

# Inventory and Price Discount Strategies for Seasonal Products in a Two-stage Sales Setting

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## ABSTRACT

Seasonal products have obvious sales seasons, the sales period is short, and the demand is uncertain. To create high profits in a short period, how to set the order quantity is a problem that the industry needs to face. Therefore, price is very important, the lower price, it can attract the attention of consumers. Therefore, this research wants to use discounts to increase demands, that seasonal products have more chances to sell.

Therefore, this research develops a two-stage sales model. In order to make products have more opportunity to sell and earn more profits, the original price is sold at the beginning, and provided a discount to increase demand at next stage. After the sales seasons, the residual value of the product is calculated. The aim of this research is maximize the net profit. To find the order quantity, discount timing and discount rate for the product. So design cases to experiments, search through the method of exhaustion, and then analyze the changes in the profit value and discount. Finally, according to the experimental analysis results, the two-stage sales model developed in this study is indeed more effective than the undiscounted sales model, and we also provide decision with an ordering and discount strategy based on the experimental results.

Keyword: Seasonal products 、 Two-stage sales 、 Optimal order quantity 、 Price discount strategies

