

Preface

Channel coordination is a core subject of supply chain management. It is well-known that a stochastic multi-echelon supply chain system usually fails to be optimal owing to the presence of the bullwhip effect and the double marginalization issue. Motivated by the importance of the topic, over the past decade, much research effort has been devoted to exploring the detailed mechanisms (such as incentive alignment schemes) for achieving supply chain coordination under uncertainty and has generated many fruitful analytical and empirical results. Despite the abundance of research results, there is an absence of a comprehensive reference source that provides state-of-the-art findings on both theoretical and applied research on the subject “under one roof”. In addition, many new topics and innovative measures for supply chain coordination under uncertainty have appeared in recent years and many new challenges have emerged. As a result, we believe it is significant to put together all these interesting works and the respective insights into an edited volume.

In view of the above, we co-edit this Springer handbook. The handbook contains five parts, covering (1) introductory materials and review of supply chain coordination; (2) analytical models for innovative coordination under uncertainty; (3) channel power, bargaining, and coordination; (4) technological advancements and applications in coordination; and (5) empirical analysis and case studies. The specific topics covered include the following:

- Coordination of Supply Chains with Risk-Averse Agents
- A Timely Review on Supply Chain Coordination
- A Review of Control Policies for Multi-Echelon Inventory Systems with Stochastic Demand
- Supply Chain Models with Active Acquisition and Remanufacturing
- Facilitating Demand Risk-sharing with the Innovative Percent Deviation Contract
- Value-added Retailer in a Mixed Channel under Asymmetric Information
- Capacity Management and Price Discrimination under Demand Uncertainty using Options
- Dynamic Procurement and Quantity Discounts in Supply Chains
- Coordination in a Multi-period Setting: The Additional Ordering Cost Contract

- Use of Supply Chain Contract to Motivate Selling Effort
- Price and Warranty Competition in a Duopoly Supply Chain
- Supply Chain Coordination for Newsvendor-type Products with Two Ordering Opportunities
- Bargaining in a Two-Stage Supply Chain through Revenue-Sharing Contract
- Should a Stackelberg-dominated Supply-chain Player Help her Dominant Opponent to Obtain Better Information
- Supply Chain Coordination under Demand Uncertainty using Credit Option
- Supply Chain Coordination under Consignment Contract
- A Heuristic Approach for Collaborative Planning in Detailed Scheduling
- RFID Technology Adoption and Supply Chain Coordination
- Possibilistic Mixed Integer Programming Approach for Supply Chain Network Problems
- Coordination of Converging Material Flows in Supply Chains under Uncertainty
- Bioenergy Systems and Supply Chains in Europe: Conditions, Capacity, and Coordination
- Benefits of Involving Contract Manufacturers in Collaborative Planning for Three-Echelon Supply Networks
- A Capability-Based Approach for Managing IT Suppliers
- Methodology for Assessing Collaboration Strategies and Incentives in the Pulp and Paper Industry

We are very pleased to see that this research handbook has generated a lot of new analytical and empirical results with precious insights, which will not only help supply chain agents to understand more about the latest measures for supply chain coordination under uncertainty, but also help practitioners and researchers to know how to improve supply chain performance based on innovative methods. This will be especially meaningful to industries such as fashion apparel and consumer electronics, in which effective supply chain management has been known to be the key to success.

We would like to take this opportunity to show our gratitude to Werner A. Mueller and Christian Rauscher for their kind support and advice along the course of carrying out this project. We sincerely thank all the authors who have contributed their decent research to this handbook. We are grateful to the professional reviewers who reviewed the submitted papers and provided us with timely comments and constructive recommendations. We are indebted to our student Pui-Sze Chow for her editorial assistance. We also acknowledge the funding support of the Research Grants Council of Hong Kong under grant number PolyU 5143/07E (General Research Fund) and The Hong Kong Polytechnic University under grant number J-BB6U. Last but not least, we are grateful to our families, colleagues, friends, and students, who have been supporting us during the development of this important research handbook.

Tsan-Ming Choi, T.C.E. Cheng
The Hong Kong Polytechnic University



<http://www.springer.com/978-3-642-19256-2>

Supply Chain Coordination under Uncertainty

Choi, T.-M.; Cheng, T.C.E. (Eds.)

2011, XIV, 654 p., Hardcover

ISBN: 978-3-642-19256-2