

Applications of Game Theory to Competitive Distribution Channels

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Abstract

The main objective of this dissertation is to provide a better understanding of competitive behaviours in distribution channels when not only prices but also local advertising decisions are considered. Local advertising is indeed a very important part of any retailer's marketing mix and should be studied in addition to prices when analyzing competitive behaviours in marketing channels. Further, two forms of competition are of interest: horizontal competition (e.g., between firms at the same channel's level) and vertical competition (e.g., between firms at different channel levels). We present three essays where both competition between channel members and local advertising decisions are considered.

The first essay investigates the effectiveness of co-op advertising programs in a channel with horizontal competition at both the manufacturing and the retailing levels. We show that when competition is introduced at a channel level, the effectiveness of the co-op program is not guaranteed any more for members who operate at that level. Further, for symmetric channel members, we find that cooperative advertising programs are implemented only under some conditions on brand and store substitution rates. The second essay studies the situation where a retailer is competing with a manufacturer by introducing its private label. Then, we evaluate the effectiveness of implementing a co-op advertising program to counter the negative effects created by the store brand competition. We show that the retailer's as well as the channel's payoffs are higher with the store brand option whereas the manufacturer could lose a part of his profits. However, for a specific range of the retailer's advertising efficiency and of the cross-price competition intensity, the manufacturer could profit from the private label introduction. Further, the co-op plan is an efficient counterstrategy for the manufacturer. However, the retailer would accept its implementation only if the national brand competes strongly with the private label. Finally, in the third essay, we investigate the effect of a private label introduction in a two-manufacturer, one-retailer channel. We study whether advertising for a private label could improve the performance of its introduction and investigate the effects for manufacturers. We solve for three Manufacturer-Stackelberg games and show that the retailer benefits from advertising the store brand. We also find that the private label introduction is not always harmful for manufacturers, especially when the private label is weak, and the store brand positioning does not target the national brand.

Keywords:

Game theory, distribution channels, competition, local advertising, cooperative advertising programs, private labels.