

ASSESSING RAW MATERIAL INVENTORY MANAGEMENT EFFICIENCY IN THE KEBULI YAMAN RESTAURANT

Halimah¹, Hans Victor Sitepu²

¹Sekolah Tinggi Ilmu Ekonomi GICI, sitihalimah090602@gmail.com

² Sekolah Tinggi Ilmu Ekonomi GICI, hans.victor.sitepu@stiegi.ac.id

ABSTRAK

Penelitian ini dilakukan untuk menganalisis persediaan bahan baku dalam meningkatkan efisiensi pengelolaan persediaan bahan baku. Rumah Makan Kebuli Yaman adalah salah satu Rumah makan yang ada di kota Bekasi. Rumah Makan Kebuli Yaman mengalami kekurangan bahan baku untuk Nasi, Ayam, Kambing, Iga saat beroperasi. Keadaan tersebut menunjukkan bahwa efisiensi pengelolaan persediaan bahan baku pada Rumah Makan Kebuli Yaman belum tercapai. Penelitian ini dilakukan dengan menggunakan data jumlah penjualan, permintaan, komposisi, serta biaya-biaya dalam pemesanan dan penyimpanan bahan baku. Adapun metode analisis yang digunakan adalah Economic Order Quantity (EOQ). Hasil dari penelitian ini mengungkapkan bahwa pengelolaan persediaan bahan baku dengan menggunakan metode EOQ dapat meningkatkan efisiensi, karena dengan menggunakan metode EOQ, maka Rumah Makan Kebuli Yaman dapat menentukan pembelian bahan baku dengan optimal dan biaya yang ekonomis. Sebelum menggunakan metode EOQ nilai efisiensi pengelolaan persediaan bahan baku secara keseluruhan untuk menu Nasi, Ayam, Kambing, Iga pada Rumah Makan Kebuli Yaman pada tingkat rata-rata yang tidak efisien, yaitu berada pada angka 1.39 untuk bahan Nasi, 1.04 untuk bahan Ayam, 2.5 untuk bahan Kambing, dan 5.6 untuk bahan Iga. Setelah menggunakan metode EOQ nilai efisiensi dari pengelolaan persediaan bahan baku Rumah Makan Kebuli Yaman berhasil meningkat dan tercapainya efisiensi.

Kata Kunci : Bahan Baku, Pengelolaan Persediaan, Manajemen Keuangan, Akuntansi Manajemen, UMKM

ABSTRACT

This study was conducted to analyze raw material inventory in order to improve the efficiency of raw material inventory management. Kebuli Yaman Restaurant is one of the restaurants in Bekasi City. Kebuli Yaman Restaurant experienced a shortage of raw materials for Rice, Chicken, Chevron, Ribs during operation. This situation indicates that the efficiency of raw material inventory management at Kebuli Yaman Restaurant has not been achieved. This study was conducted using data on sales volume, demand, composition, and costs in ordering and storing raw materials. The analysis method used is Economic Order Quantity (EOQ). The results of this study reveal that managing raw material inventory using the EOQ method can improve efficiency, because by using the EOQ method, Kebuli Yaman Restaurant can determine raw material purchases optimally and at economical costs. Before using the EOQ method, the overall efficiency value of raw material inventory management for the Rice, Chicken, Chevron, and Ribs menus at the Kebuli Yaman Restaurant was at an inefficient average level, namely at 1.39 for Rice, 1.04 for Chicken, 2.5 for Chevron, and 5.6 for Ribs. After using the EOQ method, the efficiency value of raw material inventory management at the Kebuli Yaman Restaurant has increased and achieved efficiency.

Keywords: Raw Materials, Inventory Management, Financial Management, Management Accounting, MSMEs

Naskah diterima: 30 Agustus 2026, direvisi: 11 Oktober 2026, diterbitkan: 31 Oktober 2026

INTRODUCTION

Indonesia is an ASEAN developing nation whose economy is expanding quickly. The culinary sector is one of the quickly expanding sectors propelling Indonesia's robust economic growth. It is crucial to acknowledge that not all businesses are adept at managing raw material inventory due to a lack of information and knowledge regarding raw material inventory control in order to support businesses in their endeavors to boost economic growth and assist businesses operating in the culinary industry in achieving their objectives (Saputra & Sunarso, 2024). The significance of raw material control, which impacts raw material quality, maximizes revenues, cuts wasteful expenses, and enables more effective and efficient manufacturing, is still not understood by many businesses (Tobing & Dewi, 2026).

A trading firm is a business that buys products from other companies to resell to customers without altering the products' form or nature. Naturally, maximizing profits is one of a company's main objectives in order to ensure its existence and growth. Its operational performance, which comprises operational planning, the arrangement of all available resources, and the company's control system, is crucial to reaching its main objective (Facrura & Zanani, 2022; Dewanti, et al., 2024).

