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# OPTIMIZATION OF TEAK WOOD RAW MATERIAL INVENTORY USING THE EOQ METHOD AT UD GEMILANG, GUNUNGSITOLI CITY

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***Abstract***

*This study highlights the problem of managing teak wood raw materials in the form of boards at UD Gemilang, Gunungsitoli City. The company often experiences shortages or excess inventory due to a conventional ordering system that is not based on optimal demand calculations. This inefficiency causes wasteful costs and disrupts the smooth production process. The main objective of this study is to analyze current inventory management and apply the EOQ (Economic Order Quantity) method to determine the optimal order quantity, as well as evaluate its impact on cost efficiency and production operations. The EOQ method is expected to be a systematic and rational solution for managing inventory more efficiently. This study uses a descriptive quantitative approach. Data were collected through direct interviews with business owners and documentation of raw material purchasing and usage reports for 2024. The analysis was conducted using the EOQ formula to calculate the optimal order quantity, ordering costs, storage costs, safety stock, reorder point, and total inventory cost (TIC). The analysis results show that the optimal order quantity for teak wood raw materials is 282 boards, with an ordering frequency of 6 times a year. This number is more efficient than the actual ordering system which is carried out monthly without a fixed calculation. The recommended safety stock is 22 boards, with a Reorder Point (ROP) of 36 boards. The implementation of the EOQ method successfully reduced total inventory costs from Rp6,768,000 to Rp3,496,800.*

***Keywords:*** *Economic Order Quantity, Inventory Optimization, Teak Wood*

## INTRODUCTION

In the manufacturing industry, production optimization is an effort to achieve maximum efficiency in the production process by minimizing costs and time while maximizing output. One crucial aspect of production optimization is effective raw material inventory management. Suboptimal inventory management can lead to overstocking or stockouts, both of which negatively impact production efficiency and a company's operating costs. Production optimization is a systematic effort to maximize the efficiency of resource use in order to achieve optimal production results.

UD. Gemilang is a wood-based furniture manufacturing company in Gunungsitoli City. This industry faces challenges in managing its raw wood inventory, particularly in ensuring the availability of selected wood stocks that meet production demands. Various types of wood are used as raw materials in furniture production in this industry, including durian, mahogany, and teak. Durian wood is known for its abundant availability and affordable price, while mahogany has a smooth texture and attractive color. However, teak remains a favorite in the furniture industry due to its strength, durability, and distinctive grain beauty, making it a prime choice for high-quality products. This industry relies on teak as its primary raw material in furniture production. However, behind this, UD. Gemilang experiences difficulties in maintaining a stable teak wood inventory. Limited stock causes delays in the production process and delays in fulfilling customer orders, which ultimately can reduce the company's reputation and competitiveness.

The incident at UD. Gemilang involved limited teak wood supplies, particularly planks, the primary raw material for production, due to inaccurate raw material requirements planning. This hampered production and prevented the company from optimally meeting market demand. To address this issue, appropriate inventory management methods are required.

Previous studies, such as (Intan Puspita, 2024), suggest that inventory control needs to be carefully managed to maintain a balance between production needs, costs, and value. By optimizing raw material management, UD. Gemilang can strengthen its competitiveness in the market while supporting environmental conservation efforts through waste reduction and more efficient resource utilization. Furthermore, Jacobs & Chase (Intan Puspita, 2024) also stated that the main objective of inventory control is to maintain smooth operations, avoid material shortages that can disrupt the production process, and facilitate the response to fluctuations in market demand. Therefore, this research is expected to make a real contribution to improving the teak wood raw material management system at UD. Gemilang.

## THEORY

Soekartawi(Indhasari & Ramli, 2024)states that optimization is the process of achieving the most ideal conditions, namely obtaining a solution to a problem by considering the maximum or minimum limits set. According to Sudiantini et al.(Nuraeni & Santoso, 2024)Production is one of the factors that can influence a business's operational performance. Optimization, also known as optimizing, generally refers to the process or method of achieving optimal results. In English, the term derives from the word "optimization," which has a similar meaning: achieving optimal conditions.

