Competitive Markovian Pricing

by

Prof. Bin HU

Professor

University of Texas at Dallas

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Abstract: Dynamic pricing is often complicated by strategic customer behavior. One tactic utilized by retailers to counter strategic customer behavior is to adjust prices in an unpredictable manner. This phenomenon has been studied in the Markovian pricing literature in single-retailer settings. In this paper, we extend the study to a competitive setting. By analyzing a competitive Markovian-pricing model and comparing it with a non-competitive benchmark, we show that, in the Markovian pricing setting, competition may improve retailer profits and price synchronization may reduce retailer profits, both of which are contrary to conventional economic wisdom. Our findings highlight unique properties of the Markovian pricing setting and provide strategic caveats against retailers naively applying conventional economic wisdom in this setting.

Bio: Prof. Bin Hu is a Professor in the Naveen Jindal School of Management at the University of Texas at Dallas. He received his PhD in Business Administration from the University of Michigan, and his BS in Mathematics from Peking University. Before joining UT Dallas in 2018, he taught at the University of North Carolina at Chapel Hill. Prof. Hu’s research interest is in supply chain management, procurement and sourcing, innovative operations, primarily employs analytical economic, game-theoretic and optimization models in his research. He currently serves as Associate Editor for Management Science and Naval Research Logistics and Senior Editor for Production and Operations Management.

All interested are welcome!

Enquiries: Dept of ISOM