

Analysis of Cassava Raw Material Inventory Control in the "Tape Mayang Madu" Micro-Business Using the Economic Order Quantity Method in Jember Regency

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ABSTRACT

This study is a quantitative descriptive research aimed at analyzing the optimal quantity of cassava raw material inventory, safety stock, reorder point, total inventory cost, and comparing the cassava raw material inventory control system using the company's conventional method and the Economic Order Quantity (EOQ) method at Tape Mayang Madu Micro Enterprise in 2025. The analysis in this study used the Economic Order Quantity (EOQ), safety stock, reorder point, and total inventory cost (TIC) methods. The results showed that the demand for cassava raw materials in 2025 reached 265,500 kg with an ordering frequency of 358 times per year and an average purchase quantity of 721 kg for each order. The total inventory cost using the company's conventional method was Rp19,148,404.99. Based on the EOQ calculation, the optimal order quantity was 6,818 kg per order with a purchasing frequency of 39 times per year. In addition, the safety stock obtained was 281 kg and the reorder point was 1,022 kg. The total inventory cost using the EOQ method was Rp4.049.880, indicating a potential inventory cost saving of Rp15.098.524,99 compared to the conventional method applied by the company. The implementation of the EOQ method is considered more efficient in inventory control because it can optimize order quantities and reduce purchasing frequency. However, the implementation of this method requires proper storage and handling systems.

Keywords: *Economic Order Quantity (EOQ), raw material inventory, safety stock, reorder point, total inventory cost.*