To guaranty seamless and effective operations, every business, whether manufacturing or trading, needs to keep enough inventory. To guaranty efficient production, it is essential to make sure there are enough raw materials available, especially in this digital era (Pramuja, Hamsani, & Sumar, 2024; Yang, Yin, Hwang, Liang, & Yang, 2026). The inventory shouldn't be too big, though, as this could necessitate a substantial capital expenditure and the related expenses. Monitoring and controlling inventory are therefore essential for any kind of business since it can lead to optimal performance (Kieso, Weygandt, & Warfield, 2022).

The production process might be hampered or stopped by a lack of raw materials, which are the fundamental components. Products are made from raw or uncooked resources. Businesses must develop policies on the most cost-effective order level, the amount of inventory that should be in the warehouse, and

when to place new orders in order to identify the ideal amount of raw material inventory at an efficient cost (Mukti & Pradana, 2022).

The unprocessed basic ingredients that a business provides for use in its production processes are known as raw material inventory. The survival of a culinary business may be jeopardized if excessive raw material costs are not adequately managed (Caroko, 2024).

The number of eateries in Bekasi City is rising annually. This suggests that the restaurant industry is becoming more competitive, necessitating restaurants to run their operations more effectively in order to meet their objectives of profitability and competitiveness. The Kebuli Yaman Restaurant is one such restaurant with a distinctive motif that is expanding quickly and up against fierce competition. With 59 locations around Greater Jakarta, Banten, and Bandung, this restaurant company has expanded quickly since its formal opening in late 2022 (Ismail, 2025).

However, this restaurant needs a strong financial management system because of the fierce rivalry in the food market. Regretfully, no particular accounting and finance study has examined effective raw material inventory management techniques for use at the Kebuli Yaman Restaurant, especially that operated in the Bekasi City & Regency. As a result, the author decided to conduct and wrote this research article titled "Analysis of raw material inventory in increasing the efficiency of raw material inventory management at the Kebuli Yaman restaurant."

LITERATURE REVIEW

Supplies of raw materials must be enough for any company or business unit that uses the three stages of the production process: input, processing, and output, or finished items. Utilizing raw material supply is crucial to the industrial process's efficient operation (Park & Kim, 2021). The organization or business unit can meet customer demand and is expected to finish the delivery process on time when raw material sources are available. A smooth production process and the avoidance of delays in customer order fulfillment are guaranty by adequate raw material supplies (Sasikanth & Krithika, 2024).

Jacobs & Chase (2022) defines inventory as an action that attempts to handle a circumstance

that will necessitate the utilization of a product. A product that is meant to be used or sold in the future is referred to as inventory. Inventory can comprise finished goods that must be processed in order for the firm to operate properly, bakery goods that require processing, components that require processing, and goods in the production process (P & Haorei, 2026). Inventory, or simply inventory, is a crucial component of corporate operations. This inventory is crucial for both achieving customer satisfaction and production operations. Consequently, it may be deduced that inventory is a category of commodities that will be utilized or sold in the future. Raw, semi-finished, and finished commodities can all be found in inventory (Gantara & Syihabuddin, 2025).

Raw materials are essential to any firm that uses a production process in order to support the production of a high-quality product. One crucial element is raw materials (Bhuvaneswari, 2026). A scarcity of raw materials will cause the production process to halt. However, as Putri, et.al found, an excessive supply of raw materials can lead to high inventory, a number of risks for the business, and significant expenses that the business must pay (2025). The author will discuss several viewpoints on the theory of raw materials in order to make the concept of raw materials clearer.

This view is consistent with the findings of earlier research (Kurniawan, 2022). The factors in this study are similar to those in earlier studies that used the EOQ approach (Algifari, Syamsuddin, Miru, & Hadi, 2022) and the Kraljic Matrix approach (Efendi & Purnama, 2024) to organize the inventory of raw materials and improve the effectiveness of inventory control in Kebuli Yaman Restaurant.

RESEARCH METHOD

In order to increase the effectiveness of raw material inventory management at the Kebuli Yaman Restaurant, Pondok Kelapa branch, descriptive quantitative research methodology is employed. The Economic Order Quantity (EOQ) method will be used to examine the raw material inventories in problematic food

categories, such as chicken, chevon, and ribs (Saha & Roy, 2024). The research's goal is to assess raw material inventories in problematic food and beverage categories, such as chicken, chevon, and ribs, using the Economic Order Quantity (EOQ) approach.

This research was conducted at the Kebuli Yaman Restaurant, Pondok Kelapa Branch, located at RT05, RW.11, Malaka Jaya, Duren Sawit District, East Jakarta City, Jakarta. This research was conducted from February to June 2025, while the data period taken was the period of 2023. The source of research data came from the management of the restaurant.

