

MISQ Archivist

An Empirical Analysis of Intellectual Property Rights Sharing in Software Development

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Abstract

Software development outsourcing (SDO) contracts are plagued with *ex post* opportunism and underinvestment problems. Property rights theory (PRT) argues that appropriate property rights allocation between vendors and clients can reduce opportunism and incentivize relation-specific investments. We conduct an in-depth content analysis of 171 real SDO contracts and empirically examine how project attributes and contract parties' bargaining power affect the allocation of intellectual property rights (IPR). We find that clients retained more IPR when software development was modularized whereas they shared more IPR with vendors in contracts that incorporated greater use of a vendor's proprietary software. Greater levels of task complexity were associated with more IPR sharing with vendors. We also find that the responsiveness of IPR to project attributes varied across the different types of intellectual assets. For example, vendors were more likely to obtain redeployment rights of know-how if they were contracted for novel software development projects. However, clients were less likely to cede ownership of data and confidential information embedded in software customization projects. We control for a variety of firm and transaction characteristics and the results we obtain here are robust to concerns of endogeneity bias.

Keywords: Software development, outsourcing, contract design, intellectual property rights allocation, property rights theory, incomplete contracts