

十一、研究計畫中英文摘要：請就本計畫要點作一概述，並依本計畫性質自訂關鍵詞。

(二) 計畫英文摘要。

In business dealing, there exists many factors like advance booking discount to make retailers buy goods early. For companies, the advance booking discount strategy is common and useful in reality to decrease the estimation error in demand and to increase the market share. Furthermore, in real life, the demand is usually influenced by time. In the growth stage of a product life cycle, the demand rate can be well approximated by a linear form or exponential form.

In this project, a deterministic inventory model for deteriorating items with time-varying demand and advance booking discounts is developed. In addition, we allow for two-echelon trade credits. We then try to provide a simple solution procedure for finding the maximum total profit. Finally, numerical examples will be used to illustrate the results.

Keywords: inventory, deteriorating items, time-varying demand, advance booking discount, trade credit