Analysis of Invetory Control of Wheat Flour Raw Material Using the EOQ Method in UD Sampurna Bakery Sidoarjo
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ABSTRACT

Inventory control became an important factor in maintaining the smooth production process of the company. Inventory control was carried out by determining the optimal order quantity to minimize inventory costs. The determination of raw material orders based on estimates and without proper calculations became a problem for UD Sampurna Bakery, as a bread industry, in managing the main raw material inventory, namely wheat flour. The Economic Order Quantity (EOQ) method was one of the inventory control techniques used to optimize the raw material order quantity and minimize total inventory costs. This study aimed to analyze the comparison between the conventional inventory control system of the company and the EOQ method. The data used were the ordering and usage data of wheat flour during the year 2024. This study applied the EOQ method with analysis techniques including optimal raw material ordering, ordering frequency, safety stock, reorder point, and total inventory cost. The results of the conventional method analysis showed that the company made an order quantity of 1.301 kg and placed orders 77 times, with a total inventory cost of Rp1.389.500. The results of the EOQ method analysis showed that the optimal order quantity was 2.669 kg, with an order frequency of 38 times, a safety stock of 1.393 kg, and a reorder point of 1.740 kg, with a total inventory cost of Rp1.201050. The research results indicated that the EOQ method saved inventory costs by Rp188.450. The application of the EOQ method significantly reduced the total inventory cost. The EOQ method could be an effective inventory management strategy to improve the company's operational efficiency.

Keywords: *Inventory, Flour, EOQ*