Proposed Improvements to The Chip Raw Material Control System Using the Continuous Review System and Periodic Review System Methods

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Abstract

Each region has its characteristics of traditional food, snacks, and drinks. One example of traditional processed products is generally made from raw materials of tubers such as cassava and sweet potatoes and also processed from fruits and flour (Sari and Nurrizati, 2018). Through optimal inventory control, companies can meet consumer needs on time and minimize the cost of raw material inventory to achieve company goals (Lahu, E.R., 2017). This research focuses on controlling the inventory of raw materials for chips, which will later be useful for minimizing inventory costs to affect the company's benefits. The purpose of this study is to describe raw materials inventory by determining the number of ordering lots and calculating the optimum total inventory cost for the company. The method used is a continuous review system and a periodic review system by collecting data related to the cost of raw material inventory at the UKM Tungku Sanjai Minang Maimbau. The results obtained are the total cost of raw material inventory, the optimal order lot size of raw materials by comparing the Q and P methods, and the total cost of raw material inventory. The calculation of the two methods is then compared to get the best method for controlling the inventory of chip raw materials.

Keywords
Material Inventory, Inventory Cost, Continuous Review System, Periodic Review System

1.Introduction

The level of inventory in the company's large raw material storage warehouse (*Inventory*) can cause major problems because on the other hand the company must prepare funds for the purchase of inventory and maintain the quality of raw materials and the possibility of damage and loss of raw materials. On the other hand, inventory anticipation can reduce inventory costs, which will risk a shortage of raw materials if there is a surge in demand from consumers. The business activities of making cryptic snacks at the Sanjai Minang Maimbau Furnace started from buying raw materials from *suppliers* in the Pua River area then the products were processed and marketed to consumers inside and outside the province. The Sanjai Minang Maimbau Furnace business produces 12 kinds of chips with 4 main raw materials, namely cassava / sweet potatoes, taro, potatoes and bananas. Based on an interview conducted by the owner of the Sanjai Minang Maimbau Furnace UKM, data on the sale of sanjai chips from April 2021 to March 2022 can be seen in the Table 1 below.

Table 1. Sanjai Chips Sales Data for April 2021- March 2022

Date	Sales (Kg)
April 2021	536
May 2021	320
June 2021	210
July 2021	317
August 2021	200
September 2021	318

In its activities, this business only carries out processing based on previous experience and does not yet have a certain method. The condition *of overstock* of raw materials at this enterprise is due to non-fixed and capricious consumer demand.over time. This condition can cause the cost of inventory incurred by the company to increase.From the results of observations that have been made, there is damage to raw materials such as cassava and bananas which indicates an error in controlling raw material inventory which ultimately causes losses to the company. The selection of the two methods, namely the *continious review system* and *periodic review system* methods, is based on companies that have an uncertain amount of raw material demand according to consumer needs, resulting in variations in the purchase of raw materials. Therefore, research is needed to determine inventory control methods that are expected to help the Sanjai Minang Maimbau Furnace business in regulating the supply of sanjai raw materials in order to minimize costs.

1.1 Objectives

Sanjai Minang Maimbau Furnace UKM is a business engaged in the manufacture of sanjai chips or traditional snacks made from tubers and fruits. This business has been established since 1994. This home business is located on Jl. Sanjai, Manggis Ganting Village, Mandiangin Koto Selayan District, Bukittinggi City, West Sumatra

