

The Hong Kong University of Science and Technology

Dept of Information Systems, Business Statistics
and Operations Management
Dept of Industrial Engineering & Logistics Management
Joint Seminar Announcement

Optimal Timing of Sequential Distribution: The Impact of Congestion Externalities and Day-and-Date Strategies

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Date : 31 March 2016 (Thursday)
Time : 11:00 am - 12:15 pm
Venue : Room 3005, LSK Business Building



Abstract: The window between a film's theatrical and video releases has been steadily declining with some studios now testing day-and-date strategies (i.e., when a film is released across multiple channels at once). We present a model of consumer choice that examines trade-offs between substitutable products (theatrical and video forms), the possibility of purchasing both alternatives, and a congestion externality affecting consumption at theaters; this permits a normative study of the impact of smaller release windows (0-3 months) for which there is a scarcity of relevant data. We characterize the market conditions under which a studio should pursue direct-to-video, day-and-date, and delayed video release strategies. During seasons of peak congestion, we establish that day-and-date strategies are optimal for films with high content durability (i.e., films whose content tends to lead consumers to purchase both alternatives) whereas prices are set to perfectly segment the consumer market for films with low content durability. We find that lower congestion effects provide studios with incentives to delay release and price the video to induce multiple purchasing behavior. However, an increase in congestion effects can actually lead to higher studio profitability. We also illustrate that, at the lower range of quality, an increase in movie quality should be accompanied by a later video release time. Surprisingly, however, we observe the opposite result at the upper range of movie quality: an increase in quality can justify an earlier release of the video. Finally, we explore the effect of piracy on studio strategy, finding a day-and-date strategy works better for plain vanilla video offerings such as video-on-demand and reduced-feature DVDs while a delayed release strategy can increase profits for feature-rich Blu-ray offerings. This is a joint work with Terrence August and Duy Dao.

Bio: Shin's research interests include forecast information sharing and investment in supply chain management, competitive strategies under operational constraints, economics of information technology, software and digital goods, release strategies in the motion picture industry and innovation in supply chains.

Shin has been published in numerous journals, including Information Systems Research, Management Science, Manufacturing & Service Operations Management, Marketing Science, and Production and Operations Management, and Operations Research. He won the best paper award of Conference on Information Systems and Technology (2012) for the paper "Cloud Computing: Implications on Software Network Structure and Security Risks" with his co-authors, Terrence August and Marius Niculescu.