A variety of additional methods were used by the author, such as documentation, interviews, and observation. During the observation phase, the Kebuli Yaman restaurant in the Pondok Kelapa branch's raw material inventory management operations were directly observed by the author using observation as a data collection method.

The researcher asked the research subjects structured questions throughout the interview phase. The purpose of these interviews was to enable the author to perform a thorough analysis of the data. Information on monthly raw material usage, monthly raw material storage, and monthly process data were anticipated to be obtained from these interviews. The researcher examined the information in documents that were collected from the study participants during the documentation stage and calculated the EOQ for each significance raw food material using the well-known EOQ formula. The study problem-related documents were utilized.

RESULT AND DISCUSSION

In the management of raw material inventory, Kebuli Yaman Restaurant has various menus. Such as Chicken Kebuli Rice, Chevon Kebuli Rice, and Rib Kebuli Rice. Kebuli Yaman Restaurant in managing raw material inventory still uses traditional methods, from daily operations, raw materials from the Food menu often run out or stock out. This is caused by inaccurate calculations of the amount of raw material orders, when to place orders and the time to re-order raw materials (reorder point).

When raw material supplies run low, the restaurant only makes a re-order of (minimum order). The restaurant management is not precise in determining how much the optimal raw material order should be ordered and when to re-order raw materials. In managing raw materials, the restaurant often runs out or stock out. so that the restaurant manager is unable to fulfill some requests from customers.

Managing raw material inventory, especially for rice, chicken, chevon, and ribs, is a challenge for the Kebuli Yaman Restaurant. The discrepancy between the quantity of raw materials ordered for the Kebuli Yaman Restaurant in 2023 and the available raw material stock is displayed in the following.

Table 1

Raw Material Available Stock vs Order Qty

Raw Material	Available Stock in 2023	Order quantity in 2023	Demand unmeet in 2023
Rice	310.800	222.500	88.300
Chicken	375.800	360.000	15.800
Chevon	10.000	4.000	6.000
Ribs	4.250	750	3.500

Source: Research Data, 2025

According to the above chart, there is a shortage of raw materials for rice (88,300 grams), chicken (15,800 grams), chevon (6,000 grams), and ribs (3,500 grams) in 2023. These figures demonstrate that the Kebuli Yaman Restaurant's raw material inventory management has not been functioning effectively since there was insufficient raw material inventory during the restaurant's operation. The Kebuli Yaman Restaurant now manages its raw material inventory using conventional techniques. The Kebuli Yaman Restaurant must switch from using outdated raw material inventory management techniques to more effective ones.

The Kebuli Yaman Restaurant has a reputation for having ineffective inventory management. The Kebuli Yaman Restaurant has not managed its raw material inventory well. This is evident from the issues they encounter, such as running out of raw materials for menu items, which affects the efficiency of production processes and prevents all customer orders from being fulfilled. This typically happens as a result of the Kebuli Yaman Restaurant manager ordering and reordering raw ingredients at the wrong time. Orders don't

arrive on schedule as a result. The efficiency of the Kebuli Yaman Restaurant utilizing conventional methods is shown in the following data.

The raw material inventory efficiency for rice is 1.39, for chicken meat it is 1.04, for chevon it is 2.5, and for ribs it is 5.6. The Table 2 indicates that the Kebuli Yaman Restaurant currently employs the traditional approach for raw material inventory management. From the computation findings in Table 2, the Kebuli Yaman Restaurant's raw material inventory management has been ineffective since many client orders remain unmet as a result of a shortage of raw materials during business hours. Restaurants are greatly impacted by inventory management, particularly when it comes to optimizing raw material inventory to prevent shortages or excesses.

Table 2

Efficiency Data of using traditional methods

Raw Material	Number of sales per box in 2023 (Output)	Number of orders per Box in 2023 (Input)	Efficiency Rate (Output / Input)
Rice	3.108 Kg	2.225 Kg	1.396
Chicken	9.395 Kg	9.000 Kg	1.043
Chevon	200 Kg	80 Kg	2.500
Ribs	85 Kg	15 Kg	5.600

Source: Research Data, 2025

Using the Economic Order Quantity (EOQ), policies are implemented to determine the quantity of raw material inventory in order to improve the efficiency of raw material inventory management. The information that will be gathered for raw material inventory management utilizing the EOQ approach to boost efficiency is shown in the Table 3:

Table 3

Problematic Raw Material Base Data

Raw Material	Storage Cost	Lead Time	Order Cost	Service Level
Rice	8.000	3	500.000	90%
Chicken	8.000	3	102.500	90%
Chevon	8.000	3	340.000	90%
Ribs	8.000	3	180.000	90%

Source: Research Data, 2025

The Table 3 shows the category of Raw Materials that are problematic in stock at the Kebuli Yaman Restaurant.