2. Literature Review

(Axsäter, 2015) Permintaan pasar yang fluktuatif atau tidak stabil sehingga diperlukan perencanaan persediaan yang baik. Penelitian ini bertujuan untuk mengetahui model persediaan probabilistik yang baik digunakan dalam menentukan kuantitas pemesanan dengan mempertimbangkan total biaya minimal. (Aryanny & Kurniawan, 2020) Menentukan pengendalian persediaan Suku Cadang *Housing Bowl for Gravel Pump Warman* setiap tahun untuk meminimumkan biaya persediaan. Metode pengendalian persediaan yang digunakan *Periodic review (R, S), Periodic Review (R,s,S), Continuous Review (s,Q)* dan *Continuous Review (s,S)*. Ke empat metode ini dibandingkan dengan metode perusahaan dan dipilih metode dengan total biaya yang minimum. Industries that use make-to-stock production methods depend on inventories to adapt to changing demand. The precision of customer demand estimation becomes crucial. Overstock or stock out results from improper inventory management. On businesses involved in the automobile industry, this research was done. To determine the best inventory system policy, this study sets out to find it. A low inventory cost and low order cost can be used by the ideal inventory system to generate order volumes to assist the fulfillment of consumer demand (Rizkya et al., 2018). High costs occur from excess product inventory, while damage and expiry result from storing stock for an extended period of time. This retail business sells high-quality goods and offers a variety of superb and comprehensive goods, making it simpler for clients to pick the finest solution for their requirements (Kholil, 2022). In order to minimize inventory-related costs and maximize service levels with a considerable decrease in treatment costs and resource wastage, inventory

management in a healthcare system must be consistent with its operations and important characteristics. Researchers and practitioners have created a variety of tools and approaches over the years to model and analyze different inventory management systems in the healthcare industry while taking these factors into account(Saha & Ray, 2019). To find the best ordering lots and reorder points, inventory planning methods with continuous review and periodic review approach were contrasted. Additionally, inventory rules were looked at, including service level, safety stock, ordering costs, holding costs, and cost resulting from potential shortages. The findings indicated that continuous review is preferable to periodic review for this specific issue(Toha et al., 2019).

2. Methods

This research methodology describes each activity carried out during the conduct of the study as a whole.

a. Preliminary Studies
A preliminary study was carried out in order to find out the problems that exist in the Sanjai Minang Maimbau Furnace UKM at this time, so that an overview of the problems to be studied is obtained.

b. Problem Identification
Based on the identification of the problem, the cause of the problem can be known by planning the inventory of raw materials. The inventory of raw materials so far has been less than optimal, causing the amount of raw material inventory to often experience overstock and stock out, causing the cost of raw material inventory to be not minimal which can cause disruption of the production process and have an impact on profits at the Sanjai Minang Maimbau Furnace SMEs.

c. Problem Formulation
Based on the identification of problems that have been carried out, it can be formulated which method is the most appropriate among the *continuous review system* and *periodic review system* methods used by the Sanjai Minang Maimbau Furnace UKM? The formulation of this problem is also the focus of observation in the later research process

d. Research Goal Setting
The purpose of this study is to describe the inventory system of cryptic raw materials, determine the number of ordering lots, calculate the total cost of inventory and compare the control of cryptic raw materials through the *continuous review system* and *periodic review system* methods in order to optimize inventory costs.

3. Data Collection
This research the data needed are primary data and secondary data, namely:

A. Primary Data
Primary data is data obtained from the results of direct observations at the Sanjai Minang Miambau Furnace UKM and asking for information and interviewing employees who are directly involved. The data obtained is the data of the production process carried out by the company

B. Secondary Data
Secondary data is data that is not directly observed by the researcher or obtained from existing sources, namely data obtained from within the company. This data is a company profile, company production data, raw material needs and purchase data, lead time data, message cost data, storage cost data, and raw material shortage cost data, all this data is needed for the purposes of the analysis process of problems that exist in raw material inventory at the Sanjai Minang Maimbau Furnace SMEs.

5. Results and Discussion
From the results of data collection by means of interviews and observations, it was found that the Sanjai Minang Maimbau Furnace UKM did not have a certain inventory control method in determining the order time and the size of the ordering lot for chip raw materials. The following is data on the purchase, inventory and use of raw materials which are then calculated to obtain the total inventory costs incurred by the company.

5.1 Cost of Ordering Raw Materials
Based on the information obtained from the SME Furnace sanjai Minang Maimbau, the cost of ordering and the cost of saving from raw materials are as follows:

1. Booking fee = Base rate x phone duration
   = IDR 1.125 x 10 minutes
   = IDR 11.250,-/ message

2. Administrative Costs on the process of ordering raw materials for chips come from the cost of making proof of receipt and other unforeseen costs that are usually always incurred when an order is placed. IDR. 20.000/message

3. The message fee is obtained from the sum of the telephone fee of IDR 11,250, the administrative fee of IDR 20,000, and the transportation fee of IDR 100,000, so that the total message cost is IDR 131,250

5.2 Cost of Storing Raw Materials

Storage costs are costs incurred by a company to finance the inventory of raw materials stored in the warehouse. Storage cost data in this study includes labor costs, electricity costs and warehouse maintenance costs.

