handling and Receiving Procedures

After the raw materials are sent by the supplier, the raw materials immediately undergo the production process at the company's factory. The company no longer needs to carry out acceptance inspection activities in the form of checking the quantity and quality of raw materials. Because the inspection has been carried out by the supplier. High trust between the company and the supplier is the main capital in making long-term contracts. The advantage that can be taken by the company is the efficiency of inspection time.

To carry out the activity of moving raw materials from the truck, the company needs 30 minutes and the inspection activity will take 1 hour (60 minutes). So the total time required is 90 minutes. If the inspection activity has been carried out by the supplier, the company can save 90 minutes.

Determination of the Raw Material Needs Schedule and Production Schedule Given to Suppliers.

To find out the smoothness of the delivery of raw materials, suppliers must know the schedule of the company's steel plate needs. The company produces based on orders. So the amount of steel plate sent is relatively stable. This makes it very easy for suppliers to send their raw materials. The average need for steel plates per month is 4,166.67 kg, so that suppliers send that amount of raw materials every month. But sometimes the company receives orders

that exceed the usual amount. That means the need for raw materials will also increase. If there is a change in the need per month, the purchasing staff can call or fax the change in the need for raw materials to the supplier.

To be able to withdraw raw materials, the production department can use a Kanban card. The Kanban card is sent to the supplier. And if the supplier sends raw materials according to the requested quantity, the Kanban card can be used as a delivery document. Thus, the company will save on purchasing documents. According to the payment agreement, the Kanban card can be used as proof of payment. The use of the card is considered very efficient because it can reduce the use of paper in the company's administration.

Supplier Value Analysis

Value analysis is a creative approach to identifying and eliminating unnecessary costs from products and their production processes. So it is hoped that this value analysis can be used to assess the performance of each component related to just in time. Value analysis provides the same or better performance at a lower cost level, without reducing the quality and reliability of the product.

In accordance with the basic principles of value analysis on the theoretical basis, the purchasing department must concentrate on the following:

1. The purchasing department must be sure that material suppliers understand the principles of just in time.
2. Provide knowledge related to value analysis techniques and their application to suppliers.
3. Create a list that makes it easy for suppliers to contribute ideas in the value analysis.
4. Involve suppliers in making material purchasing decisions.
5. Determine together with suppliers regarding the attributes that need to be analyzed from suppliers.
6. Conduct supplier ratings based on contributions from the value analysis.
7. Select suppliers based on the highest value achieved in the value analysis.
8. Give appropriate awards to suppliers for assistance
9. Always monitor supplier performance based on the value analysis that has been agreed upon together.

The Effect of the Just In Time Purchasing System on Inventory Costs

At CV Prima Jaya, the ordering cost for a year is Rp. 27,895,600 (table 4.2). Storage costs are 6% of the price of raw materials and maintenance costs for a year are Rp. 24,000,000 (table 4.3). The need for steel plates for a year is 50,000 kg at a price of Rp. 7,500 /kg, and the percentage of steel plate is 45% of the total inventory.

Simplifying purchasing activities through a factor approach will have an impact on inventory cost elements. What happens to the ordering cost is:

a. Clerical costs

These costs include administrative costs, fax costs, telephone costs:

1. Administrative costs will be reduced due to the use of Kanban cards and long-term contracts.
2. Telephone and fax costs can be reduced because the company cooperates with suppliers. So, by cooperating, telephone and fax costs for orders will be reduced.

b. Transportation costs

Transportation costs of Rp. 7,861,500 can be reduced due to the use of smaller trucks. And the location of the supplier greatly affects the amount of this cost. The closer the supplier is, the less the cost will be incurred for transportation. The existence of purchases with small lot sizes will have an impact on frequent deliveries. This will affect transportation costs. But long-term cooperation contracts will be able to overcome these costs. The Research model or framework is intended to further clarify the essence of the discussion of previous research result and the theoretical basis in the research, including the relationship between influential variables. (Enny Istanti, et al. 2024 : 150) This research will be conducted in three phases : measurement model (external model), structural model (internal model), and hypothesis testing. (Pramono Budi, et al., 2023 ; 970) Melalui proses tersebut, karyawan diberikan pelatihan dan pengembangan yang relevan dengan kinerja pekerjaannya, sehingga diharapkan dapat menjalankan tanggung jawab pekerjaannya dengan sebaik - baiknya. (Abdul Aziz Sholeh et.al. 2024 :82) Memilih merupakan bagian dari suatu upaya pemecahan sekaligus sebagai bagian dari proses pengambilan keputusan. Oleh karena itu dibutuhkan keputusan pembelian yang tepat (Kristiawati Indriana et.al. 2019 : 28) Kerja sama antara pemerintah, industri, lembaga penelitian dan masyarakat sipil dalam merancang menerapkan, Komitmen dan kerja sama yang kuat dari seluruh pemangku kepentingan menjadi kunci keberhasilan upaya - upaya tersebut. (Gazali Salim et al. 2024 : 63) The SERVQUAL model includes

calculating the difference between the values given by customers for each pair of statements related to expectations and perceptions (Diana Zuhro et al. 2024 : 98)

4. CONCLUSION

1. The implementation of the just in time purchasing system at CV Prima Jaya is intended to achieve zero inventory, the company must do it gradually by reducing the lot size of the purchase. The company still keeps inventory, but the amount will decrease little by little so that inventory cost efficiency will be achieved.
2. The factors of the JIT purchasing system that can be applied by CV Prima Jaya are:
 - a) Quality, quality constraints related to the desired raw material specifications can be overcome by means of communication between the company and its suppliers.
 - b) Quantity, reduction in storage costs (carrying costs) is caused by the inventory of raw materials stored in the company in small quantities. To be able to achieve small inventory, the company must be able to buy raw materials in small or small quantities (small lot size). The impact of purchasing in small quantities is that the company must make frequent deliveries but must be in accordance with the company's needs. So that ordering costs will increase. However, the increase in ordering costs can be overcome through long-term contracts with suppliers who are located close to the company. With a long-term contract, the company gets certainty from the supplier regarding good quality, frequent and accurate delivery, and the right order quantity. With small purchases, inventory costs will become more efficient. Inventory cost efficiency is only based on the calculation of one type of main raw material, namely steel plate. Meanwhile, if other raw materials are calculated, it is estimated that the savings that the company can make will be much greater. The JIT purchasing system cannot be achieved in an instant, but the company must do it step by step.
 - c. Suppliers, namely building relationships with fewer suppliers in close locations, using value analysis to obtain good suppliers, grouping suppliers, doing business relationships with the same suppliers, and making system changes that are the opposite of just in time.

5. SUGGESTIONS

1. The company should try to implement just in time purchasing system factors because in addition to being very possible for the company, there are many benefits to be gained, including increasing purchasing efficiency which will have an impact on reducing inventory costs.
2. In order for the just in time purchasing system to run well, the company must assess its suppliers so that the quality of the raw materials is in accordance with the company's wishes. Good communication and relationships are very necessary.
3. For types of materials that only have one supplier, the company should start considering having more than one supplier. This is possible if the supplier cannot send raw materials on time and with good quality, then the company can rely on other suppliers.
4. The company should also assess the shipping company through a value analysis as it did for the suppliers.

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