Abstract

Current literature on e-commerce and knowledge management primarily emphasizes the benefit of knowledge management for innovative e-commerce operations. The Internet-enabled e-commerce field provides capabilities for firms in all sectors to reach global buyers and suppliers. Knowledge management provides frameworks to manage intellectual capital as a valuable organizational and strategic resource. Do knowledge management practices significantly benefit electronic commerce? If so, does the relationship work in the other direction? Does a firm’s e-commerce applications significantly benefit knowledge management practices as well? To test these exploratory propositions, empirical data were collected from companies in a variety of industries in Taiwan, a country emphasizing e-commerce initiatives. The
results revealed significant relationships between the way businesses implement
electronic commerce projects, as well as how they experiment with knowledge man-
agement concepts. In addition, the findings reveal interesting benefits and difficulties
in implementation. These relationships were found to operate in both directions,
offering reinforcing effects as well as connections.

Introduction

Internationally, Internet technology is an integral component of business strategy.
Most firms use electronic commerce to reach customers at home and abroad. E-
commerce, when properly linked with business processes and aligned with an
organization’s culture, aids a firm’s strategic growth (Ahadi, 2004; Piris, Fitzgerald,
& Serrano, 2004). These initiatives can lead to important performance gains (Green
& Ryan, 2005). Another global imperative is the widespread recognition of the
value of intellectual capital as a major source of sustainable competitive advantage
(Marr, Schiuma, & Neely, 2004). To avoid basing competitive strategy on price
discounting alone, a company must continuously engage in acquiring and updating
the knowledge base. According to Porter (2001), intellectual assets embodied in the
total business system are then difficult to duplicate.

Knowledge management provides the mechanism for firms to keep up with innovative
activities (Bakhru, 2004; Trethewey & Corman, 2001). As e-commerce information
flows freely and sites are easy and inexpensive to duplicate, innovations have an
increasingly shorter life span. Thus, these two developments of knowledge manage-
ment and e-commerce would seem to supplement each other (Fahey, Srivastava,
Sharon, & Smith, 2001; Bose & Sugumaran, 2003). The integration of major business
processes brought about by e-commerce provides a wealth of data and information
that can fuel knowledge management (Fang & Wu, 2006; Kocharekar, 2001). Yet
most discussions in the literature are largely conceptual in nature (Holsapple &
Singh, 2000). Inquiries that examine these global issues, based on actual data, are
needed to obtain more insight into the relationship and directionality between the
two management themes.

The purpose of this study is to correct this deficiency in the literature by exploring
these relationships. Thus, the primary research question is: Do knowledge manage-
ment practices significantly benefit electronic commerce? If so, does the relationship
work in the other direction? Do a firm’s e-commerce applications significantly benefit
knowledge management practices as well? To test these exploratory propositions,
empirical data were collected from companies in a variety of industries in Taiwan.
Taiwan was chosen due to its aggressive emphasis on e-commerce initiatives. The
paper will first briefly review the existing literature on both knowledge management
A Variable Precision Fuzzy Rough Group Decision-Making Model for IT Offshore Outsourcing Risk Evaluation
www.igi-global.com/article/variable-precision-fuzzy-rough-group/3667?camid=4v1a