

Optimal channel decision of retailers in the dual-channel supply chain considering consumer preference for delivery lead time

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ABSTRACT

Facing competition from manufacturers' online direct channels, how retailers make sales channel decisions to increase consumer stickiness has become the core concern of the industry and academia. Empirical research showed that delivery lead time is a key factor that affects consumers' preference for online channels. To analyze the impact of consumer delivery time preference on channel selection and pricing strategy of retailers, consumer delivery lead time preference function was improved from a linear function to an exponential function and consumer demand under the mixed dual-channel supply chain of manufacturer and retailer was derived. Then, the Stackelberg game models under different channel strategies of retailer were established and solved. Results show that consumer preference for delivery lead time has four implications on the channel decision of retailers under manufacturer encroachment in the dual-channel supply chain. First, the dual retail channels strategy is the optimal choice for retailers, and the profit margins that a retailer obtains from dual retail channels supply chain and single online retail channel supply chain will increase as consumers' delivery lead time preference coefficient increases. Second, the optimal pricing of online retail channel and offline retail channel is positively related to consumers' delivery lead time preference coefficient. By contrast, the optimal pricing of online direct channel is negatively related to consumers' delivery lead time preference coefficient. Third, the optimal pricing of online retail channel is higher than that of offline retail and online direct channels. Fourth, a retailer and a manufacturer can adopt a compensation-based whole price contract to address the conflict brought about by the optimal channel choice of the retailer. This study introduces consumer delivery lead time preference into retailer channel decision making and provides a theoretical reference for retailer's mixed channel construction in practice.

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