

Research on Correlation between Knowledge Management and Operational Performance

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ABSTRACT: *In the face of increasingly competitive pressure, how to integrate the concepts of information technology input, organizational learning, and market orientation into knowledge management activities, so as to provide customers with better product and service quality and improve operational performance, has become the focus of many companies. This study explored the correlation between the concepts of information technology input, organizational learning, market orientation and knowledge management activities. The results show that the higher the information technology, organizational learning, and market orientation, the better the knowledge management activities, and the better the knowledge management activities, the higher the operational performance. This study provided suggestions for companies to implement knowledge management activities and improve operational performance.*

KEYWORDS: *Information Technology input, Knowledge Management activities, Operational Performance*

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I. RESEARCH BACKGROUND AND PURPOSE

Under the pressure of a highly competitive environment, how to choose appropriate business strategies, integrate the concepts of information technology input, organizational learning and market orientation into knowledge management activities, and then provide customers with better products and services, has become the focus of many enterprises' business strategies. There are few empirical studies on the impacts of information technology input, organizational learning, and market orientation on knowledge management activities. Therefore, this study explored the correlation between information technology, the degree of organizational learning, the degree of market orientation, the implementation degree of knowledge management activities, and operational performance. Based on the results of this study, suggestions for implementing knowledge management activities and improving operational performance were provided for companies.

II. LITERATURE REVIEW

2.1 Market Orientation

Narver and Slater (1990) divided market orientation into three dimensions, including (1) customer orientation; (2) competitor orientation; and (3) cross-departmental coordination. Kohli and Jaworski (1990) mentioned that market orientation includes (1) collecting market intelligence; (2) transmitting market intelligence; and (3) responding to market intelligence. This study selected the viewpoint of market orientation proposed by Narver and Slater (1990) as the research dimensions.

2.2 Organizational Learning

Templeton et al. (2002) pointed out that organizational learning includes information extraction, information transmission, information interpretation, and organizational memory. Pace (2002) divided organizational learning into four dimensions: information sharing, consulting atmosphere, learning practice, and achievement tendency. Tippins and Sohi (2003) divided the content of organizational learning into four procedures: information acquisition, information dissemination, shared interpretation, and organizational memory. This study took the four dimensions of organizational learning proposed by Tippins and Sohi (2003) as the dimensions of organizational learning activities.

2.3 Information Technology Input

Sakaguchi and Dibrell (1998) suggested that the degree of information technology input can be measured by the investment and training of information technology. Miller and Doyle (1987) pointed out that information technology input must pay attention to (1) understand the importance of information technology in a company; (2) the use of information technology requires a certain degree of investment in software, hardware, and personnel to achieve benefits; and (3) personnel training should be based on user needs. Based on the literature review (Miller & Doyle, 1987; Sohal et al., 2001; Meso & Smith, 2000; Sakaguchi & Dibrell, 1998),

this study divided the degree of information technology input into personnel cognition, hardware and software investment, and personnel training dimension.

2.4 Knowledge Management

Carlucci et al. (2004) mentioned that knowledge management refers to the process of understanding information, and organizing, updating, sorting, analyzing, and sharing information over a long period of time. Zack (1999) pointed out that knowledge management activities include five stages: (1) acquisition; (2) refinement; (3) storage and retrieval; (4) dissemination; and (5) presentation. Lee and Hong (2002) divided knowledge management activities into four basic steps: knowledge acquisition, knowledge development, knowledge sharing, and knowledge utilization. Based on the literature review, this study divided knowledge management activities into four dimensions: knowledge acquisition and creation, knowledge refinement, knowledge storage, and knowledge sharing.

2.5 Operational Performance

Shrader (2001) measured operational performance with profitability and sales growth rate. Chow et al. (2003) measured performance with indicators such as long-term profitability, sales or earnings growth rate, and financial capability. Tippins and Sohi (2003) measured organizational performance with profitability, return on investment, customer retention rate, and sales growth rate. Kirca et al. (2005) took the overall business performance, profitability, sales, and market share as indicators to measure performance. Based on the literature review, this study took profitability, business growth rate, return on investment, customer retention rate, customer satisfaction, market share, and operational efficiency as indicators to measure company performance.

III. RESEARCH METHOD

This study explored the correlation between organizational learning, market orientation, information technology input, and the implementation degree of knowledge management activities and operational performance, and proposed the hypotheses as follows:

H1: The degree of information technology input has a significant positive impact on the implementation degree of knowledge management activities.

H2: The degree of organizational learning has a significant positive impact on the implementation degree of knowledge management activities.

H3: The degree of market orientation has a significant positive impact on the implementation degree of knowledge management activities.

H4: The implementation degree of knowledge management activities has a significant positive impact on operational performance.

3.1 Information Technology Input and Knowledge Management

Ruiz-Mrcader et al. (2006) stated that information technology contributes to the knowledge management activities of enterprises. Gold et al. (2001) suggested that information technology input affects the implementation effect of knowledge management activities. Based on the literature review, H1 was supported.

3.2 Organizational Learning and Knowledge Management Activities

Singh (2009) pointed out that the degree of organizational learning has a significantly positive impact on the implementation of knowledge management activities. Hsu (2006) indicated that continuous learning by members will enhance knowledge sharing among employees. Based on the literature review, H2 was supported.

3.3 Market Orientation and Knowledge Management Activities

Nonaka and Takeuchi (1995) mentioned that market orientation has a significant impact on knowledge creation. Sinkula (1994) proposed that organizations can gain an advantage in knowledge creation if they are based on market orientation. Based on the literature review, H3 was supported.

3.4 Knowledge Management Activities and Operational Performance

Gold et al. (2001) suggested that effective knowledge management helps enterprises improve their operational performance. Choi and Lee (2003) indicated that implementing knowledge management activities can improve organizational performance. Carlucci et al. (2004) pointed out that knowledge management activities will affect the operational performance of organizations. Based on the literature review, H4 was supported.

IV. CONCLUSION AND SUGGESTIONS

Few empirical studies have explored the impacts of information technology input, organizational learning, and market orientation on knowledge management activities. This study showed that the degree of information technology input, organizational learning, and market orientation had significant positive impacts on the implementation degree of knowledge management activities. The implementation degree of knowledge management activities has a significant positive impact on operational performance. This study can provide manufacturers with a reference to promote knowledge management and avoid unnecessary waste of resources and time.

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