

Economics of Information Technology Outsourcing and Markets

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Abstract

The outsourcing market for Information Technology (IT) services has been transformed over the past decade. Companies that once only considered outsourcing as a means of reducing cost are now choosing to outsource important and even strategic IT functions. The unique characteristics of IT services and the breadth of procured services warrants investigation into the relationships found in outsourcing agreements and markets that facilitate exchange for these services. This dissertation fills this need with an encompassing evaluation of the economics of contracting for IT and an initial investigation into the economics of online markets for IT services. The contribution of this dissertation is threefold. First, a risk analysis framework for understanding the viability of IT outsourcing is developed. The unique characteristics of IT contracts on four critical dimensions, including monitoring, uncertainty, competitive importance, and organizational interconnectedness, require adapting classic prescriptions on governance structure and contractual mechanisms to IT outsourcing. Second, a two-stage contractual mechanism is devised for selecting a vendor, when project outcome cannot be verified, limiting the use of classic incentive contracts. The success of this contract lies in setting compensation for the first phase sufficiently low, establishing a threshold performance level for continuation, and setting compensation for the second phase to reimburse a high quality vendor for his first phase losses. Finally, behavior in online exchanges for IT services, where sellers bid on buyers' projects, is explored. Important attributes of these markets are the transaction costs involved with bidding on a project and evaluating bids. Empirical evaluation of these markets indicates that these costs drive participation, resulting in excessive bidding and average vendor quality decreasing in project value. Prescriptions for improving these markets, to attract buyers, include lowering the costs associated with participation and limiting the number of sellers who view each posting. As the optimal number of providers bidding on each project depends on project-specific characteristics, we should find horizontal differentiation among markets. With the expansion of IT procurement and novel means of exchange developing, economic analysis can improve the viability of IT outsourcing.