

The Hong Kong Polytechnic University
Department of Logistics and Maritime Studies
Research Seminar

Misreporting Demand Information

by

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Date: 22 November 2019 (Friday)
Time: 2:30pm - 3:30pm
Venue: M714, Li Ka Shing Tower
The Hong Kong Polytechnic University
(Conducted in English)

Abstract:

In this study, we investigate information sharing in a distribution channel in which the retailer possesses superior information about market demand. Departing from the existing literature on information sharing which assumes that information sharing must be truthful, we allow the retailer to manipulate and misreport its demand information for its benefit at an information manipulation cost. We find that the retailer's ability to manipulate information has substantial effects on the equilibrium outcome: when the cost of manipulation is low, the retailer cannot help but to deflate its demand forecast (even if the actual demand is high) to convince the manufacturer to offer it a low wholesale price. When the cost of manipulation is moderate, the retailer, in the case of high demand, randomizes between misreporting and truthful reporting. Finally, when the cost of manipulation is high, the retailer never misreports its demand information. While the manufacturer's profit increases with the manipulation cost, the retailer's profit is nonmonotone with this cost. At first, it decreases but only up to a certain point, after which the effect is reversed. Within a certain parameter space, the retailer's ability to manipulate information hurts both the manufacturer's and retailer's profits, thereby creating a lose-lose situation. Collectively, these results underscore the significant effects of information manipulation in distribution channel management.

Bio:

Xi Li is an Assistant Professor of Marketing at City University of Hong Kong. He received his PhD in management from University of Toronto and BE in computer science from Tsinghua University. His research examines how big data and advanced information technologies can help guide firms' daily business activities. He has published in such journals as *Marketing Science*, *Journal of Marketing Research*, and *International Journal of Research in Marketing*.

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All are welcome!