1. Warehouse labor costs
   The workforce working at the Sanjai Minang Maimbau Furnace UKM in the raw material warehouse section is as many as 1 worker with a wage of IDR 1,800,000 per month.
   Labor costs = IDR 1.800.000/month x 12 months
   = IDR 21.600.000, -/year
2. Electricity Usage Fee is Rp 570.720, -/year
3. Warehouse Maintenance Cost is IDR 450,000
   So that the total storage costs are obtained from the sum of warehouse labor costs, electricity usage costs, and warehouse maintenance costs, which are IDR 22,620,720

5.2 *Lead Time* Data

The lead time at the Sanjai Minang Maimbau Furnace UKM is two days until the raw materials arrive at the warehouse. With the number of working days each year 292 working days. Then the calculation of *lead time* is as follows:

$$Lead\ Time = \frac{2}{292} = 0,0068$$

The cost of shortage occurs if the consumer's order cannot be fulfilled which leads to loss of income. Table 2 there is;ah cost of shortage of chip raw materials in SME Furnace Sanjai Minang Maimbau..

Table 2. Cost of Lack of Raw Materials

No	Raw Material	Shortage Cost
1.	Cassava/Yam	IDR 2.200
2.	Taro	IDR 2.500
3.	Potato	IDR 2.600
4.	Banana	IDR 2.000

5.3 Data Processing

The data processing that will be carried out is to determine the planning of controlling chip raw materials and calculating the costs of raw material control using the *Continuous Review System (Q)* and *Periodic Review System (P)* methods. The following are the stages of processing such data:

5.3.1 Actual Condition of Raw Materials in Sanjai Minang Maimbau Furnace SMEs

The following is data on the purchase, inventory and use of raw materials which are then calculated to obtain the total inventory costs incurred by the company can be seen in the table below:

The size of ordering raw material products by the company's method is calculated by adding up the cost of ordering per product, the cost of storing and the total cost of inventory, which is as follow Inventory costs incurred by the company for cassava raw materials from April 2021 to March 2022 in Table 3.

Tabel 3. Order size of Cassava Products by Company Method

Moon	Purchase (sak)	Use (sak)	Supplies (sak)	Message Fee	Save Costs
March			30		
April	260	245	45	IDR 262,500	IDR 87,255
May	300	410	-65	IDR 393,750	IDR 0
June	400	325	10	IDR 262,500	IDR 19,390
July	260	215	55	IDR 262,500	IDR 106,645
August	100	160	-5	IDR 393,750	IDR0
September	200	185	10	IDR 262,500	IDR 19,390
October	300	200	110	IDR 262,500	IDR 213,290
November	200	315	-5	IDR 393.750	IDR0
December	400	346	49	IDR 262.500	IDR 95.011
January	260	286	23	IDR 262.500	IDR 44.597
February	340	342	21	IDR 262.500	IDR 40.719
March	200	220	1	IDR 262.500	IDR 1.939
Total				IDR3.543.750	IDR 628.236

1. Message Cost + Storage Cost +Total Purchase (Raw Material Price (Sak) x Total Purchase of Cassava)
   IDR 3,543,750 + IDR 628,236 + IDR 515,200,000
   = RP519.371.985, -
2. The inventory costs incurred by the company for taro raw materials are as follows:
   Message Cost + Storage Cost +Total Purchase (Raw Material Price (Sak) x Total Purchase of Taro)
   IDR 3,150,000 + IDR 982,566 + IDR 576,000,000
   IDR 580.132.566, -
3. The inventory costs incurred by the company for potato raw materials are as follows:
   Message Cost + Storage Cost +Total Purchase (Raw Material Price (Sak) x Total Purchase of potatoes)
   IDR 3,410,500 + IDR 346,723 + IDR 834,000,000
   IDR837.757.223, -
4. The inventory costs incurred by the company for banana raw materials are as follows:
   Order Cost + Saving Cost +Total Purchase (Raw Material Price (Sak) x Total Purchase of bananas)
   IDR 3,150,000 + IDR 930,720 + IDR 728,000,000
   IDR732.080.720, -