According to (Nengsih et al., 2025), production optimization is a very important strategy in reducing waste and increasing productivity without reducing the value of product quality. Fole & Kulsaputro (Asrul fole, 2025) stated that there are several factors that are the main challenges in optimizing the production process (production optimization) in meeting fluctuating market demand, the factors in question are product capacity, availability of raw materials, and production efficiency. In production optimization there are several benefits obtained by industries and companies, According to (Rahmiyati & Rachmawati, 2024) production optimization has great potential in changing manufacturing operations and making them more efficient at various levels. The proper application of optimization can bring a number of benefits to industries and companies, including:

1. Improve overall equipment efficiency.
2. Reduce delays in the production process.
3. Ensures reduced damage to equipment.
4. Increase the effectiveness of equipment use.
5. Routinely monitor equipment availability and performance.
6. Improve the quality and performance of the final product.
7. Predict production performance variations, analyze waste, and identify inefficiencies.
8. Reduce downtime or overtime and unplanned maintenance.
9. Optimizing energy use to save costs and contribute to environmental sustainability.
10. Analyze sources of scrap, waste, and other inefficiencies.

**Raw Material Inventory**

Schroeder, in his book (Purnomo & Riani, 2018), defines inventory as a stock of materials stored for future use to meet customer demand. According to Arifianti (Nuraeni & Santoso, 2024), inventory is an asset consisting of various goods for industrial purposes, intended for sale within the normal operating cycle, including goods in the production process and materials to be used in the production process. Furthermore, according to(Cindy Permata Dewi, 2022)Inventory is goods stored for later use or sale at a specific time depending on existing demand or to be sold in the future. Schroeder in the book (Purnomo & Riani, 2018) defines inventory as a stock of materials stored with the aim of providing future supplies to meet customer demand.

According to Arifianti (Nuraeni & Santoso, 2024), inventory is an asset consisting of various goods for industrial purposes, intended for sale within the normal operating cycle, including goods in the production process and materials to be used in the production process. According to Lase et al.(Nuraeni & Santoso, 2024)states that inventory management is a series of decisions or policies implemented by a company to ensure stock availability, so that the company is able to meet needs with the right quality, quantity and time.

Sudiantini et al. (Nuraeni & Santoso, 2024) stated that raw materials are a key component in production activities, encompassing goods obtained from suppliers, which are then processed and transformed into final products that can be marketed by the company. Raw materials can be categorized in several ways, including price and frequency of use.

**Inventory Management**

Fahmi in the book(Julyanthry, 2020)states that inventory management is a company's ability to organize and manage the need for goods, whether raw materials, semi-finished goods, or finished goods, so that they are always available in stable or fluctuating market conditions. Wahyudi in his book(Julyanthry, 2020)explains that inventory management includes activities related to planning, implementation, supervision, determining material requirements, and determining inventory levels and composition to maintain smooth production.

Heizer & Render (Julyanthry, 2020) state that the goal of inventory management is to find a balance between investment in inventory and service to customers. Riskatania (Julyanthry, 2020) adds that the goal of inventory management is to provide good service to customers at minimal total cost. Daft (Julyanthry, 2020) explains that the goals of inventory

management include providing the best service to consumers, streamlining the production process, anticipating inventory shortages (stock outs), and dealing with price fluctuations. Johns and Harding (Julyanthry, 2020) state that the goal of inventory management is to minimize investment in inventory while still meeting expected service levels.

According to Fahmi in his book (Julyanthry, 2020), inventory management is a company's ability to organize and manage the need for goods, whether raw materials, semi-finished goods, or finished goods, so that they are always available in stable or fluctuating market conditions. Meanwhile, Wahyudi in his book (Julyanthry, 2020) states that inventory management involves activities related to planning, implementation, supervision, determining material requirements, and determining the level and composition of inventory to maintain smooth production.

