

A Discussion on the Factors Influencing the Performance of Engineering Consulting Companies

Yi-Chan Chung

Department of Business Administration, Yuanpei University of Medical Technology, Taiwan.

Corresponding Author: Yi-Chan Chung

Abstract: *This study explores the correlation between the management strategy, organization learning, execution degree of knowledge management activities and operation performance, with engineering consulting companies as the research objects. The results of this study indicated that the higher the execution degree of cost leadership strategy, marketing differentiation strategy and innovative differentiation strategy, the greater the positive impact on the execution degree knowledge management, and the greater the positive impact on business performance. Therefore, this study suggests that enterprises need to improve the execution of organizational learning and knowledge management activities, and attach importance to the execution of cost leadership strategy and differentiation strategy, so as to improve their performance.*

Keywords: *management strategy, organization learning, business performance*

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I. Research Background

Under the pressure of highly competitive environment, how to select appropriate business strategy, incorporate the concept of organizational learning into knowledge management activities, and then provide customers with products and services of better quality, and improve business performance has become the key point of business strategy of many engineering consulting companies. Execution of knowledge management activities can help the company maintain good interaction with customers and improve competitive advantage. This study explores the correlation between the management strategy, organization learning, execution degree of knowledge management activities and operation performance, with engineering consulting companies as the research objects. The purpose of the study is to provide a proposal for engineering consulting companies to implement knowledge management activities and improve business performance.

II. Literature Review

2.1 Business strategy

Durand & Coeurderoy (2001) classified business strategy into: (1) cost leadership strategy; (2) marketing differentiation strategy; (3) innovative differentiation strategy). Croteau & Bergeron (2001) pointed out that business strategy refers to the actions taken by the organization to achieve specific objectives. Porter (1980) held that enterprises could implement cost leadership strategy, differentiation strategy and centralization strategy to achieve competitive advantages. Miles & Snow (1978) divided business strategies into prospector strategy, defender strategy, analyzer strategy and reactor strategy. This study adopted three categories of business strategy of Durand & Coeurderoy (2001).

2.2 Organizational learning

Aris & Ronald (2000) pointed out that organizational learning is to adjust the future decision-making activities based on the past experience. Templeton et al. (2002) held that organizational learning includes information extraction, information transfer, information interpretation and organizational memory. Tippins & Sohi (2003) divided the content of organizational learning into four procedures, including information acquisition, information dissemination, shared interpretation and organizational memory. This study adopted the four dimensions put forward by Tippins & Sohi (2003) as the dimensions of organizational learning activities.

2.3 Knowledge management activities

According to Carlucci et al. (2004), knowledge management refers to the process of understanding information, and organizing, updating, sorting, analyzing and sharing the information with others within a long period. Desouza (2003) defined knowledge management as a set of all activities involving knowledge creation, knowledge storage, knowledge distribution and knowledge application. Sarvary (1999) believed that knowledge

management includes three processes: organizational learning, knowledge generation and knowledge dissemination. Summarizing related literature review, this study classified knowledge management activities into four dimensions: knowledge acquisition and creation, knowledge refining, knowledge storage and knowledge sharing.

2.4 Business strategy

Croteau & Bergeron (2001) measured performance from two dimensions: profitability and sales growth. Kirca et al. (2005) used four indicators to evaluate performance, including the overall business performance, profitability, sales and market share. Tippins & Sohi (2003) measured the organizational performance by profitability, return on investment, customer maintenance and sales growth. In this study, profitability, business growth rate, return on investment, customer retention rate, customer satisfaction, market share, operating efficiency and other indicators are used as indicators for performance measurement.

2.5 Business strategy and knowledge management activities

Shih & Chiang (2005) pointed out that different business strategies adopted by the company will affect the mode of promoting knowledge management. Hamzah & Ismail (2009) pointed out that different types of business strategy adopted by the company would significantly affect the execution of knowledge management activities to different extent. Based on the literature review, this study put forward H1: different types of business strategy will have different degrees of significant impact on the execution of knowledge management activities.

2.6 Organizational learning and knowledge management activities

Singh (2009) pointed out that the execution of organizational learning has significant positive impact on the execution of knowledge management. Sarvary (1999) held that knowledge management consists of three procedures, one of which is organizational learning procedure for the company to acquire knowledge or information. Hsu (2006) pointed out that through encouraging the continuous learning of all the staff of the company, it can improve the degree of knowledge sharing of the employees. Based on the literature discussion, this study put forward H2: the degree of organizational learning has significant positive impact on the execution degree of knowledge management activities.

