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Kichan Nam

State University of New York, Buffalo

S. Rajagopalan

University of Minnesota

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DIMENSIONS OF INFORMATION SYSTEMS OUTSOURCING

K. Nam

S. Rajagopalan

H. R. Rao

State University of New York, Buffalo

A. Chaudhury

University of Massachusetts, Boston

ABSTRACT

Outsourcing has emerged as a key method of managing Information Systems especially since the report about Eastman Kodak and IBM's outsourcing partnership in 1989 (Loh and Venkatraman 1992b). However, firms have used outside vendors in many different ways (Gantz 1990) so much so that some IS managers believe that any type of involvement of third party vendors can be considered to be outsourcing. Requirements for outsourcing are not uniform and managers have different evaluations and different approaches to the process (Venkatesan 1992; Welch and Nayak 1992; Walker 1988). Motivations for outsourcing are diverse and vary widely across firms.

The diverse types of outsourcing can not be fully conceptualized simply by one measurement such as the degree of outsourcing which is represented as dollar amounts or as a percentage of total IS budget (Loh and Venkatraman 1992a, Harrigan 1985, 1986). Outsourcing is not a simple substitution of in-house operations. In order to provide a formal framework for outsourcing phenomena, a study of ten sample firms that have diverse sizes and varying patterns of outsourcing contracts in the Northeastern United States was performed. Our case studies and analysis of trade literature on outsourcing allows us to propose two dimensions of outsourcing, *the extent of involvement by outside vendors* and *the strategic impact of IS (Information Systems) applications* based on two criteria of differentiability and comprehensiveness (Nam et al. 1994).

The extent of involvement by outside vendors is defined as the degree of physical substitution of in-house activities by outside vendors. Therefore, this dimension refers to how much internal IS functions are substituted by outside vendors. The strategic impact of IS applications refers to the characteristics of IS applications that client firms outsource in terms of their competitive advantages. Therefore, the second dimension refers to whether IS functions are "operation-oriented" or "strategy-oriented" (Phalen 1992).

In order to identify the factors that affect two dimensions of outsourcing, transaction cost economics (TCE) theory (Milgrom and Roberts 1992; Williamson 1979, 1987) and inertial theory (Hannan and Freeman 1977, 1984) are used. The TCE factors, asset specificity, uncertainty, duration of relationship, and difficulty of measurement, are considered. Inertial theory assumes that organizations rarely make fundamental changes successfully and are subject to inertial forces. Based on inertial theory, three inertial forces, the size of firm, the age of computing experience, and the IT maturity, are considered.

Preliminary results based on the case studies are generally consistent with TCE theory and inertial theory. For instance, one company considered outsourcing for its data center. The company decided to insource after an in-depth analysis of outsourcing. Asset specificity, uncertainty, and difficulty of measurement in the company were relatively high while the duration of relationship was low. This company had relatively high inertial factors.

Further detailed results will be confirmed by a future survey study. The future study will also include other factors, such as the power of IS departments and top management support.

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