ANALYSIS OF RAW MATERIAL INVENTORY CONTROL BY EOQ *(ECONOMIC ORDER QUANTITY) METHOD* IN BAKERY FLOWERS

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Abstract - *The purpose of this study was to determine whether controlling the inventory of raw materials in bakery flowers in minimizing costs at the current order quantity is more economical when using the EOQ (Economic Order Quantity) method and in analyzing raw materials at the reorder point (Reorder Point) at the Flower Bakery company. This study uses a descriptive approach with the analytical tool used is the EOQ (Economic Order Quantity) method. Methods of data collection are carried out by observation, interviews, documentation and literature study. The results of this study indicate that the supply of raw materials using the EOQ method is more economical, namely with the purchase of margarine according to company policy of 440 kg while according to the EOQ method of 409 kg, the purchase of granulated sugar according to company policy is 2900 kg while according to the EOQ method it is 9760 kg. So if the company uses the EOQ method on raw materials for margarine, sugar and wheat flour, a total cost savings of Rp 17,563,995 will be obtained. Based on the research results, the company's policy of raw materials at Bunga Bakery is currently not economical and inefficient, because the total costs incurred are greater than using the EOQ method.*

Keywords: *Control of raw materials, Inventory, EOQ Method (Economic Order Quantity)*

Abstract - The purpose of this research is to find out whether the control of raw material inventory at bakery flowers in minimizing the

cost on the number of orders is currently more economical when using the EOQ (Economic Order Quantity) method and in analyzing raw materials at reorder points at bakery flower companies. This research uses descriptive approach with analysis tool used is EOQ (Economic Order Quantity) method. Data collection method is done by observation, interview, documentation and literature study. The results of this study showed that the supply of raw materials using the EOQ method is more economical, namely by purchasing margarine according to the company's policy of 440 kg while according to the EOQ method as much as 409 kg, the purchase of granulated sugar according to the company's policy of 2900 kg while according to the EOQ method of 2740 kg, the purchase of wheat flour according to the company's policy of 10200 kg while according to the EOQ method of 9760 kg. So if the company uses the EOQ method on margarine raw materials, granulated sugar and wheat flour, a total cost saving of Rp 17,563,995 is obtained. Based on the results of the study, with the company's policy of raw materials at Bunga Bakery is currently not economical and not efficient, because the total cost incurred is greater than using the EOQ method

Keywords: *Economic Value Added* (EVA), *Market Value Added* (MVA), and Financial Performance.

I. INTRODUCTION

Companies are generally established to earn profit, in companies that produce products in the form of goods, efforts to earn profit are carried out by processing raw materials into finished goods or semi-finished goods, in contrast to service companies that only provide services to consumers for profit. So in this company the procurement of raw materials is very large influence on the smooth production process.

Production problems are one of the most important issues for the company because production affects the company's profit and objectives. If the production process goes smoothly then the company's goals will be easier to achieve and vice versa, if the production process does not run smoothly it will make it difficult for the company to achieve its goals. While the smooth production itself is influenced by the existing or not available raw materials.

Supplies of raw materials or other goods are available in the market at all times, some must be ordered in advance, and some are even only available at certain times or seasons. If a company only considers the availability of raw materials, they can buy it in large quantities at once. This may get a discount due to the large number of purchases and cheaper freight fares. But this will lead to greater storage costs. Larger storage warehouses are required, greater maintenance and security burdens, more inventory administration, greater insurance expenses, and the cost of borrowing interest or cost of capital on funds embedded in larger inventories. Therefore, considerations are needed in the procurement and storage of raw materials or other materials.

The Company needs a control over its products in maintaining its quality and quantity, in meeting the demands and needs of consumers. Product control activities are very necessary, such as checking the quantity of inventory in warehouses, as well as the selection of defective raw materials so as not to occur unexpected circumstances by the company (Darmawan, 2015).

II. THEORETICAL FOUNDATION

2.1. Joint Control

According to Nilwan (2011) inventory control is an ekgitan to determine the level and composition of raw material inventory and goods produced or production,so that the company can protect the smooth production and sales as well as the needs of peerusahan spending effectively and efficiently.

2.2. Supplies

According to Darmawan (2015) inventory is a number of goods in the warehouse that will be used to fulfill a certain purpose within the company. The company can be raw materials, auxiliary materials, goods in the process, finished goods and spare parts.