**Economic Order Quantity (EOQ) Method**

According to Habibie & Widyaningrum(Zakki et al., 2025)The EOQ method is a management approach related to the quantity of goods that must be ordered to minimize total inventory costs. Furthermore, according to Haobenu et al.(Safitri et al., 2024)EOQ is a method used to determine inventory when purchasing or ordering raw materials. According to Satriadwati,(Safitri et al., 2024)EOQ is a method for optimizing the control of the amount or quantity of materials by a company within a certain period of time to be more effective and reduce unnecessary costs.

According to Hastari et al and Suryono et al, (Zakki et al., 2025) there are several objectives of EOQ, including:

1. Knowing the most economical raw material inventory order size
2. Knowing how many times in one period raw material purchases should be made
3. Knowing the amount of inventory (safety stock) that must be prepared
4. Knowing the limit for ordering raw materials during the grace period (reorder point)
5. Knowing the total cost of raw material inventory
6. Knowing the level of efficiency of the total costs incurred in purchasing raw materials

EOQ is based on several key assumptions, such as constant annual demand, constant inventory prices, availability of goods when needed, and fixed inventory costs. These assumptions support the accuracy of EOQ calculations for effective and efficient inventory management (Haming & Nurnajamuddin, 2025).

1. The demand for goods is known with certainty, is constant, and is not interdependent.
2. *Lead time*, namely the time between ordering and receiving goods, is fixed and predictable.
3. The ordered items are received intact in one shipment at a certain time.
4. There are no discounts for large purchases.
5. The costs calculated only include ordering costs and storage costs.
6. Stock shortages can be completely prevented as long as orders are placed on time.

**RESEARCH METHOD**

According to Sugiyono in(Ali et al., 2022)A research method is a scientific way to obtain data that has a specific purpose and use. The type of research used in this study is quantitative-descriptive research. Quantitative research is conducted to obtain measurements

and analysis of numerical data related to research variables objectively. The descriptive quantitative method is an approach used to describe, present, and summarize data systematically through statistics, thus facilitating understanding of the information contained in the data.(Aziza, 2023)The data sources in this study come from interviews and observations conducted by the researcher. Information was obtained through direct observation and various complaints revealed in the interviews. Data analysis in this study was conducted quantitatively using the EOQ model.

Descriptive analysis techniques are used for data analysis by presenting or describing the collected data as it is, without trying to draw general conclusions.(Alfianti & Kartikasari, 2023). By using this technique, we can determine the optimal amount of raw material purchases to minimize total inventory costs. Data analysis techniques are methods applied to process data to make it easier to understand and to help find solutions to existing problems.

## RESULTS AND DISCUSSION

### Result

**Table 1.**Details of Teak Wood Raw Material Inventory at UD Gemilang in 2024

| NO | COMPONENT | MARK | INFORMATION |
|---|---|---|---|
| 1. | Total Annual Demand | 1,640 lbr | Average raw material requirements per year |
| 2. | Purchase Amount Per/order | 125 lbr | Orders are made once a month |
| 3. | Order Frequency Per/year | 12 times | Number of orders in a year |
| 4. | Cost Per/order | Rp. 300,000 | Transportation and loading and unloading costs |
| 5. | Storage Cost Per/unit per year | Rp. 12,400 | Based on total holding costs divided by demand |
| 6. | Total Annual Order Cost | Rp3,936,000 | Frequency x cost per/order |
| 7. | Total Annual Storage Cost | Rp. 775,000 | Average inventory cost x holding cost per unit |
| 8. | Total Inventory Cost | Rp4,711,000 | Total annual inventory cost |

**Source:** Research Processed 2025

Based on the results of interviews conducted with UD. Gemilang, it was discovered that the company routinely orders 125 teak wood raw materials per purchase, which is generally done once a month. From this pattern, the total raw material requirement for the year reaches 1,640 boards. This number results in an ordering frequency of 13.12 times per

year, indicating that the company sometimes places additional orders in certain months to adjust to production needs or anticipate supply constraints. For each order transaction, the company incurs a cost of Rp 300,000, which includes shipping, unloading, and administration costs. With this frequency, the total annual ordering cost incurred by the company is approximately Rp 3,936,000. Meanwhile, the storage cost per unit of raw material (teak wood plank) per year is estimated at Rp 12,400. With the number of purchases per order of 125 boards, the average inventory stored is 62.5 boards. From this data, it is calculated that the total storage cost per year is Rp 775,000. If the two cost components are added together, it is obtained that the total annual inventory cost (Total Inventory Cost/TIC) based on current company policy reaches IDR 4,711,000.

