

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

**Selected Topics in Interdisciplinary Operations Management:  
Behavioral Pricing, Omnichannel and Horizontal Merger**

by

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**Date: 14 May 2019 (Tuesday)**  
**Time: 3:30pm-4:30pm**  
**Venue: Y402, Lee Shau Kee Building**  
**The Hong Kong Polytechnic University**

**(Conducted in English)**

**Abstract:**

This thesis focuses on the interplay between a firm and its strategic consumers as well as its competitors. It consists of three studies.

In the first study, we investigate the impact of valuation uncertainty and consumers' anticipated regrets on a retailer's pricing decision and strategy. We consider a firm selling two substitutable products over two periods, one product for one period, in a selling season. The firm announces all its prices at the beginning of the selling season (price commitment), or announces each price at the beginning of each period (dynamic pricing). Besides, a consumer may experience purchase regret or wait regret. Regret is the disutility of not having chosen the ex post best-forgone alternative. We focus on examining whether and how the retailer can use intertemporal prices and pricing strategies to mitigate consumers' strategic behavior. We find that a firm may need to set a lower price in the first period to mitigate consumers' strategic waiting. This is true even when the product in the first period is more attractive. Second, the effects of purchase regret and wait regret on the optimal prices may be non-monotone. Last, price commitment always dominates dynamic pricing, and the value of commitment depends on the uncertainty and anticipated regret.

In the second study, we turn our attention from pricing management to channel management. Specifically, we study how far a retailer should go in an omnichannel environment. That is, we analyze whether the retailer should stay in the region with traditional selling; step out to use the research online and purchase offline (ROPO) strategy; or go further to adopt the buy online and pick up in store (BOPS) strategy. It is interesting to show that both the ROPO and BOPS strategies may not be optimal for the retailer. We derive the conditions under which the retailer should implement the ROPO or BOPS strategy. For example, we show that if the hassle cost of using the BOPS function is low, and, at the same time, each consumer brings a high cross-selling benefit, then adopting the BOPS strategy will be optimal for the retailer.

Furthermore, since many firms adopt mergers and acquisitions (M&As) as an important strategy in competitive business environment, we look at a bigger picture than the previous two works and study merging decision and strategy in a competitive market. We develop a game-theoretical model, in which multiple firms compete on price and quality and two of the firms decide whether and how to merge. The post-merger firm achieves cost saving and needs to further decide the degree of post-merger integration, i.e., centralized merger or decentralized merger. We focus on examining whether two competing firms should merge and which merging strategy (i.e., centralized or decentralized merger) is optimal for the post-merger firm when facing competition from the nonparticipant firm in the market. We find the post-merger firm prefers decentralized merger when market competition is fierce enough; otherwise, it should choose centralized merger. Besides, if both centralized and decentralized mergers are possible, then the merger always benefits the participants. However, if centralized merger is not possible, then the participants will be worse off after the merger when differentiation level is low.

**Bio:**

Yunjuan is currently a PhD student under the supervision of Prof. Daniel Ng. Her research interests are operations and marketing interface, and customer behavior in operations management and supply chain management.

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**All are welcome!**