Tabel 4 Recapitulation of Actual Condition Raw Material Inventory Costs

No.	Types of Raw Materials	Inventory Costs
1.	Cassava/Yam	IDR 518.190.736,-
2.	Taro	IDR 580.132.566,-
3.	Potato	IDR 837.757.223,-
4.	Banana	IDR732.080.720,-
Total		IDR2.688.161.245,-

Total inventory costs include message costs and storage costs. So that the total inventory costs incurred by the company are IDR 2,688,161,245, -. (Table 4)

5.4 Continuous *Review System* (Q) Method

By using this method, every time the use of raw material inventory is carried out, the amount of available inventory must be calculated to determine whether reordering is or not necessary to do so. The *Continuous Review System* (Q) method has several steps to get optimal ordering results. The steps using the Q method for the calculation of chip raw materials in the Sanjai Minang Maimbau Furnace UKM are as follows:

5.5 Calculation of Method Q on Cassava

The calculation of the Continuous Review System method on the supply of cassava raw materials is as follows:

Annual Demand (D) =3,249 sak/year
Lead time (L) =0.0068
Fee per time booking (A) = IDR 131.250/order
Inventory shortage cost (Cu) = IDR 2,200/sak
Storage cost per unit (h) = IDR 1,939/sak
Raw material price per sak (P) = IDR 160.000/sak

1. Determine the average needs

$$\overline{X} = \frac{\Sigma\ xi}{n}$$
$$\overline{X} = \frac{3249}{12}$$
$$\overline{X} = 271 \text{ sak}$$

2. Calculating the standard deviation

$$\sigma = \sqrt{\frac{\Sigma(Xi-X)^2}{n-1}}$$
$$\sigma = \sqrt{\frac{\Sigma(Xi-X)^2}{n-1}}$$

$$\sigma = \sqrt{\frac{\Sigma(245-271)^2+(410-271)+(325-271)+\cdots+(220-271)}{12-1}}$$
$$\sigma = \sqrt{\frac{66235}{11}}$$
$$\sigma = 77,5974$$

3. Determine the size of the ordering lot

$$q_{01} = \sqrt{\frac{2\ AD}{h}}$$
$$q_{01} = \sqrt{\frac{2\ (131.250)(3.249)}{1.939}}$$
$$= 663,209 \approx 663 \text{ sak}$$

4. Determine the magnitude of the value of inventory shortages ( ) or the possible occurrence of deficiencies using the following formula:

$$\alpha = \frac{hq_{01}}{CuD+hq_{01}}$$
$$\alpha = \frac{(1.939)(663)}{(2.200)(3.249)+(1.939)(663)}$$
$$\alpha = 0,1524$$

5. Based on the normal distribution table of 0.1524 has a value of Z of 1. Next look for r1 which is as follows:

$$r1 = DL+Z\alpha\ S\sqrt{L}$$
$$r1 = (3.249)(0,0068) + (1)(77,5974)\sqrt{0,0068}$$
$$r1 = 22,0932 + 77,5974\ \sqrt{0,0068}$$
$$r1 = 28,49 \text{ sak} \approx 29 \text{ sak}$$

6. Based on Table B Values f(Z i.e. 0.2420 and value (Z α) *yaitu* 0,0833. So calculating q02 adalah is as follows:

$$q_{02} = \sqrt{\frac{2D\left[A+Cu\int_{r1}^{\infty}(x-r1)\,f(x)dx\right]}{h}}$$

Where:

$N = \int_{r1}^{\infty}(x-r1)\,f(x)dx = SL\left[f(Z\alpha) - Z\alpha\,\psi\,(Z\alpha)\right]$

