

DOCTORAL THESIS

The interaction effects of social presence, recipient availability, urgency, relationship, and proximity on media selection: a cost minimization analysis

Li, Xinbao Wilson

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**The Interaction Effects of Social Presence, Recipient
Availability, Urgency, Relationship, and Proximity on
Media Selection: A Cost Minimization Analysis**

LI Xinbao, Wilson

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ABSTRACT

To achieve a satisfactory model for media selection, the present study focuses on clarifying, consolidating, integrating, improving, and utilizing existing research results efficiently. An economic perspective, the cost minimization analysis, is adopted as the ground theory to study interaction effects between determinant factors on media selection. This study elaborates how the cost minimization analysis integrates with trait theories and social interaction theories, and particularly, by examining a classical empirical data, shows how the ground theory incorporates not only with the positivist perspective but also with the research results from the interpretivist perspective research approach.

With the assistance of the cost minimization analysis, twenty interaction effects of determinant variables on media selection are identified, including task social presence, recipient availability, task urgency, relationship between communicators, and physical proximity, and a research model on interaction effects is also established. An experiment involving 169 knowledge workers has been conducted at an international company, in which policy-capturing methodology is carefully designed and implemented through a two-phase survey. As a result, sixteen of the twenty hypothesized interaction effects between the five determinant factors on media selection have been empirically verified. These findings confirm a new research direction to reconcile conflicts between different theoretical views such as trait theories and social interaction theories and to explain inconclusive results emerged in previous empirical testing such as the testing of the main impact of task urgency on media selection.

Different from the prior research in the same area, this study treats interaction effect as a special case of moderate effect without assumption of symmetry, and provides empirical evidences for the asymmetric property of the interaction effects on media selection, which has not yet been studied in existing literature. As for the statistical method, the nested goodness-of-fit strategy has been adopted in this study for dealing with asymmetric interaction effects, which is also the first application of this strategy in the area of media selection.

In the view of the cost minimization analysis, the best or appropriate medium used in a communication event would depend on neither just the fitness between the task requirement and the media features, social interaction factors, nor organizational context, but on the integration of those factors with various weights. Moreover, the media selection is not only determined by the main impact of each of those determinant factors but also by the interaction effects between factors. The results from the present study also have a number of implications for organizations, knowledge workers, and systems professionals.

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