December 1997

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The need for corporate information technology (IT) standards is increasingly recognized as critical to maintaining compatibility among diverse organizational platforms and for maintaining control over escalating IT costs (Scott Morton 1991; Violino 1995; Weill 1993). Keen (1991) also notes the role of technology standards as important mechanisms in building enabling IT infrastructures. In spite of the considerable attention given to the importance of standards, empirical work that addresses their organizational impacts has been sparse.

This study utilized a multi-site case approach to investigate the organizational impacts of corporate standards in three distinct areas: IT responsiveness to local business needs, IT responsiveness to enterprise-wide integration needs, and IT cost reduction. The nature of standards was conceptualized along two dimensions: scope and flexibility. Scope is the comprehensiveness, or depth and detail, of IT infrastructure standards for a particular IT-related domain. High scope implies that standards prescribe guidelines for the use of IT assets in greater detail. Flexibility refers to the discretion or latitude that standards provide individual decision-makers with for deviating from guidelines embodied in the standards. Multiple theoretical perspectives were drawn from to relate the use of standards to their associated impacts. Coordination Theory (Malone 1987) was used to describe how standards coordinate activities among various stakeholders to facilitate higher levels of enterprise-wide integration. The concept of economies of scope (Teece 1980) was used to describe how the recurrent use of common standards by organizational stakeholders may lead to enterprise-wide cost in areas related to IT purchasing, maintenance, training, and support activities. Finally, theories related to information processing (Simon 1976; Morgan 1986) were used to describe how IT standards may act as uncertainty reduction mechanisms to help facilitate IT responsiveness at local levels through the provision of decisional guidance.

The researchers analyzed corporate IT standards from four firms to determine how variations in both scope and flexibility influenced the ability of organizations to reduce IT costs, to facilitate enterprise-wide integration, and to promote greater levels of local IT responsiveness. Multiple sources of data consisting of surveys, structured interviews, and archival analysis of standards were collected from a variety of respondents to measure each construct and to evaluate six research propositions. The findings suggest that IT infrastructure standards act as coordination mechanisms to provide a balance between two competing organizational tensions: the autonomy needs of local business units and the need for centralized control over enterprise-wide infrastructure by corporate IS (Boynton and Zmud 1987). Evidence from this study suggests that the use of IT standards facilitates enterprise-wide IT cost reduction as well as higher levels of integration within organizations. The study also found that standards appear to be most effective when limits are placed on business unit flexibility in IT decision making. Contrary to expectations, the decisional guidance provided by standards did not appear to facilitate IT responsiveness to local business needs. These findings as well as unanticipated case-study findings are summarized, and managerial implications for implementing corporate IT standards are presented.

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