$N = 77,5974\sqrt{0,0068}[0,2420\text{-}1(0,0833)]$

$N = 77,5974\sqrt{0,0068}[0,1587]$

$N = 1,0154$

So that:

$$q02 = \sqrt{\frac{2(3249)[131.250+2.200(1,0154)]}{1.939}}$$

q02 = 668 sak

7. Recalculate α and r2

$$\alpha = \frac{hq02}{CuD+hq02}$$

$$\alpha = \frac{(1.939)(668)}{(2.200)(3.249)+(1.939)(668)}$$

$\alpha = 0,153$

Based on the normal distribution table of 0.153 has a Z value of 1. Then the value of r2 is as follows:

$r2 = DL+ Z\alpha\,S\sqrt{L}$

$r2 = (3.249)(0,0068)+(1)(77,5974)\,\sqrt{0,0068}$

$r2 = 28,49$ sak $\approx$ 29 sak

After obtaining the values of r1 and r2, then the results of both are compared. If the results of the two are relatively the same, then r=r1 and q0=q02. So r1=r2= 29 sak and q01=q02 =668 sak

8. Calculation of total costs

$$O_T = D_p + \frac{AD}{q0} + h\left(\tfrac{1}{2}q_{0+r\text{-}DL}\right) + \left(\frac{CuDN}{q0}\right)$$

$$O_T = 3.249(160.000) + \frac{(131.250)(3.249)}{668} + 1.939\left(\tfrac{1}{2}668+29\text{-}(3.249)(0,0068)\right) + \left(\frac{(2.200)(3.249)(1,0154)}{668}\right)$$

$O_T = 519.840.000+638.370+661.018+10.865$

$O_T = Rp521.150.253$

The recapitulation of the calculation of the ordering lot size and inventory costs of all types of chip raw materials at the Sanjai Minang Maimbau Furnace UKM using the continuous review system method can be seen in the Table 5 below

Table 5 Recapitulation of *Calculation of Continuous Review System* Method

No.	Types of Raw Materials	q (sak)	r (sak)	Inventory Costs
1.	Cassava/Yam	668	29	IDR 521.150.253
2.	Taro	628	25	IDR 574.828.241
3.	Potato	619	23	IDR 840.607.581
4.	Banana	614	23	IDR 716.198.301
	Total			IDR 2.652.784.376

Based on Table 5, it can be seen *that the size of the order lot* for each type of chip raw material and the cost of inventory using the *Continuous Review System* method is IDR 2,652,784,376.

5.5 Periodic *Review System* (P) Method

The *periodic review system* method is a method of controlling inventory that is checked *periodically* everyone certain period of time. Bookings are made with a booking amount that varies with a fixed booking period. The steps in the *periodic review system* method for calculating the type of chip raw materials are as follows:

5.5.1 Calculation of Method P on Cassava/Yam

The calculation of the periodic review system method on the supply of cassava / sweet potato raw materials is as follows:

Annual Demand (D) = 3,249 sak/year
Lead time (L) = 0.0068
Fee per time booking (A) = IDR 131.250/order
Inventory shortage cost (Cu) = IDR 2,200/sak
Storage cost per unit (h) = IDR 1,939/sak
Raw material price per sak (P) = IDR 160.000/sa

1. Calculating the T Value

$$T = \sqrt{\frac{2 \times A}{Dh}}$$

$$T = \sqrt{\frac{2\,(131.250)}{(3.249)(1.939)}}$$

$$T = \sqrt{\frac{262.500}{6.299.811}}$$

$$T = \sqrt{0,041}$$

T = 0,2025 tahun atau 73,91 days rounded to 74 days

2. **Calculate α**

$$\alpha = \frac{T.h}{Cu}$$

$$\alpha = \frac{(0,2025)(1.939)}{2.200}$$

$$\alpha = 0,1785$$

3. Based on the normal distribution table α of 0,1785 has a value of Z α sebesar 0,95. The value of $f(Z\,\alpha)$ i.e 0,2541 and valueψ (Z α) i.e 0,0916. Next calculate the value of R (maximum inventory)