Table 4

Raw Material Usage Composition

Raw Material	Available Stock in 2023	Order quantity in 2023
Rice	3.108 x 100	2.225 x 100
Chicken	9.395 x 40	9.000 x 40
Chevon	200 x 50	80 x 50
Ribs	85 x 50	15 x 50

Source: Research Data, 2025

The Ttable 4 is a table of material components for the Yemeni Kebuli Menu at the Restaurant.

Table 5

Raw Material Specification Data

Raw Material	Composition	Annual Needs
Rice	Rice 100 gr	222.500 kg
	Seasoning 25 gr	55.625 kg
Chicken	Chicken 40 gr	360.000 kg
	Seasoning 200 gr	1.800 kg
Chevon	Chevon 50 gr	4.000 kg
	Seasoning 100 gr	8.000 kg
Ribs	Ribs 50 gr	750 kg
	Seasoning 100 gr	1.500 kg

Source: Research Data, 2025

The Kebuli Yaman Restaurant's operating components are included in the above table. The cost of one order of Kebuli Ingredients is Rp. 50,000 per unit of rice, Rp. 10,000 per unit of chicken, Rp. 34,000 per unit of chevon, and Rp. 18,000 per unit of ribs, with a minimum order of 10 units per pack. The cost of storage is Rp. 8,000 per unit of electricity. The cost of one order is determined by multiplying the minimum order of ten units by the cost of one order per unit.

The following presents the EOQ calculation along with its respective components for each food raw material analyzed in this study.

EOQ Calculation for Rice:

$$EOQ = \frac{\sqrt{2 \cdot S \cdot D}}{H}$$

$$EOQ = \frac{\sqrt{2(500.000 \times 222.500)}}{8000}$$

$$EOQ = \frac{\sqrt{222.500.000.000}}{8000}$$

$$EOQ = \sqrt{27.812.5000}$$

$EOQ = 5.273,76$ kg, where:

D = Goods demand (unit/year)

S = Ordering Cost or Setup Cost (Rp/order)

H = Storage Cost (% goods value)

To find the safety stock (SS) level using the company's current service level of 0.90, the following results are obtained:

$$Z = 1,281$$

$$\alpha = 713,14$$

$$SS = Z \times \alpha$$

$$SS = 1,281 \times 713,14$$

$$SS = 913,53$$

To determine the reorder point (ROP), use the following formula:

$$d = \frac{D}{\text{Total Annual working days}}$$

$$d = \frac{222,500}{312} = 713,14$$

Lead time = 3 days

ROP = Reorder Point

$$= (d \times L) + SS$$

$$= (713,14 \times 3) + 913,53$$

$$= 2.139,42 + 913,53$$

$$= 3.052,96 \text{ kg}$$

So, every time the stock of Kebuli Rice in the warehouse reaches 3.052,96 kg, the Restaurant manager should immediately order again the EOQ quantity.

Then to find out the total inventory costs that need to be spent by the restaurant using the EOQ formula:

$$TC = H \frac{EOQ}{2} + S \frac{D}{EOQ}$$

$$TC = 8.000 \frac{5.273,76}{2} + 500.000 \frac{222,500}{5.273,76}$$

$TC = Rp.42.190.046$, where

TC= Total Inventory Cost

Q*= Economic Order Quantity (EOQ)

H = Storage Cost

S = Ordering Cost atau Setup Cost

R = Reorder Point

D = Demand per day

L = Lead Time

SS = Safety Stock

EOQ Calculation for Chicken Meat:

$$EOQ = \frac{\sqrt{2 \cdot S \cdot D}}{H}$$

$$EOQ = \frac{\sqrt{2(102.500 \times 360.000)}}{8000}$$

$$EOQ = \frac{\sqrt{73.800.000.000}}{8000}$$

$$EOQ = \sqrt{9.225.000}$$

$EOQ = 3.037,27 \text{ kg}$, where:

D = Goods demand (unit/year)

S = Ordering Cost or Setup Cost (Rp/order)

H = Storage Cost (% goods value)

To find the safety stock (SS) level using the company's current service level of 0.90, the following results are obtained:

$$Z = 1,281$$

$$\alpha = 1.153,85$$

$$SS = Z \times \alpha$$

$$SS = 1,281 \times 1.153,85$$

$$SS = 1.478,08$$

To determine the reorder point (ROP), use the following formula:

$$d = \frac{D}{\text{Total Annual working days}}$$

$$d = \frac{360.000}{312} = 1.153,85$$

Lead time = 3 days

ROP = Reorder Point

$$= (d \times L) + SS$$

$$= (1.153,85 \times 3) + 1.478,08$$

$$= 3.461,54 + 1.478,08$$

$$= 4.939,62 \text{ kg}$$

So, every time the stock of Kebuli Rice in the warehouse reaches 4.939,62 kg, the Restaurant manager should immediately order again the EOQ quantity.

