

The Hong Kong University of Science and Technology
Department of Information Systems,
Business Statistics and Operations Management

Seminar Announcement

*Joint Pricing and Quantity Decisions of a Multinational Firm:
Impact of Transfer Pricing Methods for Tax Purposes*

by

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Date: 12 February 2009 (Thursday)

Time: 2:00 – 3:30 pm

Venue: Room 4379, ISOM Conference Room (L17/18)

~~~~~ All interested are welcome ~~~~~

**Abstract**

Transfer pricing refers to the pricing of an intra-firm transactions of an intermediate product or service. In order to study the impact of transfer price on the operational decisions and the corresponding profits of a firm, we consider a firm consisting of two divisions (a manufacturing division and a retail division). The retail division sets the retail price, and orders an intermediate product from the upstream manufacturing division. The manufacturing division accepts or rejects the retail division's order. As for the transfer price, we particularly consider two commonly used methods for tax purpose – the cost-plus method and the resale-price method.

We also extend our analysis to a case of a multinational firm whose manufacturing and retailing divisions are under different income tax rates. Our analysis of both the retailer's problem and the central planner's problem is based on the classical price-setting newsvendor problem and its variants. We show several sensitivity results to the parameters of these methods. Numerical results indicate that the cost-plus method tends to allocate a higher percentage of profit to the retail division while the resale-price method tends to achieve a higher firm-wide profit. These results suggest that the choice of transfer pricing method has an impact on the profit as well as the operational decisions of a firm.

**Biography**

Kunsoo Park is a PhD candidate of Operations Research at Columbia University. His research interests include operations management and quantitative finance. His research currently focuses on the interface of operations management with managerial accounting and taxation. In particular, he is interested in the impact of transfer pricing method for tax purposes on the operational decisions and profit efficiency of a firm. Recently, he won the 2nd place award in the best student research paper competition at INFORMS financial services section with his paper on Markov chain models to estimate the premium for extended hedge fund lockups. Before joining Columbia, he taught management science courses at Korea Naval Academy for three years as a full-time lecturer.