

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

**Markdown or Trade-up?**  
**The Policy to Induce Early Purchases when Selling Successive-Generation Products**

by

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**Date: 6 November 2019 (Wednesday)**  
**Time: 10:30am - 11:30am**  
**Venue: M714, Li Ka Shing Tower**  
**The Hong Kong Polytechnic University**

**(Conducted in English)**

**Abstract:**

Faced with frequent product rollovers, customers need to decide which version of products to purchase. Should they purchase the current version, or wait for a new generation of products in the future? On the other hand, the seller employs different pricing strategies to induce customers to make early purchases. This paper particularly investigates two demand management options that have potential in inducing customers to make early purchases for the current version of products. Under a dynamic markdown policy, the seller adjusts the discount level for the current version of products over time. Under a dynamic tradeup policy, the seller determines the trade-up price over time, and consumers who purchase the trade-up option can use the current version of products and trade it up for the new version once it is released. We find that both the optimal markdown price and the optimal trade-up price do not necessarily decrease over time. More importantly, each policy induce different groups of customers to make early purchases for the current version of products, and it turns out that no one policy always dominates the other. We further propose a hybrid policy which combines both the markdown and the trade-up policies and performs better than each single policy.

**Bio:**

Qian Liu is an associate professor in the department of Industrial Engineering and Decision Analytics at Hong Kong University of Science and Technology. Her research interests are primarily in revenue management and pricing, consumer-driven operations management, marketing-operations interfaces. She received the Ph.D. degree in the division of Decision, Risk and Operations from the Graduate School of Business, Columbia University, and the B.E. and M.E. in Control Theory and Control Engineering from Tsinghua University in China. Her research articles have appeared in *Management Science*, *Operations Research*, *Manufacturing & Service Operations Management*, *Productions and Operations Management*, and among others.

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**All are welcome!**