**Calculation of the Quantity of Teak Wood Raw Material Orders Using the Economic Order Quantity (EOQ) Method**

In this study, the EOQ method is applied to analyze the ideal quantity of teak wood raw material orders for UD. Gemilang. The calculation is based on annual demand data, ordering costs per transaction, and storage costs per unit per year. This step aims to evaluate the efficiency of the company's current raw material procurement policy. By comparing the results of the EOQ calculation and UD. Gemilang's actual policy, researchers can assess whether the company has managed inventory optimally or still has room for improvement. The application of this method also helps the company avoid overstock and stockout conditions, so that production operations can run more stably, efficiently, and economically. The optimal ordering calculation using the EOQ method is as follows.

1. *Economic Order Quantity*

$$\mathbf{EOQ} = \frac{\sqrt{2\ DS}}{H}$$

$$EOQ \quad \frac{\sqrt{2 \times 1.640 \times 300.000}}{12.400} = 984.000.000$$

$$EOQ \quad \frac{984.000.000}{12.400} = 79.354.838$$

$$EOQ \quad \sqrt{79.354.838} = 281{,}57 \text{ (Dibulatkan)}$$

$$EOQ = 282 \text{Sheet}$$

2. After obtaining the most efficient order quantity (EOQ), the next step is to calculate how often the company needs to place orders in one year.

$$F = \frac{D}{Q}$$

It is known that:
D = 1,640Board
Q = 282Board
Calculation ;
F 1,640/282=5.81 times (rounded)
F = 6 times

The result of this division is approximately 5.81 times per year. This indicates that to achieve cost efficiency, UD. Gemilang is recommended to purchase raw materials six times per year, rounded up to the nearest whole number.

3. After completing the calculation of the optimal ordering frequency using the EOQ method, the next stage is to calculate the safety stock.
   $Safety\ Stock = Z \times Sd \times \sqrt{L}$
   The calculation of safety stock is as follows:
   SS = 1.65 x 7.45 x 1.732
   SS = 1.65 x 12.9034
   SS = 21.29 (rounded)
   SS = 22 SHEETS
   Based on data processing of teak wood demand for raw materials over 12 months in 2024, it was found that raw material demand varies from month to month. The average monthly demand reached 136.67 units, while the standard deviation was 7.45 units. This indicates that demand fluctuations relative to the average are moderate and should still be taken into account in raw material procurement planning.

4. The next step is to determine the reorder point (ROP).
   $ROP=(d\times L)+SS$
   It is known that:
   D = 136,67 : 30 days = 4.56 Units/board
   L = 3day
   SS = 22board sheet
   Solution:
   ROP = (4.56 x 3) + 22
   ROP = 13.36 + 22
   ROP = 35.36 (rounded)
   ROP = 36 sheets of board

5. The next step taken is to determine the Total Annual Inventory Cost (TIC).
   TC=({D})/({Q}) S+ ({Q})/({2}) H
   Brother:
   Q = 282 Sheets of board
   H = Rp. 12,400
   S = Rp. 300.00
   D = 1,640 sheets of board
   Calculation:
   TC = ({1640})/({282}) 300,000+ ({282})/({2}) 12,400
   TC = (5.82 ×300,000)+(141 ×12,400)
   TC = 1,746,575 + 1,748,400
   TC = Rp. 3,494,975
   Based on the analysis using the Economic Order Quantity (EOQ) method, the total annual inventory cost incurred by UD. Gemilang was Rp 3,494,975. This amount includes all costs arising from ordering and storing teak raw materials for one year.

