Chapter XIII

Knowledge Management Information Technology
User Acceptance:
Assessing the Applicability of the Technology Acceptance Model

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Abstract

This chapter 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 objective of the study was 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 in which collaboration, knowledge sharing, and role-based system usage is necessary in order for the organization to function competitively? The study provided preliminary evi-
dence suggesting that previous TAM research may serve as a foundation for research of KMS user acceptance. Relationships among primary TAM constructs found in this study were in substantive agreement with those of previous research. These findings are relevant and significant because they suggest that the considerable body of previous TAM-related IT research may be applied usefully to the knowledge management (KM) domain in which 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 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 proved to be one of the most challenging issues in information systems research (Doll, Hendrickson, & Xiandong, 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, Peacock, & Chin, 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 was conceived originally by Fred Davis in 1986 and is an intentions-based model derived from the Theory of Reasoned Action (TRA) tailored to meet the needs of information technology research (Davis, Bagozzi, & Warshaw, 1989). Since its inception, TAM has enjoyed growing acceptance and has proved to be a reasonably accurate predictor of both users’ intentions to use IT and of IT usage (Ma & Liu, 2004). 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 (January 2006) listed more than 1,150 journal citations of the initial TAM research papers published by Davis (1989) (628 citations) and Davis et al. (1989) (531 citations).

A second related topic of considerable interest in the business world is the multifaceted concept widely referred to as knowledge management (KM). KM can be defined broadly as the set of systematic and disciplined actions that 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 rapidly is becoming a critical integral business function as organizations increasingly realize that their competitiveness
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