JOINT PROMOTIONS AND INVENTORY DECISIONS

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ABSTRACT

We present a model that combines price promotions and inventory decisions, in order to evaluate the effect of these two factors on a firm's profitability. More importantly, we want to investigate whether these two factors can complement one another in the firm's effort to increase its profits. The model treats the annual number of promotions that the firm should adopt as a decision variable. The model considers an annual price-depended demand, and following the extensive marketing literature on promotions, assumes that price promotions increase monthly demand and demand variability. This affects inventory decisions such as ordering quantities and safety stocks. A sensitivity analysis shows the effects of all model parameters (marketing and operational) on the annual number of promotions adopted by the firm, providing interesting managerial insights.

Keywords: Price Promotions, Safety Inventory, Marketing and Operations Interface