

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

**Profit Allocation, Decision Sequence and Compliance Aspects of Coordinating Contracts:
A Retrospect**

by

**Prof. Suresh P. Sethi
Eugene McDermott Professor of Operations Management
Director, Center for Intelligent Supply Networks
The University of Texas at Dallas**

**Date: 29 August 2018 (Wednesday)
Time: 3:30pm - 4:30pm
Venue: M714, Li Ka Shing Tower
The Hong Kong Polytechnic University**

(Conducted in English)

Abstract:

Coordinating contracts have been actively researched in supply chain management. In this retrospect, we systematically review the profit allocation, decision sequence, and compliance aspects of these contracts. In addition to the existing concepts in the literature, we propose the notion of sample-path flexibility in profit allocation. Based on precise mathematical definitions, we develop structural properties and characterize sufficient conditions for flexibility in profit allocation, sequence independence, and voluntary compliance. We also obtain sufficient conditions for coordinating supply chains involving fair-minded or downside-risk-averse agents with sample-path flexible and voluntary compliant contracts. We reveal that simple-path flexible contracts must have a transaction after uncertainty is realized and that transactions both before and after uncertainty realization adds to their flexibility. With the properties and conditions in hand, we develop a 3x3 matrix framework of the coordination aspects within which several well-studied supply chain contracts can be systematically classified. Furthermore, we provide the steps to design coordinating contracts with sample-path flexibility and voluntary compliance, along with examples. Our results help in the design, evaluation, and implementation of supply chain coordinating contracts.

Bio:

Prof. Suresh P. Sethi is Eugene McDermott Professor of Operations Management and Director of the Center for Intelligent Supply Networks at The University of Texas at Dallas. He has written 7 books and published over 400 research papers in the fields of manufacturing and operations management, finance and economics, marketing, and optimization theory. He teaches a course on optimal control theory/applications and organizes a seminar series on operations management topics. He initiated and developed the doctoral programs in operations management at both University of Texas at Dallas and University of Toronto. He serves on the editorial boards of several journals including *Production and Operations Management* and *SIAM Journal on Control and Optimization*. He was named a Fellow of The Royal Society of Canada in 1994. Two conferences were organized and two books edited in his honor in 2005-6. Other honors include: IEEE Fellow (2001), INFORMS Fellow (2003), AAAS Fellow (2003), POMS Fellow (2005), IITB Distinguished Alum (2008), SIAM Fellow (2009), POMS President (2012), INFORMS Fellows Selection Committee (2014-16), Alumni Achievement Award, Tepper School of Business, Carnegie Mellon University (2015).

Please email to clare.lau@polyu.edu.hk for enquiries.

All are welcome!