Inventory types according to Heizer and Render (2015:554) are asfollows:

A. Raw material inventory has been purchased, but belom processed. These supplies can be used to separate (i.e. filter) suppliers from the production process.

b. Inventory of goods in process (work in process - WIP inventory). Components or raw materials that have gone through some process of change, but have not been completed.

c. MRO (maintenance repair operating). Supplies provided for maintenance repair /operation (MRO) are needed to keep the machine and process productive.

d. Finish good inventory. Products that have been completed and are just waiting for delivery of finished goods can be put into stock because customer demand in the future is unknown

2.3. Raw Material Supplies

According to Assauri (2015:222) raw material inventory (Raw Materials Stock) is the inventory of tangible goods used in the production process,which goods can be obtained from natural sources or purchased from suppliers or companies that produce raw materials for factory companies that use.

2.4. Factors Affecting Raw Material Inventory

According to Ahyari (2014:169) the factors that have an influence on the supply of raw materials will consist of several kinds and will be interconnected with one factor with another. The various factors are as follows:

(1) Estimated use of baha baku. Number of units of raw materials to be used in the production process

(2) The price of raw materials. Price of raw materials to be used in the production process

(3) Inventory costs. Inventory costs, storage costs, inventory teta costs.

(4) Spendingbijksanaan. Spending discretion affects buyer's discretion

(5) Use of materials. As the basis of consideration in the implementation of raw materials.

(6) Waiting time. The grace period between ordering and the arrival of raw materials.

(7) Buyer model. Determine the amount of raw material to be used

(8) Safety supplies. Anticipating the existence of running out of raw materials in the company.

(9) Repurchases. Consider the length of waiting time required.

2.5. Metode Economic ***Order Quantity*** **(EOQ)**

According to Heizer and Render (2011:68) *economic order quantity* (EOQ) is one of the elder and widely renowned inventory control techniques, this inventory control method answers two important questions: when to order and how much to order".

Based on several definitions and concepts *above on economic order quantity* (EOQ), it can be concluded that this method seeks to achieve the lowest level of inventory possible followed by low costs. By using *economic order quantity* (EOQ) method, the company will be able to minimize the occurrence of out of stock, so that it will not interfere with the production process in a company and can save inventory costs, because of the efficiency of raw material inventory in the company.

Raw materials available in ensuring the smooth production process and costs incurred by the company in connection with the company to a minimum, then the actions that need to be done are:

1. Determine the amount of raw materials that are economical (EOQ).
2. Determining *Stock Safety*
3. Orders or purchases of basic materials can not be dating in time so will retreat

III RESEARCH METHODS

In this study the strategy used by researchers is a descriptive strategy with a quantitative approach, because it only describes the data that has been collected as is without intending to make conclusions that apply to the public or generalizations. This research is related to raw material research by analyzing the data that has been applied by the company.

3.1. Data Analysis Unit

According to Hamidi (2005: 75-76) states that the analysis unit is a research unit that can be an individual, group, object or a background of social events such as individual or group activities as a research subject. From how to disclose the data analysis unit by setting the criteria of the respondent, the researcher himself will obtain who and what is the subject of his research. In this case, researchers will try to find the initial informant who is the first to provide adequate information when the researcher initiates data collection activities. The initial informant of this research was the Head of Bakery Flower Production.

Unit (unit) analysis of this research data is the control of raw material inventory in one company as a source of data related to raw material inventory, namely raw material buyer data, raw material buyer frequency data, raw material usage data, storage costs and raw material ordering costs for one year from January 2019 to December 2019.

3.2. Data and Data Retrieval Methods

In this study, the data used by researchers is primary data and secondary data, where the data source is obtained directly by visiting the place to be studied, namely Bunga Bakery and researchers use interview method directly to get the data. And with secondary methods, itobtains additional data through intermediary media or indirectly, both published and not publicly published. Primary data refers to information obtained directly by researchers related to interrelationship variables for a specific purpose of the study while secondary data is data that has been processed by institutions and available so that the data has been published. Secondary data

can be obtained more easily and quickly because it is already available, for example in companies, central bureaus of statistics and government offices.

3.3. Variable Operationalization

According to Sugiyono (2016:59) variables are attributes or properties or values of people, objects or activities that have certain variations set by researchers to be studied and drawn conclusions, and which the researchers will describe are the variables concerned with the EOQ (Economic Order Quantity) method.

