

Research on the Correlation between Market Orientation and New Product Development Performance

Yi-Chan Chung*, Chih-Hung Tsai**

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

**Department of Information Management, Yuanpei University of Medical Technology, Taiwan

Corresponding Author: Yi-Chan Chung

ABSTRACT : *In highly competitive environment, development of products meeting the customers' needs and reduction of R&D cost and time to market are the keys of business operation. According to findings of this study, higher level of information technology application significantly and positively influences new product development performance. In addition, higher level of market orientation significantly and positively influences new product development performance. Thus, this study suggests that in order to enhance new product development performance, it must upgrade information technology application and market orientation level.*

KEYWORDS- *Market Orientation, information technology, new product development performance*

Date of Submission: 12-07-2021

Date of Acceptance: 28-07-2021

I BACKGROUND AND PURPOSE

In highly competitive environment, reinforcement of development performance of new products becomes extremely important. Development of products meetings the customers' needs by market orientation and information technology is emphasized in operational strategies in many enterprises. At present, the scholars rarely mention about the effect of market orientation and information technology on new product development performance. Through literature review, this study explores the effect of market orientation and information technology on new product development performance. Research purposes are shown below: (1) it explores the effect of market orientation on new product development performance; (2) it explores the effect of information technology on new product development performance; (3) it proposes the suggestion for the company to enhance new product development performance.

II LITERATURE REVIEW

2.1 Information technology

Roberts (1996) argued that information technology means all kinds of software and hardware tools to access, apply, present, save and interact with information. According to Sakaguchi and Dibrell (1998), involvement of information technology can be measured by the investment and training of information technology. When studying the effect of investment of information technology on the companies, Brynjolfsson and Yang (1996) explored not only the investment in hardware, but also the investment on software and personnel training. According to literature review, this study classifies involvement of information technology into personnel cognition, software and hardware investment and personnel training.

2.2 Market orientation

Narver and Slater (1990) divided market orientation into customer orientation, competitor orientation and interdepartmental communication. Hunt and Morgan (1995) suggested that market orientation means systematic searching of the information related to the competitors and customers and use the said knowledge to recognize, select, execute and modify the strategies. Market orientation defined by Kohli and Jaworski (1990) includes (1) collection of market information; (2) communication of market information; (3) response to market information. This study adopts the definition of market orientation proposed by Narver and Slater (1990) as research dimension.

2.3 New product development performance

Ragatz et al. (2002) measured new product development performance by quality level, time to the market, development cost, R&D competence and diversity of products. Thomas (1993) suggested that measures of new product development include product quality, product cost, product development time, development cost and R&D competence. Calantone et al. (1995) measured new product development performance by return on investment and the growth, sales increase and market share. Based on literature review, this study adopts five

measures as the dimensions of new product development performance: (1) time of new products to market; (2) quality of new products; (3) market share of new products; (4) success ratio to market; (5) cost of new product development.

III RESEARCH METHOD

By literature review, this study explores the correlation among information technology, market orientation and new product development performance. According to literature review, this study develops the following hypotheses:

H1: Higher level of information technology application significantly and positively influences new product development performance.

H2: Higher level of execution of market orientation significantly and positively influences new product development performance

3.1 Information technology and new product development performance

Ozer (2000) argued that information technology allows the enterprises, in terms of new product development, to properly manage product knowledge, enhance consistent collaborative work and improve development process. Essienubong (2018) suggested that information technology application can assist with the managers' supervision and control of new product development and it enhances new product development performance. According to literature review, this study proposes H1: higher level of information technology application significantly and positively influences new product development performance.

3.2 Market orientation and new product development performance

Kahn (2001) posited that higher level of market orientation results in better new product development performance. Atuahene-Gima (1996) suggested the positive correlation between market orientation and new product performance. Kohli et al. (1990) indicated that market orientation behavior results in higher level of innovation and reinforces new product development performance. According to literature review, this study proposes H2: higher level of execution of market orientation significantly and positively influences new product development performance.

IV CONCLUSION AND SUGGESTIONS

In highly competitive environment, development of products meeting the customers' needs and reduction of R&D cost and time to market are the keys of business operation. According to findings of this study, higher level of information technology application significantly and positively influences new product development performance. In addition, higher level of market orientation significantly and positively influences new product development performance. Thus, this study suggests that in order to enhance new product development performance, it must upgrade information technology application and market orientation level. The findings of this study can serve as the reference for the strategy of the companies to enhance new product development performance.

REFERENCES

- [1]. Atuahene-Gima, K., 1996. Differential potency of factors affecting innovation performance in manufacturing and services firms in Australia. *Journal of Product Innovation Management*, 13(1), 35-52.
- [2]. Brynjolfsson E., 1993. The Productivity Paradox of Information Technology. *Communications of the ACM* (35), , 66-77.
- [3]. Brynjolfsson, E. , Yang, S., 1996. Information Technology and Productivity: A Review of the Literature. *Advance in Computers* (43), 179-214.
- [4]. Calantone, R.J., Vickery, S.K., Droge, C., 1995. Business performance and strategic new product development activities: An empirical investigation. *Journal of Product Innovation Management*, 12(3), 214-223.
- [5]. Essienubong, M., 2018. Usage of information technology in ne product development process. *International Journal of Scientific & Technology Research*, 7(10), 26-35.
- [6]. Hunt, S.D. and Morgan, R.M., 1995. The comparative advantage theory of competition. *Journal of Marketing*, 59(2), 1-15
- [7]. Kahn, K.B., 2001. Market orientation, interdepartmental integration, and product development performance. *Journal of Product Innovation Management*, 18, 314-323
- [8]. Kohli, A.K., Jaworski, B.J., 1990. Market orientation: the construct, research propositions, and managerial implications, *Journal of Marketing*, 54(2), 1-18.
- [9]. Narver, J.C., Slater, S.F. 1990. The effect of a market orientation on business profitability. *Journal of Marketing*, 54 (4), 20-35
- [10]. Ozer, M. 2000. Information Technology and New Product Development: Opportunities and Pitfalls. *Industrial Marketing Management*, 29, 387-396.
- [11]. Roberts, C.B., 1996. The Impact of Information Technology on the Management of System Design. *Technology in Society*, 18(3), 333-355.
- [12]. Ragatz, G. L., Handfield, R. B. , Petersen, K. J. .2002. Benefits associated with supplier integration into new product development under conditions of technology uncertainty. *Journal of Business Research*, 55, 389-400
- [13]. Sakaguchi, T., Dibrell, C., 1998. Measurement of the intensity of global information technology usage: Quantitizing the value of a firm's information technology. *Industrial Management & Data Systems*, 98 (8): 380-394.
- [14]. Thomas, Rober J., 1993. *New Product Development: Managing and Forecasting for Strategic Success*, New York: John Wiley & Sons.