$$R = D\,(T+L) + Z\,\alpha\,\sqrt{T} + L$$

$$R = 3.249\,(0,2025+0,0068) + 0,95\sqrt{0,2025 + 0,0068}$$

$$R = 3.249\,(0,2093) + 0,4346$$

$$R = 680\text{ sak}$$

4. Calculating the probability of *occurrence of a shortage* (N)

$$N = S\sqrt{T} + L\ (F_{(z\alpha)} - (Z\,\alpha \times \varphi_{z}\alpha))$$

$$N = 77,5974\sqrt{0,2025 + 0,0068}\,(0,2541 - (0,95x0,0916))$$

$$N = 35,5003 \times 0,1644$$

$$N = 5,835$$

5. Calculate the total cost

$$O_T = D_p + \frac{A}{T} + h(R - D_L + \frac{DT}{2}) + (\frac{CuN}{T})$$

$$O_T = (3.249)(160.000) + \frac{131.250}{0,2025} + 1.939\,(680 - (3.249)(0,0068))$$

$$+ (\frac{(3.249)(0,2025)}{2}) + (\frac{(2.200)(5.835)}{0,2025})$$

$$O_T = 519.840.000 + 648.148 + 1.913.537 + 63.393$$

$$O_T = 522.465.078$$

The same calculation is also carried out to calculate the cost of inventory of raw materials for taro, potatoes and bananas using the periodic review system method.

Tabel 6 Recapitulation of Calculations Periodic review system method

No.	Jenis Bahan Baku	R (sak)	T (tahun)	Hari	Biaya Persediaan
1.	Cassava/Yam	680	0,2025	74	IDR 522.465.078
2.	Taro	642	0,2168	79	IDR 576.076.366
3.	Potato	632	0,2190	80	IDR 841.826.038
4.	Banana	629	0,2218	81	IDR 717.412.737
	Total				IDR 2.657.780.219

Based on Table 6, it can be seen that the maximum inventory (R), order time (T) and inventory cost of chip raw materials with *the periodic review system* method are IDR 2,657,780,219.

5.5.2 Comparison of Total Inventory Costs Between the Actual Condition of *the Continuous Review System* Method and *the Periodic Review System* Method

The results of the recapitulation of the comparison of the total cost of raw material inventory between actual conditions, *the continuous review system* (CRS) method and *the periodic review system* (PRS) can be seen in the Table 7 below. A comparison of the total cost of availability between the actual condition of the company, *the continuous review system* and *the periodic review system* can be seen in Figure 1.

Table 7 Recapitulation of Actual Inventory Cost Comparison, CRS Method and PRS Method

No.	Types of Raw Materials	Current	CRS method	PRS method
1.	Cassava/Yam	IDR519.371.985	IDR 521.150.253	IDR 522.465.078
2.	Taro	IDR580.132.566	IDR 574.828.241	IDR 576.076.366
3.	Potato	IDR837.757.223	IDR 840.607.581	IDR 841.826.038
4.	Banana	IDR732.080.720	IDR 716.198.301	IDR 717.412.737
	Total	IDR2.669.342.494	IDR2.652.784.376	IDR2.657.780.219

