

ABSTRACT

Nowadays, there is high competition in every business. As inventory is the important key for trading businesses, thus, managing the amount of inventory is important to find the suitable amount to reduce expenditures from storage costs and stock carrying costs. As a result, the profits of the company can be increased and, the competitive power of the business can also be increased. In this project, Economic order quantity (EOQ) was chosen for managing inventory in the ABC company. The scoped inventory for this project are five products those generated first 80 percent of total revenue. Therefore, the research question of this project is "Can economic order quantity reduce total inventory costs and which numbers are optimal order quantities for ABC Company?" The total inventory cost in this project consists of total ordering cost and total carrying cost.

Before applying the EOQ model, it is needed to make sure whether demands of selected products are suitable for the model or not. The demand patterns are tested their consistent by using variability coefficient (VC). The VC of selected products was below 0.25, which means EOQ is suitable.

Next, the total inventory ordering cost, total carrying cost were calculated to determine EOQ, safety stock (SS), and reorder point (ROP). The EOQ ordering process was then simulated. Then the total inventory cost of the current ordering process was compared with the EOQ ordering process. The results indicated that EOQ is appropriate as it had a lower total inventory cost compared to the current ordering policy.