

The Peril of Channel Integration with Environmental Quality Under Competition

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Abstract

This paper studies vertical decentralization vs. integration with products of different environmental quality under distribution channel competition. We first examine the strategic impact of different channel structures on environmental quality, firms' profits, and welfare. Specifically, we analyze different channel structures: no integration, ordinary product channel integration, green product channel integration, and full channel integration. Comparing different channel structures, we reveal that more channel integration will cause more intense competition between the manufacturers and thus lower profits. Therefore, both manufacturers prefer decentralization over integration in equilibrium, which also constitutes a win-win distribution channel strategy compared to integration. Compared to vertical decentralization, channel integration does not necessarily increase the products' total environmental quality in the market. Furthermore, we apply the main model to study the interaction between channel strategies and production emissions with common emission regulation policies in practice: emission tax and emission reduction subsidy, as well as generalize the main model to examine multiple extensions including different consumer density, different cost efficiency, sequential market competition, and balanced objectives considering both profit and environmental quality.

Keywords

Distribution Channel Competition; Channel Integration vs Decentralization; Environmental Quality; Green and Ordinary Products.