1.Ordering cost

According to Heizer and Render (2016:560) is the cost of inventory, forms, order processing, purchase, administrative support, and more. The order fee on Bakery Interest is the cost between the purchase per order.

2.Carrying cost

According to Heizer and Render (2016:559) is the cost associated with storing or carrying inventory during a certain time. Storage costs also cover the cost of obsolete goods and the costs associated with storage.

3.Reorder Point

According to Heizer and Render (2016:567) is a certain time and time a company must place an order for raw materials back or again, so that the arrival of such orders is exactly the end of the raw materials purchased.

IV. RESULTS AND DISCUSSION

4.1. Data Description

In the process of making raw materials used by Bunga Bakery to make bread and sandwiches, the main raw material is needed which is very important in the manufacture of bread and sandwiches as well as additional raw materials as a support for the formation of maximum bread and sandwiches and auxiliary raw materials to beautify the bread and sandwiches with good and impressive results.

In this study, researchers collected data on raw material purchases, frequency of raw material purchases,data on raw material usage from January 2019 to December 2019

4.1.1. Raw Material Purchase Data

The following is the data on the purchase of wheat flour, granulated sugar and margarine raw materials at Bunga Bakery from January 2019 to December 2019 as follows:

Table 4.1. Purchase of Raw Materials in 2019.

Months	Margarine (kg)	Granulated Sugar (kg)	Wheat Flour (kg)
January	30	200	700
February	30	200	700
March	30	200	700
April	30	200	700
May	30	200	700
June	80	500	1800
July	30	200	700
August	30	200	700
September	30	200	700
October	30	200	700
November	30	200	700
December	60	400	1400
Amount	440	2900	10200

Source: Bakery Flowers (2019)

4.1.2 Raw Material Frequency Data

The following data on the frequency of purchases of margarine raw materials, granulated sugar and wheat flour at Bunga Bakery from January 2018 to December 2019 are as follows:

Table 4.2. Frequency of Purchase of Raw Materials

Months	Margarine (times)	Granulated Sugar (times)	Wheat Flour (times)
January	2	23	29
February	2	20	27
March	3	23	30
April	2	21	29
May	2	22	30
June	3	30	29
July	2	21	30
August	2	23	29
September	3	22	30
October	2	21	29
November	2	22	30
December	3	28	29
Amount	28	276	351

Source: Flower Bakery (2019)

4.1.3. Raw Material Usage Data

The following is the data on the use of margarine, wheat flour and granulated sugar in Bakery Flowers from January 2019 to December 2019 as follows.

Table 4.3. Use of Raw Materials

Months	Margarine (kg)	Granulated Sugar (kg)	Wheat Flour (kg)
January	30	200	700
February	27	180	660
March	26	175	630
April	27	180	660
May	30	190	700
June	78	500	1750
July	25	170	600
August	27	180	660
September	28	195	665
October	29	195	680
November	27	180	660
December	55	395	1395
Amount	409	2.740	9760

Source: Bakery Flowers (2019)

4.1.4. Booking Fee

4.1.4.1 Margarine Raw Material Ordering Fee

Based on table 4.5 below, the amount of ordering margarine raw materials for one year is Rp. 420,000. The amount of the booking fee per time booked (per order) is Rp. 15,000

Table 4. The 4th. Margarine Raw Materials Ordering Fee in 2019.

Months	Order Frequency (Times)	Order Fee (RP/order)	Total Cost (RP)
January	2	15.000	30.000
February	2	15.000	30.000
March	3	15.000	45.000

April	2	15.000	30.000
May	2	15.000	30.000
June	3	15.000	45.000
July	2	15.000	30.000
August	2	15.000	30.000
September	3	15.000	45.000
October	2	15.000	30.000
November	2	15.000	30.000
December	3	15.000	45.000
Amount	28	180.000	420.000

Source: Bakery Flowers (2019)

4.1. 4.2. Ordering Cost of Granulated Sugar Raw Materials

Based on table 4.6 below, the amount of ordering raw materials for granulated sugar for one year is Rp. 3,422,400. The amount of the booking fee per time ordered (per order) is Rp. 12,400.

Table 4. 5th. Ordering Cost of Raw Materials of granulated sugar in 2019.

