THE APPLICATION OF DISCOUNTED CASH FLOW ON
THE INVENTORY CONTROL WITH SOME TYPES OF
SUPPLIERS’ PAYMENT INSTALLMENTS

Name : Hansi Aditya
Registration Number : 9106205405
Supervisor : Rully Soelaiman, S.Kom, M.Kom

ABSTRACT

Economic Order Quantity (EOQ) is a model known in the area of inventory. In the concept of EOQ classical model, a customer usually has to pay an item as soon as it is received. But in reality, to do commercial transaction, the supplier can offer two alternative ways of payment at the same time, i.e. installment payment and a cash discount to the customer. In this thesis research, the problem to put forward is how to describe, implement, make a trial scenario, make a hypothesis, and draw a conclusion concerning the inventory model for either cash payment after the delivery, or the two transaction credit alternatives offered together. Based on the conclusion, the next thing is to do to determine which of those models is the most optimal to achieve the aim of this thesis research.

This thesis research will compare the test result of the classical EOQ model for a cash payment after delivery and EOQ model with Discounted Cash Flow (DCF) approach when 2 transaction credit alternatives are offered together. This thesis research will begin with a literary study in relation with the inventory models, and then followed by the descriptions of those models. After such descriptions, the models are implemented and data collection will then be conducted based on the implementation. The data collected will subsequently be used for a trial scenario for the result of the model implementarion in order to produce some information. This information that will be analyzed and evaluated to obtain a conclusion on which model is more optimal and recommendable.

It is concluded that the EOQ model with DCF approach is more optimal than the classical EOQ model, whereas EOQ with a cash discount is the most optimal. This model has been proved in two trials, namely : first through implementation of the existing theorems and reinforced by the second trial, where during the most tolerant period, i.e., three months, the optimal condition of the model with the most optimal approach of DCF remains unchanged.

Keywords : Inventory, Decision Making, Cash Discount, Installment Payment, Credit Supplier, EOQ, DCF