Department of Information and Systems Management
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Seminar Announcement

Impact of Sourcing Strategies on a Decentralized Assembly System

by

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The Hong Kong Polytechnic University

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All interested are welcome

Abstract

In this paper, we analyze a decentralized assembly system that consists of one assembler who produces final products from multiple components each having a number of potential suppliers. A component can be either single sourced from one long-term supplier, or competitively sourced from multiple suppliers. The configuration of single- and competitively-sourced components determines the sourcing structure. A system is more competitive if the number of competitively sourced components increase or the competition at any competitively sourced component intensifies. By analyzing a general assembly system, we find that competition at component level improves the predictability of suppliers' strategic behaviors; but short-term competitive sourcing does not necessarily lower the assembler's cost. Under a more competitive sourcing environment, both the assembler and the entire channel are not worse off, but the suppliers as a group suffer a loss in terms of their share of total channel profit. The preference of a profit-driven assembler is in line with that of the channel, but is to a large extent in contrast to that of the suppliers who, in most circumstances, prefer a system where both single and competitive sourcing coexist.

Biography

Li Jiang received his BE in Electrical Engineering and ME in Management Engineering from Shanghai Jiao Tong University. He earned his Ph.D. in Operations and Management Science from the Ross School of Business at University of Michigan, Ann Arbor, in December 2006. He joined the Department of Logistics of the Hong Kong Polytechnic University at the end of 2006. His research interests include capacity management, supply chain modeling and analysis, consumer search, and Operations Marketing interface. His research papers have appeared in and will appear in Management Science, Manufacturing & Service Operations Management, and European Journal of Operational Research. He reviews papers for Management Science, Networks, Manufacturing & Service Operations Management, Operations Research Letters, European Journal of Operations Research, and Journal of Global Optimization.