Months	Order Frequency	Order Fee (Rp/order)	Total Cost (RP)
January	23	12.400	285.200
February	20	12.400	248.000
March	23	12.400	285.200
April	21	12.400	260.400
May	22	12.400	272.800
June	30	12.400	372.000
July	21	12.400	260.400
August	23	12.400	285.200
September	22	12.400	272.800
October	21	12.400	260.400
November	22	12.400	272.800
December	28	12.400	347.200
Amount	276	148.800	3.422.400

Source: Bakery Flowers (2019)

4.1.4.3. Wheat Flour Ordering Fee

Based on table 4.7 below, the amount of ordering wheat flour raw materials for one year is Rp. 2,457,000. The amount of the booking fee per time booked (per order) is Rp. 7.000

Table 4.6 Cost of Ordering Wheat Flour Raw Materials in 2019

Months	Purchase Frequency	Order Fee (RP/order)	Total Cost (RP)
January	29	7.000	203.000
February	27	7.000	189.000
March	30	7.000	210.000
April	29	7.000	203.000
May	30	7.000	210.000
June	29	7.000	203.000
July	30	7.000	210.000
August	29	7.000	203.000
September	30	7.000	210.000
October	29	7.000	203.000
November	30	7.000	210.000
December	29	7.000	203.000
Amount	351	84.000	2.457.000

Source: Flower Bakery (2019)

4.1.5 Storage Costs

4.1.5.1 Margarine Storage Costs

Table 4. 7 Cost of Storing Margarine Raw Materials in 2019

Months	Purchasing (kg)	Save Cost (Rp/kg)	Total Cost (RP)
January	30	3.000	90.000
February	30	3.000	90.000
March	30	3.000	90.000
April	30	3.000	90.000
May	30	3.000	90.000
June	80	3.000	240.000
July	30	3.000	90.000

August	30	3.000	90.000
September	30	3.000	90.000
October	30	3.000	90.000
November	30	3.000	90.000
December	60	3.000	180.000
Amount	440	36.000	1.320.000

Source: Bakery Flowers (2019)

Based on the details of storage costs incurred by the company for a year amounting to Rp. 1.320.000. The amount of the cost of storing margarine raw materials perkilogram per year is Rp 3,000.

4.1.5.2 BStorage of Raw Materials for Granulated Sugar

Table 4. 8 Storage Costs of granulated sugar Raw Materials in 2019

Months	Purchasing (kg)	Save Cost (Rp/kilo)	Total Cost (RP)
January	200	1.240	248.000
February	200	1.240	248.000
March	200	1.240	248.000
April	200	1.240	248.000
May	200	1.240	248.000
June	500	1.240	620.000
July	200	1.240	248.000
August	200	1.240	248.000
September	200	1.240	248.000
October	200	1.240	248.000
November	200	1.240	248.000
December	400	1.240	496.000
Amount	2900	14.880	3.596.000

Source: Bakery Flowers (2019)

Based on the details of storage costs incurred by the company for a year amounting to Rp. 3,596,000. The amount of storage cost of raw materials of granulated sugar perkilogram per year is Rp 1,240.

4.1.5.3 BStorage of Wheat Flour **Raw Materials**

Table 4. 9 Storage Costs of wheat flour Raw Materials in 2019

Months	Purchasing (kg)	Save Cost (Rp/kilo)	Total Cost (RP)
January	700	700	490.000
February	700	700	490.000
March	700	700	490.000
April	700	700	490.000
May	700	700	490.000
June	1800	700	1.260.000
July	700	700	490.000
August	700	700	490.000
September	700	700	490.000
October	700	700	490.000
November	700	700	490.000
December	1400	700	980.000
Amount	10200	8.400	7.140.000

Source: Bakery Flowers (2019)

Based on the details of storage costs incurred by the company for a year amounting to Rp. 7.140.000. The amount of storage cost of wheat flour raw materials perkilogram per year is Rp 700.

