论文

信息共享对供应链合作广告影响的博弈分析

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Effects of Information Sharing on Cooperative Advertising in A Supply Chain: A Game Theoretic Approach

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- 摘要
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摘要 本文研究需求不确定环境下合作广告供应链中的信息共享对供应链上下游企业决策及绩效的影响。在此供应链中,上游制造商决定产品批发价格及地方性广告费用分担比例,下游零售商决定地方性广告费用的投入及产品售价。运用斯坦伯格博弈模型研究了不确定性对上下游定价和广告投入决策的影响,分析比较了有信息共享和无信息共享两种情况下供应链各成员及供应链利润。结果表明,对零售商而言,其广告水平,产品售价,及期望利润都随着广告效应的增大而增加;对制造商而言,当广告费用分担率较大时,较强的广告效应会导致零售商对广告的过度投入,从而损害制造商的利润。给定制造商广告分担率,信息共享可以提高制造商期望利润,却减少了零售商期望利润,并可能减少供应链的总体利润。给定批发价格的情况下,信息共享会提高制造商及供应链期望利润,而对零售商来讲无差别。

关键词： 合作广告 供应链 信息共享 斯坦伯格博弈

Abstract： In this paper, a supply chain which consists of a single manufacturer and a single retailer doing cooperative advertising are studied under uncertain customer demand. The manufacturer determines the wholesale price and to what ratio he will share the retailer's investment in his local advertising. The retailer determines how much he will invest in his local advertising and the sales price. How information sharing affects the decision making of the manufacturer and the retailer as well as their performance are studied. The expected profit of the manufacturer, the retailer, and the supply chain as a whole are compared. The results show that information sharing increases the manufacturer's expected profit, and sometimes the supply chain's, but decreases the retailer's expected profit under certain circumstances.

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