

Preeti Thammapatanakul 2010: Economic Order Quantity Model for Diesel Engine Dealers : A Case Study of Thai Pattana Panich Company Taphan Hin District, Phichit Province. Master of Business Administration, Major Field: Business Administration, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Preeyanuch Apibunyopas, Ph.D. 84 pages.

The optimal inventory levels which minimize inventory costs while still maintaining enough volume to fulfill customer demands are required for an effective inventory management. The problems of the inventory control are excessive inventories which incur financial cost, and insufficient inventories which can cause customers to be unsatisfied and loss of potential sales. These problems might be occurred owing to the inaccuracy of forecasted demands. Especially, in the case of uncertain demands.

There are two primary purposes of the research as follows: Firstly, to study the past sale volume of multi-purpose diesel engine in different seasons in order to forecast future sales figures of the engine in each season. Secondly, to give appropriate advises and effective solution of stock management. In fact, the research takes the Thai Pattana Panich Company in Phichit Province, as a case study to research the demand for efficient stock management. In addition, the research is separated into five sections: 1) To create models of forecast demand by using related statistics.2) To select the alternative models of forecast demand.3) To predict demand through the created model.4) To build the model of stock management.5) To compare overall cost of holding stock. Furthermore, the research result showed that the multiplicative model has less deviation for stock prediction than the additive one. Regarding this, the multiplicative is used to forecast the stock by using model of static orders Fixed order quantity model. By doing so, it can minimize the total cost in January to June 16,694 baht. According to results of the research, dealers of multi-purpose diesel engine should record systemically information of the products, volume of sales as well as related information for ordering products effectively.

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Thesis Advisor's signature