Then to find out the total inventory costs that need to be spent by the restaurant using the EOQ formula:

$$TC = H \frac{EOQ}{2} + S \frac{D}{EOQ}$$

$$TC = 8.000 \frac{3.037,27}{2} + 500.000 \frac{360.000}{3.037,27}$$

$TC = Rp.24.298.148$, where

TC= Total Inventory Cost

Q*= Economic Order Quantity (EOQ)

H = Storage Cost

S = Ordering Cost atau Setup Cost

R = Reorder Point

D = Demand per day

L = Lead Time

SS = Safety Stock

EOQ Calculation for chevon:

$$EOQ = \frac{\sqrt{2 \cdot S \cdot D}}{H}$$

$$EOQ = \frac{\sqrt{2(340.000 \times 4.000)}}{8000}$$

$$EOQ = \frac{\sqrt{2.720.000.000}}{8000}$$

$$EOQ = \sqrt{340.000}$$

$EOQ = 583,10 \text{ kg}$, where:

D = Goods demand (unit/year)

S = Ordering Cost or Setup Cost (Rp/order)

H = Storage Cost (% goods value)

To find the safety stock (SS) level using the company's current service level of 0.90, the following results are obtained:

$$Z = 1,281$$

$$\alpha = 12,82$$

$$SS = Z \times \alpha$$

$$SS = 1,281 \times 12,82$$

$$SS = 16,42$$

To determine the reorder point (ROP), use the following formula:

$$d = \frac{D}{\text{Total Annual working days}}$$

$$d = \frac{4.000}{312} = 12,82$$

Lead time = 3 days

ROP = Reorder Point

$$= (d \times L) + SS$$

$$= (12,82 \times 3) + 16,42$$

$$= 38,46 + 16,42$$

$$= 54,88 \text{ kg}$$

So, every time the stock of Kebuli Rice in the warehouse reaches 54,88 kg, the Restaurant manager should immediately order again the EOQ quantity.

Then to find out the total inventory costs that need to be spent by the restaurant using the EOQ formula:

$$TC = H \frac{EOQ}{2} + S \frac{D}{EOQ}$$

$$TC = 8.000 \frac{583,10}{2} + 340.000 \frac{4.000}{583,10}$$

$TC = Rp.4.664.761$, where

TC= Total Inventory Cost

Q*= Economic Order Quantity (EOQ)

H = Storage Cost

S = Ordering Cost atau Setup Cost

R = Reorder Point

D = Demand per day

L = Lead Time

SS = Safety Stock

EOQ Calculation for Ribs:

$$EOQ = \frac{\sqrt{2 \cdot S \cdot D}}{H}$$

$$EOQ = \frac{\sqrt{2(180.000 \times 750)}}{8000}$$

$$EOQ = \frac{\sqrt{270.000.000}}{8000}$$

$$EOQ = \sqrt{33.750}$$

$EOQ = 183,71 \text{ kg}$, where:

D = Goods demand (unit/year)

S = Ordering Cost or Setup Cost (Rp/order)

H = Storage Cost (% goods value)

To find the safety stock (SS) level using the company's current service level of 0.90, the following results are obtained:

$Z = 1,281$

$\alpha = 2,40$

$SS = Z \times \alpha$

$SS = 1,281 \times 2,40$

$SS = 3,08$

To determine the reorder point (ROP), use the following formula:

$$d = \frac{D}{\text{Total Annual working days}}$$

$$d = \frac{750}{312} = 2,40$$

Lead time = 3 hari

ROP = Reorder Point

= $(d \times L) + SS$

= $(2,40 \times 3) + 3,08$

= $7,21 + 3,08$

= 10,29 kg

So, every time the stock of Kebuli Rice in the warehouse reaches 10,29 kg, the Restaurant

manager should immediately order again the EOQ quantity.

Then to find out the total inventory costs that need to be spent by the restaurant using the EOQ formula:

$$TC = H \frac{EOQ}{2} + S \frac{D}{EOQ}$$

$$TC = 8.000 \frac{183,71}{2} + 340.000 \frac{750}{183,71}$$

$TC = Rp.1.469.694$, where

TC= Total Inventory Cost

Q*= Economic Order Quantity (EOQ)

H = Storage Cost

S = Ordering Cost atau Setup Cost

R = Reorder Point

D = Demand per day

L = Lead Time

SS = Safety Stock

Calculation Result Interpretation

The order quantity (EOQ), order frequency, reorder point (ROP), and total raw material inventory cost for a single period per material are all displayed in the table below as the outcomes of calculations made using the EOQ method.

