PERCEIVED STRATEGIC VALUE OF INFORMATION SYSTEMS: MEASUREMENT, DETERMINANTS, AND EFFECTS

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ABSTRACT

Busch et al. (1991) report that the Chief Executive Officer’s (CEO) perception of Information Technology (IT) importance had the strongest effect on the progressive use of IT in the firm. They advocate additional research on the perceptions of the CEO and other top management of the value of IT.

The perceptions of top management on the strategic value of information systems (PSVIS) are classified into three types based on a review of the strategic use of information systems literature. The first type is the perception of a support role for information systems (PSVISSUP). This role is supported in the work of Porter and Millar (1985), Kim and Michelman (1990), and other frameworks based on Porter’s (1980) work. The second is the perception of information systems as managerial productivity enhancement tools (PSVISPRO). The evidence for this role is seen from the fact that data sharing and communication across departments and the high penetration and use of office automation and communication technology were expressed as needs by CEOs from information technology departments (Moynihan 1990). The third type is the perception of information systems as strategic decision aid tools (PSVISSTR). An example of this role would be the use of Group Decision Support Systems (GDSS) in supporting competitive analysis as illustrated in Dennis, Nunamaker, and Paranka (1991). Inter-organizational information systems (Johnston and Vitale 1988) are incorporated in the support perception as linkages to suppliers and in the strategic decision aid perception as cooperative partnerships.

Responses for the items in the PSVIS instrument from a sample of seventy one senior level managers were used in measuring PSVIS. Subsequent factor analysis empirically confirms the presence of these types of PSVIS. The reliability of the instrument was obtained using the alpha reliability coefficient from the analysis of variance results (Kerlinger 1986, pp. 409-412). The validity of this instrument was obtained using the communality measure from the factor analysis of these items (Kerlinger 1986, pp. 428-431). The reliability measure for this instrument is 0.96363 and the validity measure is 0.89806. Both of these values are high and would indicate higher confidence in using the PSVIS instrument.

REFERENCES


