

Relationship among Teams' Information Processing Capacity and Performance in Information System Projects: The Effects of Uncertainty and Equivocality

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Abstract : Uncertainty and equivocality are defined in the information processing literature as two task characteristics that require different information processing responses from managers. As uncertainty often stems from a lack of information, addressing it is thought to require the collection of additional data. On the other hand, as equivocality stems from ambiguity and a lack of understanding of the task at hand, addressing it is thought to require rich communication between those involved. Past research has provided weak to moderate empirical support to these hypotheses. The present study contributes to this literature by defining uncertainty and equivocality at the project level and investigating their moderating effects on the association between several project information processing constructs and project performance. The information processing constructs considered are the amount of information collected by the project team, and the richness and frequency of formal communications among the team members to discuss the project's follow-up reports. Data on 93 information system development (ISD) project managers was collected in a questionnaire survey and analyzed it via the Fisher Test for correlation differences. The results indicate that the highest project performance levels were observed in projects characterized by high uncertainty and low equivocality in which project managers were provided with detailed and updated information on project costs and schedules. In addition, our findings show that information about user needs and technical aspects of the project is less useful to managing projects where uncertainty and equivocality are high. Further, while the strongest positive effect of interactive use of follow-up reports on performance occurred in projects where both uncertainty and equivocality levels were high, its weakest effect occurred when both of these were low.

Keywords : uncertainty, equivocality, information processing model, management control systems, project control, interactive use, diagnostic use, information system development

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020