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Lead Time Optimism: Exploring the Distinct Effects of Lead Time Uncertainty and Review Period Uncertainty on Ordering Behavior

Simone Balvers

Problem definition: Decision-makers face different forms of supply uncertainty when making ordering decisions. This paper focuses on two forms of supply timing uncertainty: lead time uncertainty and review period uncertainty (i.e., uncertainty in the time between two order moments). Both forms of supply timing uncertainty are widely present in the nanostore retail channel, but can also be encountered in other settings. In this paper, we analyze the implications of supply timing uncertainty on ordering behavior. **Methodology/results:** Using an experimental design, we find that subjects order more under lead time uncertainty than under review period uncertainty, for both high and low margin products. We identify as an underlying mechanism the tendency of decision-makers to underestimate the expected lead time, while this is not necessarily the case for the expected review period. Interestingly, the underestimation of the expected lead time is not mitigated by reducing the lead time uncertainty.
Managerial implications: Our results suggest the existence of a new bias: "lead time optimism". Moreover, our results show that supply timing uncertainty results in sub-optimal ordering behavior. Mitigating supply timing uncertainty therefore deserves attention in the nanostore retail channel.

The paper is co-authored by Dr. Eirini Spiliotopoulou and Prof. dr. ir. Jan C. Fransoo.