4.1.6. Analysis of Raw Material Inventory Research Results

4.1.6.1 *Economic Order Quantity* (EOQ) method of margarine raw materials

Table 4.10 Data on The Use of Margarine Raw Materials in 2019

Description	**Year 2019**
Quantity (kg)	409
Price (Rp/kg)	13.000
Total Cost (RP)	5.317.000
Order Fee (RP/order)	15.000
Storage Cost (Rp/kg)	3.000

Source: Bakery Flowers (2020)

From table 4.11 above can be calculated the optimal quantity as follows:

1. Determination of optimal purchasing quantity (EOQ) in 2019

   EOQ = Q* = = = 64 kg $\sqrt{\frac{2\ x\ D\ x\ S}{\text{H}}}$ $\sqrt{\frac{2\ x\ 409\ x\ 15000}{3000}}$

With economic *order quantity* (EOQ) method for each order in order quantity or purchase of margarine raw material of 64 kg.

2. The frequency of ordering margarine raw materials in 2019, are:

   Order frequency = = = 6.39 times $\frac{\text{D}}{\text{Q}}$ $\frac{409}{64}$

So the most economical ordering frequency on margarine raw materials is 6.39 times/year.

3. Total ordering of optimal margarine raw materials for one year can be calculated:

   Bookings per year = Q* x order frequency = 64 x 6.39 = 409 kg

4. Total inventory per year = Total booking cost per year + Total storage cost per year

   Calculation of total cost of $\frac{\text{D}}{\text{Q*}}$ booking = S = x 15000 = Rp 95.859 $\frac{409}{64}$

   Calculation of total storage cost $\frac{\text{Q*}}{2}$ H= $\frac{64}{2}$ x 3000 Rp 96000

   Total inventory cost per year = Rp 95.859 + Rp 96000

   = Rp191.859

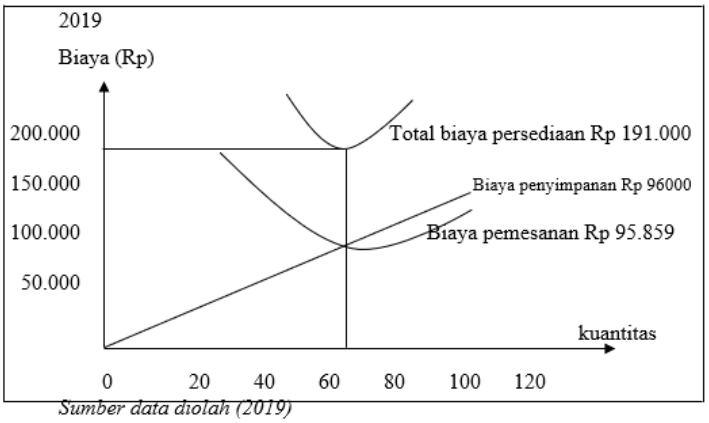
5. The time between each of the most economical orders, is:

   Time between each order = = = 50 days $\frac{\text{jumlah hari kerja pertahun}}{\text{frekuensi}}$ $\frac{312}{6,39}$

The time between each order has been calculated by generating 50 days for each purchase.

From the results of the calculation above with this relationship between storage costs and booking costs can be done optimally by showing in the form of charts.

Gambar 4.2 Grafik *Economic Order Quantity* (EOQ) Margarin Tahun 2019



Sumber data diolah (2019)

4.1.6.2 Economic Order Quantity (EOQ) Method of Granulated Sugar raw materials

Table 4.11 Data on The Use of Raw Materials for Granulated Sugar in 2019

Description	**Year 2019**
Quantity (kg)	2.740
Price (Rp/kg)	15.000
Total Cost (RP)	41.100.000
Order Fee (RP/order)	12.400
Storage Cost (Rp/kg)	1.240

Source: Bakery Flowers (2020)

From table 4.11 above can be calculated the optimal quantity as follows:

1. Determination of optimal purchasing quantity (EOQ) in 2019

   EOQ = Q* = = = 234 kg $\sqrt{\frac{2\ x\ D\ x\ S}{H}}$ $\sqrt{\frac{2\ x\ 2.740\ x\ 12.400}{1.240}}$

With economic *order quantity* (EOQ) method for each order in order quantity or purchase of raw materials of granulated sugar of 234 kg.

2. Ordering Frequency of granulated sugar raw materials in 2019, are:

   Order frequency = = = 11.7 times $\frac{D}{Q}$ $\frac{2740}{234}$

So the most economical ordering frequency on granulated sugar raw materials is 11.7 times/year.