Table 5

Quantity Analysis with EOQ (rounded-up)				
Raw Material	Annual Demand	α (Std. Dev.)	SS	ROP
Rice	222.500	713,1	914	3.053
Chicken	360.000	1.154,9	1.479	4.940
Chevon	4.000	12,8	17	55
Ribs	750	2,4	4	11

Source: Research Data, 2025

Table 6

Cost Analysis with EOQ (rounded-up)			
Raw Material	EOQ	Frequency Order	Total Inventory Cost
Rice	5.274	43	42.190.046,22
Chicken	3.038	119	24.298.148,08
Chevon	584	7	4.664.761,52
Ribs	184	5	1.469.693,85

Source: Research Data, 2025

The aforementioned data shows that for Nasi Kebuli, the order based on the EOQ technique

is 5,273.76 kg, and orders are placed 42 times a year because the amount needed in a single period is 222,500 kg. When Nasi Kebuli's inventory reaches 3,052.9 kg and its annual cost is Rp 42,190,046, it is time to reorder.

In the meantime, orders for chicken meat are placed 118 times a year, with an order based on the EOQ technique of 3,037.27 kg because the need in a single period is 360,000 kg. The yearly cost of chicken is Rp 24,298,148, and the reorder point occurs when the inventory reaches 4,939.62 grams. The EOQ order for Chevron is 583.10 kg, with six orders per year, because the demand for one time is 4,000 kg. Chevron costs Rp 4,664,761 a year, and the reorder point occurs when the chevon inventory reaches 54.88 kg.

Lastly, the EOQ order for Ribs is 183.71 kg, with four orders annually, as the demand for one period is 750 kg. Ribs cost Rp 1,469,693 a year, and the reorder threshold occurs when the chevon inventory exceeds 10.29 kg.

With the previous old methods, the EOQ and ROP values are built on understated demand. Therefore, we need to improve the methods by using the quantity sales figures to recalculate the EOQ and ROP.

Table 7
Quantity Analysis with an improved EOQ

Raw Material	Annual Demand	α (Std. Dev.)	SS	ROP
Rice	310.800	996,1	1.276	4.265
Chicken	375.800	1.204,5	1.543	5.156
Chevon	10.000	32,1	41	137
Ribs	4.250	13,6	17	58

Source: Research Data, 2025

With the improved EOQ calculation, we can get the new annual inventory Cost (Table 8).

Table 8
Cost Analysis with an improved EOQ

Raw Material	EOQ	Frequency Order	Total Inventory Cost
Rice	6.233	50	49.863.814,54
Chicken	3.103	122	24.825.631,92
Chevon	922	11	7.375.635,57
Ribs	437	10	3.498.571,14

Source: Research Data, 2025

The improved EOQ calculation supports a better conclusion: EOQ plus a properly sized

reorder point can raise fill rate from 18–72% toward 100% for the problem items, at a moderate rise in inventory cost.

Table 9
Efficiency Data of using an improved data

Raw Material	Efficiency Rate (Old Methods)	Efficiency Rate (With New Improved EOQ)	Impact
Rice	1.396	1.000	Positive
Chicken	1.043	1.000	Positive
Chevon	2.500	1.000	Positive
Ribs	5.600	1.000	Positive

Source: Research Data, 2025

With the improved EOQ and ROP calculation method, even though we have to increase the total annual inventory cost, but we still can get the positive impact for the inventory management by solving the shortage problem of the inventory and improving the customer satisfaction from their repeat order.

CONCLUSION & RECOMMENDATION

The application of the EOQ method in managing raw material inventory can increase efficiency compared to the method used by the Kebuli Yaman restaurant, as can be seen from the results of the calculations that have been carried out.

The Kebuli Yaman Restaurant's raw material inventory management has not been operating smoothly. Raw material inventory management still has a lot of mistakes, particularly when it comes to the juice drink menu. This is due to the restaurant manager's erroneous calculations of the quantity and timing of raw material orders, which disrupts smooth production and prevents the restaurant from fulfilling all customer orders for the Kebuli Yaman menu.

The Kebuli Yaman Restaurant's inventory management has not yet reached its optimal level of efficiency. This is because the menu's raw materials frequently experience stock outs as a result of restaurant management's erroneous calculations regarding the quantity of raw material orders placed, the timing of those orders, and the provision of raw material supplies.

Many customers' unfilled orders are directly impacted by this. These issues show that the computation of raw material inventory, the number of raw material orders, and the time it takes to order and reorder raw material supplies are the factors that lead to restaurant inventory management. As a result, the production process is hindered, making it impossible for the restaurant to complete multiple customer orders.

