Motivated by wide-spread outsourcing practices, this paper studies how a pre-outsourcing firm (client) facing uncertain operating costs selects an outsourcing contract between two contract types offered by different vendors, where a vendor will offer a contract if the expected profit of the contract satisfies its reservation value. We propose a real options model to determine the optimal policy structure for both the client and the vendors. We also investigate comparative statics of the client or vendor's optimal policy with respect to key system inputs. The numerical results demonstrate that the cost of making a suboptimal decision on either contract selection or outsourcing timing is significant. Our results help managers gain a better understanding on the closely intertwined relationship between the client's contract selection policy and a vendors' contract participation policy.

Biography

Dr. Susan H. Xu is Professor of Management Science and Supply Chain Management and Robert G. Schwartz fellow at Pennsylvania State University. She served as the director of the PhD Program in Smeal College of Business from 2010-2012 and the Chair of the Intercollege Dual-Title Degree Graduate Program in Operations Research at from 1998-2007. Dr. Xu is interested in production and inventory systems, risk management of supply chain, revenue management, queueing control, stochastic ordering of multivariate stochastic processes, and has widely published in these areas.

❖ All interested are welcome! ❖