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ABSTRACT

It is generally recognized that an organization’s information technology (IT) infrastructure can facilitate organizational change, particularly when the information needs of the business process are clearly defined and the capabilities of the IT infrastructure fully explored. Unfortunately, firms engaged in business process redesign (BPR) often struggle to meet these two conditions as outmoded design principles are being discarded for new patterns of activity (Hammer 1990).

Prior research indicates that IT infrastructure decisions should be made in conjunction with a firm’s business-thrust strategies (Boynton and Zmud 1987) and vice versa (Lederer and Mendelow 1986). An inadequate assessment of goals, capabilities and limitations tends to result in the adoption of incompatible BPR and IT strategies, inhibiting project rollout (MacDonald 1991). Frequently these project delays are indicative of an IT gap, in which BPR information resource needs exceed the capabilities of an IT infrastructure. Changes to either the intended process design or the IT infrastructure may be necessary for gap resolution.

This study focuses on the strategies driving BPR projects and IT infrastructure development, the nature of IT-related project delays and the degree to which the redesign project or the IT infrastructure were altered to facilitate project implementation. A multi-phase research design strategy used comprehensive phone interviews, sets of three matched surveys and archival data to collect information on forty-three BPR projects and associated IT infrastructures.

Principal components analysis provided discriminant validity for the BPR and IT strategy constructs, and a cluster analysis revealed three basic strategic orientations. Hierarchical log-linear models were used to assess the most likely outcomes (type of delay, duration, type of BPR and IT change) associated with different strategy combinations. The results suggest that a reactive BPR strategy coupled with a reactive IT strategy is least risky as IT-related project delays tend to be short, although unanticipated, with incremental changes to the intended business process and no change to the IT infrastructure. For all strategy combinations, changes to the IT infrastructure were likely to be less drastic than changes to the intended business process. Most IT-related project delays were unanticipated and relatively short (six months or less).

REFERENCES


