# The Influence of Raw Material Inventory Control on Production Targets at Wery Bakery in Gunungsitoli City

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## A R T I C L E   I N F O

## ABSTRACT

Inventory management is a planned approach to determine what to order, when to order and how many orders and how much stock so that the costs associated with purchasing and storing are optimal without disrupting production and Production targets are company limits on a production output based on planning- plans set by the company. The purpose of this research is to determine the control of raw material inventory at Wery Bakery in Gunungsitoli City, to determine the production target at Wery Bakery in Gunungsitoli City, to find out whether there is an influence of raw material inventory control on production targets at Wery Bakery in Gunungsitoli City and to find out how much The big influence of controlling raw material supplies on production targets at Wery Bakery in Gunungsitoli City. The total sample is 13 people, Quantitative research type. The results of the study that: 1). All questionnaires used in data collection in the field were declared feasible and valid to use, where rxy>rtable, 2). The value based on the calculation of the determinant coefficient, the correlation of variable X (processing of raw material supplies) to variable Y (production target) was 42, 25%. 3). From the results of simple linear regression calculations obtained the equation Y = 13.880 + 0.637 (X). 4). t test with dk = 13 at a significant level = 0.05 where tcount> t table is 2.837> 2.201 So it is proven that the accepted hypothesis is Ha, namely there is an influence of raw material inventory control on production targets at Wery Bakery in Gunungsitoli City and Ho is rejected.

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## 1.  INTRODUCTION

Every company engaged in production activities has a goal to obtain profit or gain. However, achieving this goal is not easy because it is influenced by several factors, and companies must be able to address these factors (Petersen et al., 2024). One influential factor is the smoothness of production (Lulovicova & Bouissou, 2024). Production is a very important issue for companies because it greatly affects the profits earned by the company (Ye et al., 2024). If the production process runs smoothly, the company's goals can be achieved, but if the production process does not run smoothly, the company's goal of making a profit will not be achieved (Smirnova et al., 2024).

Today, the development of the business world is increasing and competitive, even though generally it is still in a condition of relatively unstable economy (Shackleton et al., 2024). Business competition between companies is increasingly intense and sharp not only in the international market but also in the domestic market within Indonesia. One way for companies to win competitions or at least survive in these competitions is by focusing on managing inventory so that the company's production can be maximized (Ceraso et al., 2024). Every company, whether service or manufacturing, always requires inventory. Without inventory, business owners will face the risk that their companies may not be able to meet the desires and needs of their customers at some point. Inventory management is a planned approach to determine what needs to be ordered, when to order, how much to order, and how much stock is needed so that the costs associated with purchasing and storing are optimal without disrupting production and sales (Ebbes et al., 2024). Thus, inventory management aims to maintain the level of inventory demanded by the company with minimum costs.

Inventory is very important for every company, whether it produces goods or services. This inventory is held if the expected benefits from the inventory (the smooth running of the business) should be greater than the costs it incurs (Sierra-Fontalvo et al., 2024). Increasing competition among companies encourages every company to establish control over raw material inventory accurately so that the company can continue to operate to achieve its desired goals (Elena Villalba-Pastrana & Patricia Güereca, 2024).

Raw materials are very important in the production process and should be carefully considered in terms of cost and quality (Shu et al., 2024). If the cost of raw materials and the quality of raw materials are proportional, then the company can improve the quality of the products and the cost of production while maintaining quality (Eisenberg et al., 2024). On the other hand, if the product quality is unsatisfactory with high raw material prices, it affects production costs, the quality of the products produced decreases, and the company will incur losses. The continuity of the production process in a company can be influenced by several factors including capital, technology, raw material inventory, finished goods inventory, and labor (Wang & Haller, 2024). Raw material inventory can streamline the production process and finished goods produced by ensuring the effectiveness of marketing activities, which is to provide satisfaction to customers because if the goods are not available, the company loses the opportunity to capture the market and the company cannot supply goods at an optimal level (Alleva et al., 2024).

Production is defined as the activity of producing outputs using certain production techniques to process inputs. According to Liu et al., (2024) production is the processing of inputs, whether goods or services, into outputs that are more valuable or more beneficial. If the production process runs smoothly, the company's goals can be achieved, but if the production process does not run smoothly, the company's goals will not be achieved (Koloszár et al., 2024). Meanwhile, the smoothness of the production process itself is influenced by the availability or absence of raw materials to be processed in production (Khan et al., 2024). Basically, companies that carry out production processes always need inventory to meet the needs of the production process. Procurement of raw materials can be carried out by a company as an actual inventory purchase activity. Therefore, the inventory procurement system needs to be considered (Wei et al., 2024).

Wery Bakery is an industrial company located at Jln. Pelud Binaka, Km. 6, Fodo Village, Gunungsitoli City, which was established since 2001. Wery Bakery serves direct sales to consumers and serves sales according to consumer demand, meaning that production is done only according to consumer orders (Pattinson et al., 2023). In fulfilling consumer demand, Wery Bakery conducts production activities every day. Some products produced by Wery Bakery include wet cakes, dry cakes, sponge cakes, bread, and several other products.

From the findings of the researcher in the field, the researcher sees that Wery Bakery in Gunungsitoli City has not been able to manage raw material inventory well, where in the production process, Wery Bakery requires main raw material inventory such as wheat flour, eggs, sugar, yeast, milk, butter. Wery Bakery in the production process must plan the purchase and stock of raw materials to avoid shortages of inventory during the production process. In controlling raw materials, Wery Bakery often experiences obstacles because of the unscheduled ordering, causing delays in controlling raw material inventory (Fareri et al., 2023). The unavailability of raw materials will certainly hinder the production process, and the company cannot meet consumer demand, causing losses to

the company. Therefore, Wery Bakery needs to plan raw material inventory control to avoid shortages of raw material inventory during the production process (Mello et al., 2023).