3. Total ordering of optimal granulated sugar raw materials for one year can be calculated:

Bookings per year = Q* x order frequency = 234 x 11.7 = 2,740 kg

4. Total inventory per year = Total order costs + Total storage costs

   Calculation of total cost of $\frac{D}{Q*}$ booking = S = x 12,400 = Rp 145,196$\frac{2740}{234}$

   Calculation of total storage costs $\frac{Q*}{2}$ H= = $\frac{234}{2}$ x 1.240= Rp 145,080

   Total inventory cost per year = Rp 145,196 + Rp 145,080

   = RP 290.276

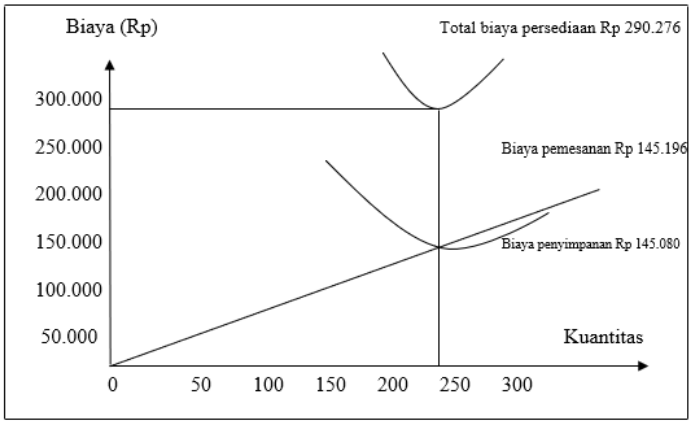
5. The time between each of the most economical orders, is:

   Time between each order = = = 27 days $\frac{\text{jumlah hari kerja pertahun}}{\text{frekuensi}}$ $\frac{312}{11,7}$

The time between each order has been calculated by generating 27 days for each purchase.

From the results of the calculation above with this relationship between storage costs and booking costs can be done optimally by showing in the form of charts.

Gambar 4.3 Grafik *Economic Order Quantity* (EOQ) Gula Pasir



Sumber: data diolah (2019)

4.1.6.3 Economic Order Quantity (EOQ) Method of Wheat Flour raw material.

Table 4.12 Data on The Use of Wheat Flour Ingredients in 2019

Description	**Year 2019**
Quantity (kg)	9.760
Price (Rp/kg)	10.000
Total Cost (RP)	97.600.000
Order Fee (RP/order)	7.000

Storage Cost (Rp/kg)	700

Source: Bakery Flowers (2020)

From table 4.11 above can be calculated the optimal quantity as follows:

1. Determination of optimal purchasing quantity (EOQ) in 2019

   EOQ = Q* = = = 442 kg $\sqrt{\frac{2\ x\ D\ x\ S}{H}}$ $\sqrt{\frac{2\ x\ 9760\ x\ 7000}{700}}$

With economic *order quantity* (EOQ) method for each order in order quantity or purchase of wheat flour raw material of 442 kg.

2. The frequency of ordering wheat flour raw materials in 2019, are:

   Order frequency = = = 22.1 times $\frac{D}{Q}$ $\frac{9760}{442}$

So the most economical ordering frequency on wheat flour raw materials is 22.1 times/year.

3. Total ordering of optimal wheat flour raw materials for one year can be calculated:

   Bookings per year = Q* x booking frequency = 442 x 22 = 9,760 kg

4. Total inventory per year = Total order costs + Total storage costs

   Calculation of total cost of $\frac{D}{Q*}$ booking = S = x 7,000 = Rp 154,570 $\frac{9760}{442}$

   Calculation of total storage costs $\frac{Q*}{2}$ H= $\frac{442}{2}$ x 700 Rp154,700

   Total inventory cost per year = Rp 154,570 + Rp 154,700

   = Rp 309.270

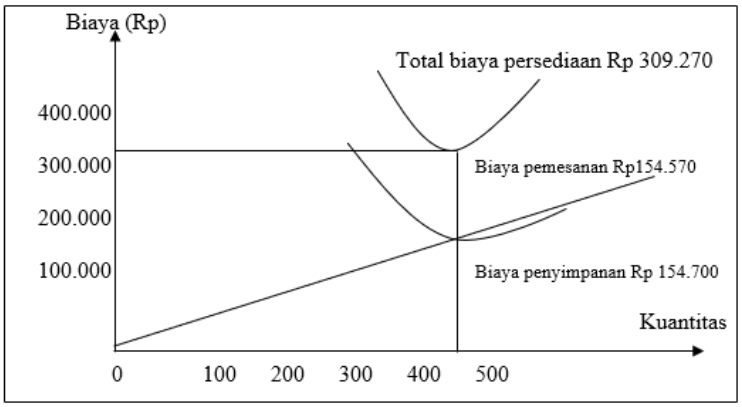
5. The time between each of the most economical orders, is:

   Time between each order = = = 15 days $\frac{\text{jumlah hari kerja pertahun}}{\text{frekuensi}}$ $\frac{312}{22,1}$

The time between each order has been calculated by generating 15 days for each purchase.

From the results of the calculation above with this relationship between storage costs and booking costs can be done optimally by showing in the form of charts.

Gambar 4.4 Grafik *Economic Order Quantity* (EOQ) Tepung Terigu



Sumber: data diolah (2019)

4.1.7. Analysis of raw material ordering efficiency based on company policy using Economic Order Quantity (EOQ) method

Table 4.13 Comparison of Calculation of Usage and Frequency of Purchase of Raw Materials Based on Company'sBijkan and EOQ models

Raw Materials	Company Policy			*Economic Order Quantity* Model		
	Qt (kg)	F (times)	Qp (kg)	Qt (kg)	F (times)	Qp (kg)
Margarine	440	28	15	409	6,39	64
Sugar	2.900	276	70	2.740	11,7	234
Flour	10.200	351	28	9.760	22,1	442

Data source: processed data (2019)

Based on table 4.6 that in the calculation there is a difference between the calculation based on *the company's policy and the economic order quantitiy* (EOQ) method and can be done to save costs incurred. On the difference in the cost of margarine raw material inventory of Rp 1,548,141,raw materialsof granulated sugar amounted to Rp 6,728,124 and wheat flour raw materials amounted to Rp 9,287,730. By comparison the calculation shows that the cost of the company's policy has not been optimal.

Table 4. 14 Inventory cost corporation according to company policy by EOQ method

Raw Materials	Conventional	*Economic Order Quantity* (EOQ)	Difference
Margarine	Rp 1.740.000	£19.99	Rp 1,548,141
Sugar	Rp 7,018,400	£19.99	£49.99
Flour	Rp 9,597,000	£29.99	Rp 9,287,730

Based on table 4.6 that in the calculation there is a difference between the calculation based on *the company's policy and the economic order quantitiy* (EOQ) method and can be done to save costs incurred. On the difference in the cost of margarine raw material inventory of Rp 1,548,141,raw materialsof granulated sugar amounted to Rp 6,728,124 and wheat flour raw materials amounted to Rp 9,287,730. By comparison the calculation shows that the cost of the company's policy has not been optimal.

V. CONCLUSION

5.1. Conclusion

Based on the results of research conducted by researchers obtained the following conclusions:

1. Based on raw material control for January 2019 to December 2019 with Economic Order Quantity (EOQ) model obtained economical order results, namely in margarine raw materials with the purchase amount of 64 kg / order, and in the raw material of granulated sugar obtained the purchase amount of 234 kg / order, as for wheat flour raw materials obtained the amount of buyers 442 kg / order.
2. Frequency of ordering in margarine raw materials as much as 6.39 times / year and in raw materials of granulated sugar as much as 11.7 times / year, as for wheat flour raw materials as much as 22.1 times / year.
3. The results of the analysis of the comparison of cost efficiency of ordering raw materials according to the company's policy with the Economic Order Quantity (EOQ) model obtained the results that with the calculation of EOQ the company can make savings on expenses of 1,548,141 for margarine raw materials, Rp 6,728,124 for raw materials of granulated sugar, Rp 9,287,730 for wheat flour raw materials, with the difference in total inventory cost of margarine, granulated sugar and wheat flour amounting to Rp 17,563,995.

5.2. Suggestions

Based on the conclusions, the researchers suggested:

1. In order for the company to purchase appropriate raw material inventory, proper planning and control that can be done by using the EOQ (Economic Order Quantity) method by determining the frequency of ordering on margarine raw materials, granulated sugar and wheat flour by using this method, the company can make savings on the total cost of inventory.
2. For the next buyer is expected to get a period of time so that the number of samples increase so as to provide more accurate results and facilitate the juniors in understanding our research.

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