## Discussion

Inventory management plays a crucial role in supporting the smooth running of production activities within a company. For manufacturing companies like UD. Gemilang, effective management of raw materials significantly impacts production process efficiency and operational cost control. The primary objective of inventory management is to maintain a balance between material availability and production needs, while minimizing unnecessary waste. When planning raw material purchases, the quantity and timing of orders cannot be based solely on habit or intuition. Inaccurate calculations can lead to risks such as excess stock, which increases storage costs, or raw material shortages, which hinder production. This study highlights teak wood as the primary material most frequently used in furniture manufacturing at UD. Gemilang, thus, inventory management of this material is the primary focus of the study.

The analysis of inventory policies currently implemented at UD. Gemilang shows that the raw material ordering system is still conventional, without a structured quantitative approach. This condition has an impact on the high total annual inventory costs that the company must bear. Therefore, the Economic Order Quantity (EOQ) method is used in this study as a more systematic alternative approach in determining optimal order quantities and efficient ordering times. A comparison between the results of the EOQ method calculations and the company's conventional policies will be outlined in the following discussion to see the extent of cost efficiency that can be obtained through the application of this method.

**Table 2.**Comparison Between Business Policy Inventory Costs and the EOQ Method

| Component | Business policy | EOQ Method | Information |
|---|---|---|---|
| Total annual demand | 1,640 Sheets | 1,640 Sheets | The demand remains the same in both methods. |
| Number of purchases per order | 125 Sheets | 282 Sheets | EOQ suggests larger purchase quantities for efficiency |
| Order frequency per year | 12 Times | 6 Times | EOQ reduces the frequency of ordering cost-effectively. |
| Ordering fee per order | Rp. 300,000 | Rp. 300,000 | Same in both methods |
| Storage cost per sheet per year | Rp. 12,400 | Rp. 12,400 | Same in both approaches |
| Total annual ordering cost | Rp. 3,939,000 | Rp. 1,746,575 | ROQ is more cost effective to order due to low frequency |
| Total annual storage costs | Rp. 775,000 | Rp. 1,746,400 | Higher EOQ due to storing more per year |
| *Safety stock* | - | 22 Sheets | EOQ takes into account fluctuations in demand |
| *Reorder point* | - | 36 Sheets | EOQ sets the reorder point to avoid stockouts. |
| *Total inventory cost* (TIC) | Rp. 4,711,000 | Rp. 3,494,975 | EOQ is more efficient overall |

Source: Research Processed 2025

Based on the comparison results, it is known that the amount of teak wood raw material required per year at UD. Gemilang remains the same in both approaches, namely 1,640 sheets. Significant differences arise in the aspect of the quantity purchased per order and the frequency of orders. In the company's policy, purchases are made as many as 125 sheets per month, which means orders are made 12 times a year. Meanwhile, calculations using the Economic Order Quantity (EOQ) method suggest purchasing 282 sheets per order, so the frequency is reduced to only 6 times a year. This strategy makes the EOQ method more efficient because it can reduce the frequency of orders without affecting raw material fulfillment.

The cost incurred for each order remains the same, which is Rp 300,000. However, because the EOQ method requires a smaller order quantity, the total annual ordering cost is more economical, which is Rp 1,746,575 compared to the company's policy which reaches Rp 3,939,000. On the other hand, although the holding cost per unit per year remains the same in both methods, which is Rp 12,400 per sheet, the total annual holding cost in the EOQ method is higher because the amount of raw materials stored is greater in each cycle, which is Rp 1,746,400 compared to the company's policy which is only Rp 775,000. Another advantage of the EOQ method is the calculation of a safety reserve of 22 sheets, as well as the determination of a reorder point of 36 sheets, which is not applied in conventional policies. These two components are important to prevent stock shortages due to delays in supply or spikes in demand.