The Economic Order Quantity (EOQ) method can increase the effectiveness of raw material inventory management at the Kebuli Yaman Restaurant based on the processed data. This is because the re-order point (ROP), which determines the amount at which the restaurant must reorder raw materials, may be used by EOQ to identify the most ideal quantity and ordering of raw materials. This can be solved by using sophisticated Food Ordering Management System (Manjula, Pol, & Varalakshmi, 2026).

Efficiency in raw material inventory management between input and output is attained by using the EOQ approach. In other words, EOQ can increase the effectiveness of raw material inventory management at the Kebuli Yaman Restaurant by ensuring that no raw materials are wasted due to damage and that there is never a lack of raw materials during operation.

This study still has a number of implementation flaws. Thus, it has to be reviewed in more detail in future studies. In order to see operational efficiency more thoroughly, it is crucial to carry out more research that can include many branches, as the analysis is still limited to a single branch site. It is advised that future research be able to employ more analytical tools that can be further integrated with the business's financial performance, as the analysis in this study was still carried out using two analytical tools, namely EOQ and Kraljic Matrix.

REFERENCES

- Algifari, M., Syamsuddin, S., Miru, S., & Hadi, S. (2022). Persediaan Bahan Baku Kedelai Pada Pabrik Tahu RGS di Desa Rerang Kecamatan Dampelas Kabupaten Donggala. *Jurnal Cahaya Mandalika*, 3(1), 860-871. doi:<https://doi.org/10.36312/jcm.v3i1.3758>
- Bhuvaneswari, M. (2026). Next-Generation Restaurant Management System with AI-Powered Food Recommendation, Live Chat Support, and Predictive Analytics. *IRJCS: International Research Journal of Computer Science*, 13(6), 601-606. doi:<https://doi.org/10.26562/irjcs.2026.v1306.02>
- Caroko, E. E. (2024, November 22). Solusi untuk pelaku usaha F&B di tengah kenaikan harga bahan baku. Diambil kembali dari <https://ekbis.sindonews.com:https://ekbis.sindonews.com/read/1492571/34/solusi-untuk-pelaku-usaha-fb-di-tengah-kenaikan-harga-bahan-baku-1732277513>
- Dewanti, M. A., Fadjar, A., Hakim, A., Sitepu, H. V., Sharon, S., Dirman, A., . . . Judijanto, L. (2024). *Akuntansi Perusahaan Jasa Dan Dagang: Panduan Praktis Untuk Manajemen Keuangan*. Jambi: Sonpedia Publishing Indonesia. Diambil kembali dari <https://buku.sonpedia.com/2023/12/akuntansi-perusahaan-jasa-dan-dagang.html>
- Efendi, M. A., & Purnama, J. (2024). Analisis Persediaan Bahan Baku Kertas Guna Meningkatkan Efisiensi Pengelolaan Persediaan pada Percetakan Wahyu Abadi (Studi Kasus: UD. Wahyu Abadi Surabaya). *Jurnal Surya Teknika*, 11(1), 236-243. doi:<https://doi.org/10.37859/jst.v11i1.7114>
- Facrureza, D., & Zanani, N. S. (2022). Analisis Penerapan Persediaan Bahan Baku Makanan Terhadap Persiapan Proses Produksi Di Harris Vertu Hotel Harmoni Jakarta. *FAME: Jurnal Food and Beverage, Product and Service Accomodation Industry Entertainment Services*, 5(2), 50-66.

