

# Manufacturer's customer satisfaction incentive plan for duopoly retailers with Cournot or collusion games

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## ABSTRACT

To increase customer satisfaction (CS) which is closely linked to corporate reputation, revenue and customer loyalty, manufacturers will provide incentives to retailers in supply chain management. This paper focuses on two types of incentives that a manufacturer may provide to retailers: customer satisfaction index bonus (CSI bonus) and customer satisfaction assistance, and studies the optimal customer satisfaction incentive plan of the manufacturer when duopoly retailers adopt Cournot or collusion game. By comparing the equilibrium of the two games, we conducted a preference analysis of both the manufacturer and the retailers. The results showed that no matter what kind of games the duopoly retailers take, the manufacturer will provide customer satisfaction assistance to the retailers to increase the customer satisfaction. However, if the duopoly retailers take Cournot behaviour, only when the wholesale price is greater than the threshold, the manufacturer will provide the retailers with customer satisfaction index bonus. The manufacturer always prefers to Cournot behaviour, and the retailers always prefer to collusion behaviour. In addition, this paper also investigated the effect of customer satisfaction incentives on the manufacturer, and found that it will help the manufacturer obtain more demand and higher profits.

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