Chapter 4.25
Assessing Knowledge Management System User Acceptance with the Technology Acceptance Model

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ABSTRACT

This article presents the results of a study investigating the applicability of Davis' Technology Acceptance Model (TAM) to user acceptance of a knowledge management system (KMS) in a modern organizational environment. The study endeavors to expand empirical research of two important and complex research questions: (1) What are the important factors, conditions, and mechanisms that affect people's acceptance and usage of collaborative and interdependent KMS in the modern organizational environment?, and (2) How applicable is the TAM, and the substantial body of information technology (IT) research around this model, to user acceptance and usage of a KMS in a modern organizational environment where collaboration, knowledge sharing, and role based system usage is necessary for the organization to function competitively? The study provides preliminary evidence suggesting previous TAM research may serve as a foundation for research of KMS user acceptance. Relationships among primary TAM constructs found in this study are in substantive agreement with those of previous research. These findings are significant because they suggest that the considerable body of previous TAM related IT research may be usefully applied to the knowledge management (KM) domain where interdependent social processes that

require knowledge creation, storage and retrieval, transfer, and application are required for effective organizational functioning.

INTRODUCTION

Although business investment in IT has declined somewhat in recent years, firms around the world still spend more than $2 trillion dollars a year on IT (Carr, 2003). It is also estimated that IT investment comprises approximately 50% of U.S. business capital investment, making it the top capital investment area for American businesses (Carr, 2003). With these continuing enormous business resource investments, understanding and creating conditions under which IT will be accepted and used in the organization remains a high priority within the IT research community (Venkatesh & Davis, 2000). Understanding why individuals accept or reject IT systems has proven to be one of the most challenging issues in information systems research (Doll et al., 1998). User acceptance of IT — a phenomenon that is not yet well understood — and usage are widely considered to be crucial factors in the ultimate determination of information system success, since information systems that are not used are of little value (Mathieson et al., 2001). Nevertheless, as will be discussed later, system usage alone may not be entirely representative of KMS organizational benefits.

A preponderance of research and accumulated knowledge of the factors affecting IT acceptance has as its foundation the technology acceptance model (TAM). TAM, originally conceived by Fred Davis in 1986, is an intentions based model derived from the theory of reasoned action (TRA) tailored to meet the needs of information technology research (Davis et al., 1989). Since its inception TAM has enjoyed growing acceptance and has proven to be a reasonably accurate predictor of both users' intentions to use an IT, and of IT usage. Evidence of the research community's growing acceptance of TAM is reflected in the fact that the Institute for Scientific Information Social Science Citation Index recently listed 335 journal citations since 1999 of the initial TAM research paper published by Davis et al. (1989). This represents a significant recent research citation increase when compared to February 2000 citation reference information cited by Venkatesh and Davis (2000).

A second related topic of considerable interest in the business world is the multi-faceted concept widely referred to as knowledge management (KM). KM can be defined broadly as the set of systematic and disciplined actions an organization can take to obtain the greatest value from the knowledge available to it (Marwick, 2001), and/or to efforts aimed at "identifying and leveraging the collective knowledge in an organization to help the organization compete" (Alavi & Leidner, 2001, p. 113). KM is rapidly becoming a critical integral business function as organizations increasingly realize their competitiveness in the intensely competitive global marketplace hinges on effective management of intellectual resources (Davenport & Grover, 2001). Increased interest and investment in KM can be attributed to the growing recognition that one of a firm's most unique and inimitable resources is the intellectual capabilities of its workers.

Reflecting this interest, recent literature is replete with research of a wide range of important issues related to the question of how organizations can best capitalize on their knowledge resources, develop processes to support KM, and broadly integrate KMS into organizational functioning. A cursory sampling of key KM issues reported recently include KM and new organizational structures (Malhotra, 2000), assessments of KM organizational capability prerequisites (Gold, Segar & Malhotra, 2001), KM strategies and taxonomies (Earl, 2001; Zack, 1999), the relative importance of various knowledge types (Lam, 2000), general discussions of KM benefits and