Below is a comparison chart between the total cost of supplying raw materials for chips in the Sanjai Minang Maimbau Furnace UKM
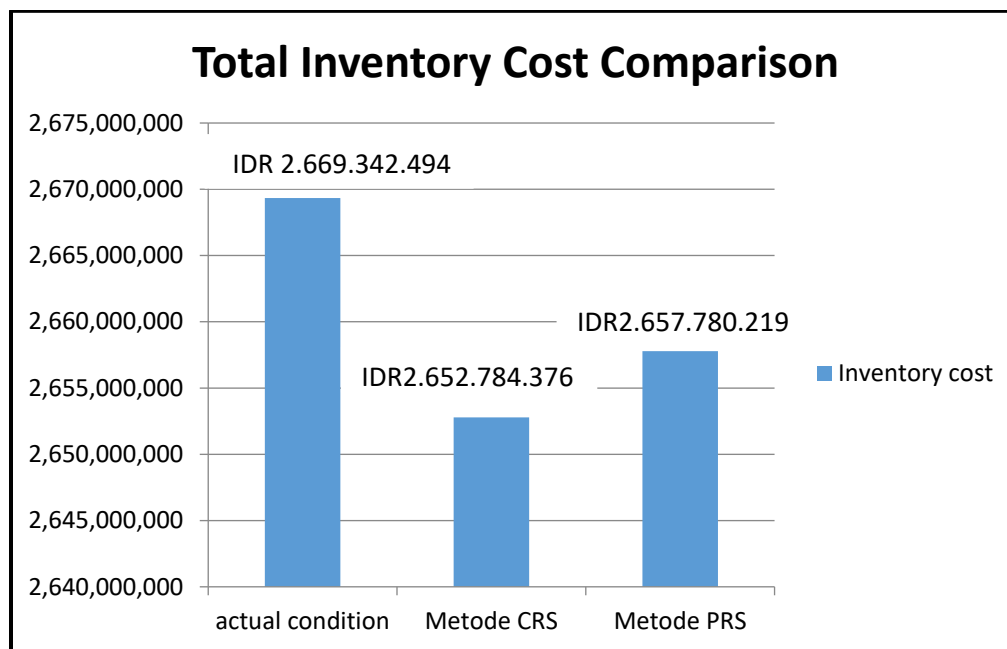

Figure 1 Comparison of Total Raw Material Inventory Costs

Based on the chart Figure 1 above, you can see the results of the recapitulation of the comparison of actual inventory costs, *the continuous review system* method and *the periodic review system* method. The calculation results show

that the method that has the lowest cost is the *continuous review system* method of IDR 2,652,784,376. So that the company using the *continuous review system* method in controlling the inventory of chip raw materials can save inventory costs of IDR 16,558,118.

6 *Conclusion*

The conclusions from the results of the research that have been carried out are as follows:

1. The supply of raw materials for chips at the UKM Tungku Sanjai Minang Maimbau often experiences overstock and stockouts. As in the raw material for cassava/yam, the company experienced a shortage of raw materials or stockout in May 2021, namely -65 sacks, August 2021 and November, namely -5 sacks. Banana raw materials also experienced overstock in January 2022 and February 2022, resulting in bananas being damaged due to being stored in the warehouse for too long this resulted in disruption of the production process for making chips. company can increase.

2. he results of the calculation show that the most optimal number of order lot sizes is using the continuous review system (Q) method where the total inventory cost is more efficient than the company's method and the periodic review system (P) method. For cassava/yam raw materials, the order time follows the reorder value of 29 sacks, for taro the reorder value is 25 sacks, for potatoes the reorder value is 23 sacks and for niali bananas the reorder value is 23 sacks.

3. The actual total cost of inventory at the SME Furnace Sanjai Minang Maimbau is IDR.2,669,342,494 which is obtained from the sum of the inventory costs in one year for raw materials for cassava/sweet potato, IDR 519,371,985, taro IDR.580,132,566, potatoes IDR 837,757,223 and bananas IDR 732. 080.720. To minimize the company's inventory costs, calculations are carried out using the continuous review system (Q) and periodic review system (P) methods where the calculations that have been carried out show that the continuous review system (Q) method produces the minimum total inventory cost of IDR 2,652,784,376. obtained from the sum of the cost of supplying raw materials for cassava/yam IDR 521,150,253, taro IDR 574,828,241, potatoes IDR 840,607,581 and bananas IDR 716,198,301.

4. By calculating the inventory control of raw materials for chips at UKM Tungku Sanjai Minang Maimbau using the continuous review system (Q) and periodic review system (P) the total cost of raw material inventory can be minimized if using the continuous review system (Q) method, which is equal to IDR.2,652,784,376 compared to the periodic review system (P) which is IDR 2,657,780,219, while using the company's policy it is IDR 2,669,342,494. So from the results of the total cost of inventory using the continuous review system (Q) method, it can save 0.62% or around IDR 16,558,118. So that the best inventory method in making decisions for controlling the inventory of raw materials for chips in UKM Tungku Sanjai Minang Maimbau is if the company uses the continuous review system (Q) method.

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