Based on the above description, how important raw material inventory control is in streamlining the production process, encourages researchers to conduct research and document it in the form of a final project by taking the title: "The Influence of Raw Material Inventory Control on Production Targets at Wery Bakery in Gunungsitoli City".

## 2.   RESEARCH METHOD

The research method used in this study is descriptive quantitative research because quantitative research method is one of the research types whose specifications are systematic, planned, and clearly structured, and its data processing will use numerical data (Gibbs et al., 2023). The population in this study is the manager and all employees at Wery Bakery in Gunungsitoli City, totaling 13 people. Since the population in this study is not too large and less than 100, considering the energy, cost, and time involved in this research, the researcher takes the entire population as the research sample (Berber et al., 2023). So, the sample in this study is as many as 13 people. In this study, the researcher used a research instrument, namely a questionnaire. The data analysis technique includes hypothesis testing, T-test, and coefficient of determination (Kraus et al., 2023).

## 3.   RESULTS AND DISCUSSIONS

The implementation of this research was initiated due to the discovery of an alleged problem that inventory control of raw materials has an influence on production targets. Therefore, the researcher will prove the truth of this assumption regarding inventory control of raw materials and production targets at Wery Bakery in Gunungsitoli City.

The research conducted at Wery Bakery in Gunungsitoli City using indicators as measurement tools as attached in the questionnaire, where the indicator of the raw material inventory control variable (X) is: the quantity of needed goods, ordering costs, storage costs, and item prices, while the indicator of the production target variable (Y) is: processing, support services, planning, control, and supervision (Deepa et al., 2024). The results are as follows: a) The calculation of the correlation coefficient of variable X (inventory control of raw materials) to variable Y (production target) shows that the critical value of r at a significant level of a=5% with a sample size of N=13, $r\_calculated=0.788$ and $r\_table=0.553$. Thus, the reliability coefficient between the raw material inventory control variable (X) and the production target fulfillment variable (Y) is obtained as 0.788, classified based on the correlation interval between 0.60–0.799. This means that the level of reliability of the correlation between variables X and Y is strong. b) From the determination coefficient calculation for the correlation of variable X (inventory control of raw materials) to variable Y (production target) is 42.25%. Meanwhile, 57.75% is influenced by other factors not discussed in this research. c) From the results of simple linear regression calculation, the equation $Y = 13.880 + 0.637$ (X) is obtained. From the regression equation above, it can be explained as follows: a) The constant (a) indicates that if the independent variable, inventory control of raw materials, is absent, then the production target is 13.880. b) The regression coefficient of inventory control of raw materials (X) = 0.637 indicates a positive (direct) relationship between the processing of raw material inventory and the production target. This result shows that the higher the processing of raw material inventory, the higher the production target. d) Based on the research results, the interim hypothesis test results have been proven with the calculation of the reliability coefficient correlation with the t-test statistic with degrees of freedom = 13 at a significant level of $\alpha = 0.05$, where $t\_calculated > t\_table$, i.e., 2.837 > 2.201. Thus, it is proven that the accepted hypothesis is Ha, which means There is an influence of inventory control of raw materials on production targets at Wery Bakery in Gunungsitoli City, and Ho is rejected. e) Compared to previous research by Riza Ramadhanty, Yuli Evitha with the title "The Effect of Inventory Control of Raw Material Fabrics on Production Processes at PT. Ratna Dewi Tunggal Abadi" (2021), the research results show: The conclusion that the research results show the existence of a significant and positive influence between the independent variable of inventory control of raw material fabrics and the dependent variable of production processes. Compared to the current research with the research results showing: all questionnaires are declared valid for use where $r\_xy > r\_table$, 2) The value based on the determination coefficient calculation,

the correlation of variable X (inventory control of raw materials) to variable Y (production target) is 42.25%. 3) From the results of the simple linear regression calculation, the equation Y = 13.880 + 0.637 (X) is obtained. 4) T-test with degrees of freedom = 13 at a significant level of α = 0.05 where t_calculated > t_table, i.e., 2.837 > 2.201. Thus, it is proven that the accepted hypothesis is Ha, which means There is an influence of inventory control of raw materials on production targets at Wery Bakery in Gunungsitoli City (Vijay et al., 2024).

## 4. CONCLUSION

Based on the results of the research conducted, the researcher presents the following conclusions: From the T-test results, it is obtained that t_calculated > t_table, or 2.837 > 2.201. The accepted hypothesis is Ha, which means There is an influence of inventory control of raw materials on production targets at Wery Bakery in Gunungsitoli City, and Ho is rejected. The determination coefficient testing shows a value of 42.25%. In other words, the influence of inventory control of raw materials on production targets at Wery Bakery in Gunungsitoli City is 42.25%. Meanwhile, 57.75% is influenced by other factors not discussed in this research. It is recommended for Wery Bakery in Gunungsitoli City to increase the inventory of raw materials used and determine the production targets for each month (Huang et al., 2023). It is recommended for Wery Bakery in Gunungsitoli City to ensure timely orders of raw materials and to negotiate prices that align with the selling price to consumers. It is recommended for Wery Bakery in Gunungsitoli City to implement production target processing techniques to achieve the desired targets.

## ACKNOWLEDGEMENTS

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