Overall, the EOQ method results in a total inventory cost of Rp 3,494,975, which is lower than the business policy of Rp 4,711,000. Therefore, it can be concluded that the application of the EOQ method is more effective in managing inventory costs and helps maintain smooth production at UD. Gemilang. Although the calculation results show that the EOQ method can reduce inventory costs and make stock management more efficient, its application at UD. Gemilang needs to be adjusted to real conditions. This is because this business does not order raw materials every day, but only when there is a production need. This pattern differs from the assumptions of the EOQ method, which assumes demand and ordering schedules are always stable.

## 4. CONCLUSION

Based on the results of research conducted on optimizing teak wood raw material inventory at UD. Gemilang, Gunungsitoli City using the EOQ method, the following conclusions were obtained:

1. The research results show that UD. Gemilang still implements a manual teak wood inventory control system that is not based on precise demand calculations. This pattern creates the risk of stock surpluses or deficits, especially when there are significant changes in production volumes, which ultimately impacts high operational costs. The

EOQ method has proven to be more effective in reducing costs and increasing operational efficiency.

2. The application of the Economic Order Quantity (EOQ) method resulted in an ideal purchase quantity of 282 boards per cycle, with a frequency of six orders per year. This method proved more efficient than the old system because it could meet annual demand with a smaller order quantity while still ensuring smooth production. The addition of 22 boards of safety stock and 36 reorder points further strengthened the system's reliability in anticipating potential raw material shortages.
1. Data comparison shows that the EOQ method can reduce total annual inventory costs from Rp4,711,000 to Rp3,494,975. These savings primarily result from reduced ordering frequency, which directly impacts lower ordering costs. Although holding costs increase slightly due to the higher purchase volume per cycle, overall, this method is more economical, planned, and effective in supporting a smooth long-term production process.

## REFERENCES

Alfianti, E., & Kartikasari, W. (2023). Pengaruh Media Audio Visual Terhadap Hasil Belajar Pada Pembelajaran SBDP Siswa Kelas V SD Inpres 3/77 Data Kecamatan Mare Kabupaten Bone. *Jurnal PGSD Universitas Lamappapoleonro*, *1*(2), 127–134. https://doi.org/10.57093/jpgsdunipol.v1i2.19

Ali, M. M., Hariyati, T., Pratiwi, M. Y., & Afifah, S. (2022). Metodologi Penelitian Kuantitatif dan Penerapannya dalam Penelitian. *Education Journal.2022*, *2*(2), 1–6.

Asrul fole, M. (2025). *JIEI : Journal of Industrial Engineering Innovation JIEI : Journal of Industrial Engineering Innovation*. *01*(01), 10–17.

Aziza, N. (2023). Metodologi penelitian 1 : deskriptif kuantitatif. *ResearchGate*, *July*, 166–178.

Cindy Permata Dewi, C. (2022). Penerapan Pencatatan Akuntansi Persediaan Barang Dagang Berdasarkan PSAK No.14 Pada Toko Online Shop CUTIESTORE.CO. *SINOMIKA Journal: Publikasi Ilmiah Bidang Ekonomi Dan Akuntansi*, *1*(2), 145–152. https://doi.org/10.54443/sinomika.v1i2.167

Fesa Putra Kristianto, E. P. (2021). Analisis Pengendalian Persediaan Bahan Baku Kardus Dengan Menggunakan Metode Eqonomic Order Quantity. *Jurnal Penelitian Dan Pengkajian Ilmiah Eksakta*, *1*(1), 59–64. https://doi.org/10.47233/jppie.v1i1.431

Hikam, K. M. (2022). Analisia Pengendalian Persediaan Bahan Baku Dengan Metode Economic Order Quantity (Eoq) Pada Umkm Pengrajin Sangkra Burung Sunda Makmur. *Tekmapro : Journal of Industrial Engineering and Management*, *17*(1), 61–72. https://doi.org/10.33005/tekmapro.v17i1.204

Indhasari, F., & Ramli, M. A. (2024). OPTIMASI BIAYA PRODUKSI DALAM INDUSTRI PENGOLAHAN KAYU (Studi Kasus Usaha Jepara Meubel Kayu Jati Majene). *Gorontalo Journal of Forestry Research*, *7*(1), 24. https://doi.org/10.32662/gjfr.v7i1.3300

Intan puspita, aji. (2024). ANALISIS PENGENDALIAN PERSEDIAAN BAHAN BAKU KAYU JATI PADA PT. XYZ DENGAN METODE ECONOMIC ORDER QUANTITY, SAFETY STOCK, DAN REORDER POINT. *Jurnal Neraca Manajemen, Akuntansi , Ekonomi*, *8*(5).