2.7 Knowledge management activities and business performance

According to Choi & Lee (2003), execution of knowledge management activities can improve organizational performance. Schack (2004) believed that knowledge management can improve the performance of the enterprise. Carlucci et al. (2004) pointed out that knowledge management activities will affect business performance. Based on the literature discussion, this study put forward H3: the execution degree of knowledge management activities has significant positive impact on business performance.

III. Research Method

The questionnaire consists of four parts, which are measured by Likert's five-point scale. Part 1: Types of business strategy, mainly including 3 dimensions: (1) cost leadership strategy; (2) marketing differentiation strategy and (3) innovative differentiation strategy. Part 2: level of organizational learning, including four dimensions: (1) information acquisition; (2) information dissemination; (3) shared interpretation and (4) organizational memory. Part 3: Execution degree of knowledge management activities, including (1) knowledge acquisition and creation; (2) knowledge refining; (3) knowledge storage and (4) knowledge sharing. Part 4: Business performance, including 7 indicators: profitability, business growth rate, return on investment, customer retention rate, customer satisfaction, market share, and operation efficiency. This study collected relevant data by mailing questionnaires according to the membership directory of the Chinese Association of Engineering Consultants, which were filled out by high executives. A total of 35 valid questionnaires were collected. The statistical analysis method is ANOVA. According to Nunnally (1978), in exploratory research, reliability is acceptable as long as it is above 0.7. In this study, the reliability of all variables is above 0.7

3.1 Measurement of business strategy

By referring to the questionnaire developed by scholars (Durand & Coeurderoy, 2001; Prajogo & Sohal, 2006), this study classified business strategy into cost leadership strategy, marketing differentiation strategy and innovative differentiation strategy.

3.2 Measurement of organizational learning

This study took the four-dimensional activities put forward by Tippins & Sohi (2003) as the indicators to measure the degree of organizational learning. Considering the operation types of the engineering consulting

companies, this study divided the items of organizational learning activities into the following dimensions: information acquisition, information dissemination, shared interpretation and organizational memory.

3.3 Measurement of the execution degree of knowledge management activities

According to related literature review, this study classified the activity items that need to be executed to promote knowledge management into the following dimensions: knowledge acquisition and creation, knowledge refining, knowledge storage and knowledge sharing.

3.4 Measurement of operation performance

This study took the profitability, business growth rate, return on investment, customer retention rate, customer satisfaction, market share and operating efficiency as the indicators to evaluate the operation performance.

IV. Research Results

4.1 Correlation between the type of business strategy and knowledge management activities

This study divided the types of business strategy into two groups (high degree and low degree), and examined whether there is significant difference between them according to the average score of the execution degree of the two groups of knowledge management. The study result rejected H1. The execution degree of cost leadership strategy, marketing differentiation and innovative differentiation strategy will significantly affect the execution degree of knowledge management.

4.2 Correlation between the organizational learning degree and knowledge management activities

This part discussed the influence of the organizational learning degree on the execution degree of knowledge management. This study divided the organizational learning degree (information acquisition, information dissemination, shared interpretation and organizational memory) into two groups (high and low degree), and examined whether there is significant difference between them according to the average scores of the execution degree of knowledge management of the two groups. The study result supported H2.

4.3 Correlation between the execution degree of knowledge management and business performance

This study divided the execution degree of knowledge management (knowledge acquisition and creation, knowledge refining activities, knowledge storage activities and knowledge sharing activities) into two groups (high and low execution degree), and examined whether there is significant difference between them according to the average scores of business performance of the two groups. The study result supported H3.

V. Conclusion

In empirical research, few studies have included organizational learning and business strategy into knowledge management activities to explore their impact on operational performance. The results of this study indicated that the higher the execution degree of cost leadership strategy, marketing differentiation strategy and innovative differentiation strategy, the greater the positive impact on the execution degree knowledge management, and the greater the positive impact on business performance. Therefore, this study suggests that enterprises need to improve the execution of organizational learning and knowledge management activities, and attach importance to the execution of cost leadership strategy and differentiation strategy, so as to improve their performance.

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