

The effectiveness of strategic information systems planning under environmental uncertainty

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Abstract

Researchers have suggested that more extensive strategic information systems planning (SISP) in an uncertain environment produces greater planning success. Managers must decide whether, and if so when, to perform such SISP. Our study tested the effect of SISP phases on planning success in more and less uncertain environments.

A questionnaire assessed SISP in terms of strategic awareness, situation analysis, strategy conception, strategy formulation, and strategy implementation planning phases. It inquired about environmental uncertainty as dynamism, heterogeneity, and hostility. Finally, it measured SISP success as a composite of alignment, analysis, cooperation, and capabilities. One hundred and sixty-one IS executives provided data in a postal survey.

More extensive strategy formulation uniformly predicted successful planning in more uncertain environments, whereas strategic awareness generally predicted it in less uncertain ones. Strategy conception predicted it in neither more nor less uncertain environments. More extensive planning is thus not uniformly successful in either environment but depends on the nature of the uncertainty.

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1. Introduction

Environmental uncertainty can impact organizations detrimentally [20]. In an uncertain environment, customers can reduce their purchases, inventories can rapidly increase, and vendors can demand more prompt payments, causing revenues to plunge, costs to escalate, and profits to vanish.

Organizations perform strategic business planning as an organizational learning process [2,14]. They do so in

order to anticipate environmental uncertainty and dampen its detrimental effects. Strategic information systems planning (SISP) help do this. Given today's global marketplace and increasingly complex economy, SISP has become more and more critical to the survival of many organizations. Not surprisingly, IS and business managers have consistently ranked it among the top IS management issues [9,30].

The purpose of this study was to examine SISP effectiveness in uncertain environments [42]. Researchers have suggested that more extensive planning would be more successful, because it would help planners understand the impact of the environment and better respond to it [41].

On the other hand, the changes produced by a less uncertain environment would be less detrimental and

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