Julyanthry, V. S. (2020). *MANAJEMEN PRODUKSI & OPERASI*.

Nengsih, R., Makmur, T., & Rahmi, A. (2025). *Meningkatkan Profitabilitas UMKM Pengrajin Gerabah dengan Efisiensi Keuangan dan Optimalisasi Produksi*. *X*(1), 12538–12547.

Nuraeni, N., & Santoso, B. (2024). Peranan Manajemen Persediaan Bahan Baku terhadap Penjadwalan Produksi PT XYZ. *Jurnal Bisnis Dan Manajemen (JURBISMAN)*, *2*(2), 1–15.

Nurjanah. (2021). Analisis Kepuasan Konsumen dalam Meningkatkan Pelayanan Pada Usaha Laundry Bunda Nurjanah. *Jurnal Mahasiswa*, *1*, h. 5.

Pradana V, & Jakaria R. (2020). Pengendalian Persediaan Bahan Baku Gula Menggunakan Eoq Dan Just in Time. *Bina Teknika*, *16*(1), 43–48.

Purnomo, H., & Riani, L. P. (2018). Optimasi Pengendalian Persediaan. *Hery Purnomo*, 122.

Rahmiyati, N., & Rachmawati, T. (2024). Jurnal Pengabdian Harapan Bangsa Optimasi Produksi Dengan Penerapan Teknologi Tepat Guna Pada UMKM Bawang Goreng Khalisa Di

Surabaya Jurnal Pengabdian Harapan Bangsa. *Jurnal …*, *2*(2), 221–226. https://doi.org/10.56854/jphb.v2i2.181

Safitri, S. Z., Sidoarjo, U. M., Rahmansyah, M. M. A., Sidoarjo, U. M., Jakaria, R. B., & Sidoarjo, U. M. (2024). *Efisiensi Biaya Dalam Pengadaan Persediaan Bahan Baku Dengan Metode Economic Order Quantity ( EOQ )*. *1*(3), 837–845.

Silitonga, R., Yusuf, M., Miskiyah, N., Bisnis, D. M., Sriwijaya, P. N., Bisnis, D. M., & Sriwijaya, P. N. (2025). *Jurnal Terapan Ilmu Ekonomi , Manajemen dan Bisnis Metode Economic Order Quantity ( EOQ ) dalam Analisis Motor Economic Order Quantity ( EOQ ) Method in the Analysis of Spare Parts Inventory Control at Bengkel Berkat Motor*. *5*(1).

Subadil, R. (2023). Analisis Pengelolaan Inventory Kayu Menggunakan Metode Economic Order Quantity pada UD. Sofie Furniture. *Serambi Engineering*, *VIII*(2), 5607–5614.

Turgay, S., & Allocation, I. (2023). Balancing Demand and Supply: Inventory Allocation in FMCG. *Industrial Engineering and Innovation Management*, *6*(10), 41–49. https://doi.org/10.23977/ieim.2023.061006

Zakki, M., Achtaar, A., Hidayati, N., & Arida, R. W. (2025). *Analisis Pengelolaan Sistem Inventori Bahan Baku pada Pabrik Krupuk Raya I dengan Menerapkan Metode Economic Order Quantity ( EOQ ) Raw Material ' s Inventory System Management Analysis at Raya I Krupuk ' s Factory using Methods of Economic Order Quantity*. *16*(225), 285–295. https://doi.org/10.33059/jseb.v16i2.10921.Abstrak