- doi:<http://dx.doi.org/10.30813/fame.v5i2.4029>
- Gantara, Y. M., & Syihabuddin, M. (2025). Pengaruh Strategi Pengelolaan Bahan Baku dan Efisiensi Biaya terhadap Kualitas Produk pada Mirah Catering. *Digital Bisnis: Jurnal Publikasi Ilmu Manajemen dan E-Commerce*, 4(4), 232-243. doi:<https://doi.org/10.30640/digital.v4i4.5564>
- Ismail, I. (2025, June 19). Rahasia Sukses Kebuli Yaman: Dari 0 ke 41 Outlet dengan Sistem POS. Diambil kembali dari <https://accurate.id:https://accurate.id/business-spotlight/rahasia-sukses-kebuli-yaman/>
- Jacobs, F. R., & Chase, R. B. (2022). *Operations and Supply Chain Management* (6 ed.). New York: McGraw-Hill.
- Kieso, D. E., Weygandt, J. J., & Warfield, T. D. (2022). *Intermediate Accounting* (18 ed.). New Jersey: John Wiley & Sons.
- Kurniawan, V. G. (2022). Analisis Persediaan Bahan Baku Pasir Besi Di Pt.Semen Baturaja. *Jurnal Multidisipliner Kapalamada*, 1(3), 406–411. doi:<https://doi.org/10.62668/kapalamada.v1i03.279>
- Manjula, K., Pol, B. S., & Varalakshmi, K. R. (2026). Design and Implementation of a Food Ordering Management System. *International Journal of Research in Engineering Science and Management*, 9(8), 11–17. doi:<https://doi.org/10.65138/ijresm.v9i8.3500>
- Mukti, W. W., & Pradana, B. I. (2022). Analisis Pengendalian Persediaan Bahan Baku Beras Dengan Metode Eoq Pada Lusi Kuliner. *Jurnal Kewirausahaan Dan Inovasi*, 1(2), 154–162. doi:<https://doi.org/10.21776/jki.2022.01.2.04>
- P, K. K., & Haorei, W. (2026). Service Speed Innovation and Customer Satisfaction in a Rural Quick-Service Restaurant: An Empirical Study. *The IUP Journal of Operations Management*, 25(2), 5-27. doi:[10.71329/IUPJOM/2026.25.2.5-27](https://doi.org/10.71329/IUPJOM/2026.25.2.5-27)
- Park, E. (., & Kim, W.-H. (2021). The effect of inventory turnover on financial performance in the US restaurant industry: The moderating role of exposure to commodity price risk. *Tourism Economics*, 27(7), 1417-1429. doi:[10.1177/1354816620923860](https://doi.org/10.1177/1354816620923860)
- Pramuja, I., Hamsani, H., & Sumar, S. (2024). The Influence of Product Quality and Service Quality on Customer Satisfaction at D.lab Coffee and Eatery Pangkalpinang. *Holistic Journal of Management*, 9(2), 42-58. doi:<https://doi.org/10.33019/hjmr.v9i2.4484>
- Putri, A., Afiah, N., Syachbrani, W., Anwar, A., & Sahade. (2025). Analisis Sistem Pengelolaan Persediaan Bahan Baku dengan Metode Economic Order Quantity (EOQ). *Jurnal Penelitian Ekonomi Akuntansi (JENSI)*, 9(2), 275-291. doi:<https://doi.org/10.33059/jensi.v9i2.12868>
- Saha, S. K., & Roy, A. (2024). Perception About Inventory Management and Control at Quick Service Restaurants. Dalam Y. Ramakrishna, & B. Srivastava, *Strategies for Environmentally Responsible Supply Chain and Production Management* (hal. 228-247). Pennsylvania: IGI Global Scientific Publishing. doi:<https://doi.org/10.4018/979-8-3693-0669-7.ch011>
- Saputra, C. T., & Sunarso. (2024). Analisis Pengendalian Persediaan Bahan Baku dengan Metode Material Requirement Planning pada Coffee & Local Food Waroeng Kobar di Surakarta. *PENG: Jurnal Ekonomi Dan Manajemen*, 2(1), 484-503. doi:<https://doi.org/10.62710/jaavt195>
- Sasikanth, M., & Krithika, D. R. (2024). Restaurant Inventory Management System. *International Journal of Emerging Technologies and Innovative Research (IJETIR)*, 4(6), 87-92. doi:[10.48175/IJETIR-1217](https://doi.org/10.48175/IJETIR-1217)

- Sitepu, H. V., & Munawarah, I. (2025). Pelatihan penerapan pengendalian internal terhadap laporan keuangan organisasi. *Kacaneegara Jurnal Pengabdian Pada Masyarakat*, 8(2), 213-224.
doi:<https://doi.org/10.28989/kacaneegara.v8i2.2503>
- Tobing, A. R., & Dewi, M. P. (2026). Evaluation of Internal Control in Inventory Management to Improve Effectiveness in Inventory Management (Case Study at Oharang Restaurant Cimahi Branch). *Jurnal Ilmu Ekonomi Manajemen dan Akuntansi*, 7(1), 124-133.
doi:<https://doi.org/10.37012/ileka.v7i1.3360>
- Yang, Y., Yin, Q., Hwang, G., Liang, S., & Yang, D. (2026). Restaurant week paradox: from relation to transaction in online reviews. *International Journal of Contemporary Hospitality Management*, 38(7), 2140–2160.
doi:<https://doi.org/10.1108/IJCHM-07-2025-1124>

AUTHOR BIODATA

The writers of this article are from the GICI College of Economics, one of the quickly expanding private universities in the Greater Jakarta region. The first author graduated in 2024 from the GICI College of Economics. Although the second author has been a permanent lecturer in the GICI College of Economics' Accounting Study Program since 2021, he has over 21 years of relevant job experience as a practitioner in the accounting and finance industries.