

# Analysis of adopting integrated fuzzy Dematel on the Technology Acceptance

Model : a study of e-publishing system

李友錚, 李美蘭, Ting-Ho Huang

Technology Management

Management

ycl@chu.edu.tw

## Abstract

The Technology Acceptance Model (TAM) has become a major analytical tool used in the promotion of information technology. Traditional TAM studies establish and verify the model of causal relationship between variables by factor analysis or structural equation modeling. However, some technology is highly complicated, not all respondents have thorough comprehension. Certain variables are not compatible with assumption of independence, and causal relationship cannot be analyzed accurately if mass samplings are difficult to obtain, resulting in mistaken conclusions. The Decision Making Trial and Evaluation Laboratory (DEMATEL) method considers the influences of inconformity between variables. Respondents may completely understand the technology, but may not adequately express it through limitations of mass sampling. Score quantification through traditional investigation asks respondents to make a choice from limited wordings in order to stress maximum attribution without considering the fuzzy thinking of humans, resulting in an imprecise summary. This study adopts Fuzzy DEMATEL to calculate the causal relationship and level of mutual effect, building on TAM by applying the E-Publishing system, providing administrator references to improve promotion of new technology to solve complicated and difficult problems in practice.

Keyword : Technology Acceptance Model, TAM