

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

Seminar Announcement

***The Role of Asymmetric Cost Information in a Finite Repeated  
Supply Chain Relationship***

by

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***The Chinese University of Hong Kong***

**Date: 19 May 2009 (Tuesday)**

**Time: 11:00 am – 12:30 pm**

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

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

**Abstract**

We consider the problem of procurement contracting in a one-supplier-one-buyer relationship, where the buyer's cost information is private, but they have opportunities to transact repeatedly. The supplier moves first by offering a whole-sale price contract, after which the buyer can either accept by ordering from the supplier, or reject the offer and seek his outside option. After profits for both are collected, the game re-starts again, altogether for  $N$  times. The key interest of this paper is to see if the buyer's true cost information can be revealed during the repeated interactions (without a screening contract). We find that the buyer's 'information advantage' persists in the initial phase of the repeated game. However, as the game goes on, such an information advantage gradually dissipates, and the buyer starts to randomize between accept and reject the contract. Therefore, his private information is revealed in a probabilistic fashion. The supplier's long-run equilibrium strategy is of a threshold type: She starts with offering a low selling price and keeps doing so until her belief about the buyer's type is over a threshold. These results indicate that repeated supply chain relationships have significantly different dynamics than those observed in a one-shot supply chain relationship. We discuss insights that are helpful to firms in shaping their strategies in their long-time supplier relationship.

**Biography**

Dr. Deming Zhou holds a Bachelor of Engineer and Master of Management Science and Engineering from Tsinghua University and a Ph.D in Management from the Anderson School of Management at UCLA. He joined the Dept. of DSE of the Faculty of Business Administration at CUHK in 2005 as an Assistant Professor.

Deming Zhou's research interests are in supply chain contract design, supply chain competitions, air cargo logistics, and other OM related issues. He has papers published in Management Science, EJOR, and other referred academic journals.