

# Measuring the Library Website Service by Integrating DEMATEL and DTPB Model

李友錚, 謝宜芳, Yau-Bin Guo, 吳嘉蕙

Technology Management

Management

ycl@chu.edu.tw

## Abstract

**Purpose:** Traditional studies on a decomposed theory of planned behavior (DTPB) analyze the relationship of variables through a structural equation model. If certain variables do not fully comply with the independent hypothesis, it is not possible to conduct proper analysis, which leads to false conclusions. Moreover, the designed interfaces of some information systems are too complex for users to understand; which therefore affect users' intention to use, and leads to difficulty in sample collection. To solve these problems, this research adopted an expert opinion-driven decision making trial and evaluation laboratory (DEMATEL), and re-established the causal relationship and the degree of interrelationship of DTPB variables.

**Design/methodology/approach:** This research used a university library website as an individual case, and illustrated the benefits of integrating DEMATEL and DTPB through the opinions of 23 experts surveyed by questionnaires, so as to provide a reference for library administrators when promoting library website services.

**Findings:** According to the analysis result of integrating DEMATEL and DTPB, when DTPB variables were distributed within quadrants of high centrality and degree of causality, they became the key influential variables in planning library website services; when distributed within quadrants of low centrality and degree of causality, the variables needed urgent management. The newly added multinomial variable relationship of the re-established DTPB would depict factors that influence the intention of using the library website more clearly, when analyzing the use behavior of the university library website.

**Originality/value:** When traditional DTPB doesn't consider the direct and indirect relationships among variables, the original causal relationship

of variables will be influenced, and then the original variables cannot fully demonstrate their causal relationship. Therefore this research combined DEMATEL with the original DTPB, and re-constructed the causal relationship and degree of influence of the DTPB. The feasibility and effect of the method proposed in this research are proved through individual cases.

Keyword : Decision Making Trial and Evaluation Laboratory (DEMATEL),  
Decomposed Theory of Planned behavior (DTPB), University library Website