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THEMES OF POWER AND TRUST IN EDI RELATIONSHIPS

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ABSTRACT

The findings reported in this research focus on the role of power and trust in adopting and using Electronic Data Interchange (EDI). EDI refers to the use of computer networks to exchange standardized business transactions (e.g., purchase orders) between customers and suppliers. As of December, 1992, there were 161 transaction sets approved for publication by the American National Standards Institute X.12 Committee, which is responsible for developing EDI standards in the U.S.

The effective use of EDI requires expenditures in the computing and networking infrastructures of participating firms, as well as investments in managerial resources required to facilitate the redesign of information processing procedures and roles. Moreover, current and potential coordination benefits associated with EDI may be related to access methods and data exchange regarded as sensitive. For these reasons, some firms may resist using EDI. Resistance by some market partners has negative economic implications for firms that use EDI: until all partners are EDI partners, redundant information processing systems must be supported. Our investigation sought to provide evidence of the role of power in influencing partners to adopt EDI and the role of trust in information exchange.

Data were collected from both telephone interviews and written questionnaires among suppliers of a major chemical company and a large office supply firm. Measures of dependence, power, and level of trust were adopted from items in a previous study (Saunders and Clark 1991). Preliminary analysis shows that, among firms adopting EDI, dependence is highly correlated with exercised power ($r=.60$, $p < .01$), which is consistent with the findings reported by Prekumar, Ramamurthy, and Nilakanta (1992). More interestingly, perceptions of a continuing relationship are positively related to trust ($r=.63$, $p < .05$), and trust is positively related to information sharing ($r=.60$, $p < .05$). These findings provide preliminary support for the recommendation that effective EDI implementation, which requires the opportunity for greater information sharing, must be based on trust. The corollary is that when trust is not developed, effective use of EDI, and thus the opportunity for greater coordination benefits, are less likely. More long term relationships with specific market partners are more likely to provide the context for greater information sharing. These preliminary findings suggest that EDI used by customer and supplier firms may more likely support electronic hierarchies (i.e., inter-organizational relationships with specific markets partners), rather than electronic markets (i.e., relationships based on short term opportunities).

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