

The Impact of Antecedent Variables on Strategic Renewal Capability : An Empirical Investigation of Software Businesses in Thailand

Wasin Phetphongphan^{1*} Kornchai Phornlaphatrachakorn² Karun Pratoom²

Abstract

Strategic renewal capability has been viewed as one of the key components that influence organizational outcomes. The objective of this study is to investigate five influential variables on strategic renewal capability; forward-looking vision, learning utilization, resources complementarity, technology growth and market change. In this research, 156 software businesses in Thailand were chosen as a target population for this study. Data were collected and analyzed in the formulation of hypotheses and the hypothesized relationships among variables were then examined using ordinary least square (OLS) regression analysis. Results suggest that almost all antecedents are positively related to the strategic renewal capability except forward-looking vision. This study concluded by identifying a range of theoretical and managerial contributions, and also made suggestions for future research

Keywords: Strategic Renewal Capability, Forward-Looking Vision, Learning Utilization, Resources Complementarity, Technology Growth, Market Change

Introduction

Globalization and advances in technology are currently forcing businesses around the world to respond to meet to ever changing, competitive and unpredictable environments if they wish to remain sustainable. Many organizations are faced with a dynamic environment given economic, social, cultural and technological changes (Schmitt and Klarnar, 2015). Moreover, the growth of information and communication technologies has resulted in changes in broader markets at both national and global levels (Yang and Sun, 2012). At the same time broader market changes have forced organizations to face an increasing number of competitors and more competitive environment, which contributes new challenges for business operations. For survival and success business organizations must continually adapt and develop more effective and innovative operations. (Poyhonen, 2004). stated that these capabilities are attributes of renewal capability.

Previous studies have indicated that renewal capability is the ability to refresh or adjust to keep up with environmental change in order to make the business of the organization become more resilient (Poyhonen, 2004 ; Stahle, 1998). Moreover, renewal capability results in modifying proactively in ways that promote the survival and sustainability of the organization. Not only does renewal capability respond to current challenges and changes, but it also assists in prefiguring market innovations in anticipation of possible future change (Hamel, 2000). Additionally, the concept of renewal capability has often been used strategically in restructuring businesses (Capron and Mitchell, 2009; Murmann, 2003; Salvato, 2009). This research integrates

^{1*} PH.D. Student (Management), Mahasarakham Business School, Mahasarakham University

² Lecturer of Mahasarakham Business School, Mahasarakham University



two concepts relating to strategic renewal and renewal capability to generate a new concept as strategic renewal capability. In this research, strategic renewal capability is defined as processes or methods to promote the ability of an organization to refresh itself within the terms of its business goals to make the organization become more sustainable; long-lasting and successful in the future.

However, there is still a profound lack of understanding in relation to aspects of strategic renewal capability. Hence this research attempts to explore the factors that affect strategic renewal capability. Thongsodsang, Ussahawanitchakit, and Jhundra-indra (2012) suggests that studies of strategic renewal capability may be investigated in the context of businesses that requires the ability to adjust to rapidly changing environments. In this regard several researchers have pointed out that such industries as the telecommunications industry, the electronics industry and the software industry must be able to adapt rapidly if they are to survive to meet competitive turbulence and environmental uncertainty (Garrett, Buisson & Yap, 2006; Thongsodsang, Ussahawanitchakit & Jhundra-indra. 2012). These businesses in the field of electronics play a significant role in the growth of national economies as they attract significant foreign investment and it is for this reason that it is important to investigate the role of strategic renewal capability in maintaining their competitive advantage market outcomes.

Research Objectives

To investigate the relationships among forward-looking vision, learning utilization, resource complementarity, technology growth, market change, and strategic renewal capability,

Literature review

This article explains the concept of dynamic capabilities associated with renewing capability. Renewal capability emerges from the integration of three main perspectives, namely, knowledge management, intellectual capital and strategic management perspectives (Pöyhönen, 2004). Within these perspectives, the knowledge management perspective is to understand the context of the organization, which leads to the capability of the organization (Henderson and Cockburn, 1994). The intellectual capital perspective focuses on the resources exploitation of the organization, which allows creating the organizational performance. Lastly, the strategic management perspective approaches the creation of competitive advantage (Zander and Kogut, 1995).

In terms of the definition, renewal capability is defined both by the organizational capability implement to the replication of existing knowledge by knowledge processes and ability to radical innovations, which these three processes require consistent with the strategy and suitable for the environment of the organization (Poyhonen, 2004). In addition, Danielson (2004) indicated that renewal as outcome of organizational capability to continuous usage of organizational innovation. Therefore, renewal capability or the organizational agility can be defined as the scope of the capacity for innovation that have been used continuously such as innovative products, new service processes and leadership practices and new management

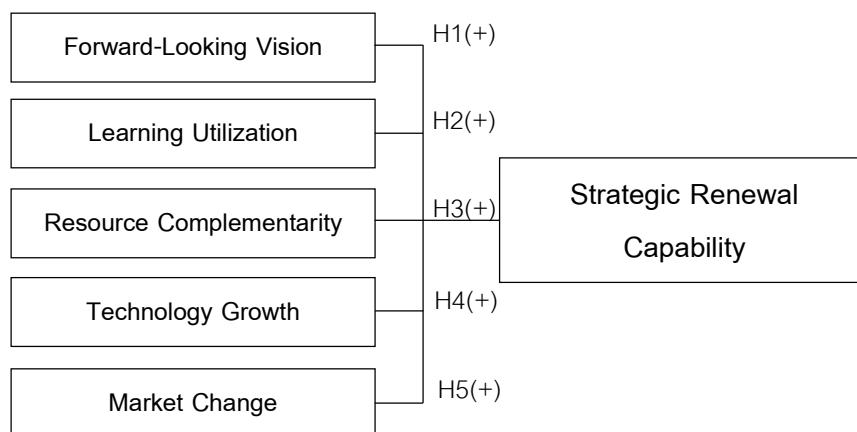


model to facilitate sustained competitive success. Which, this renewal capacity includes using purposeful and proactive strategy and knowledge mobilization processes.

However, the concept of renewal has often been used strategically (Capron and Mitchell, 2009; Murmann, 2003; Salvato, 2009). Previous studies indicate that strategic renewal refers to the procedures, processes and means of making organizational changes by focusing on the organization's long-term organizational operation which has a critical influence on its success or failure in the future (Agarwal and Helfat, 2009). To expand an understanding of renewal, this research is aimed at the integration of concepts relating to strategic renewal and renewal capability to generate a new concept. Therefore, in this research strategic renewal capability is defined as processes or methods to promote the ability of an organization to refresh itself within the terms of its business goals to make the organization become more sustainable; long-lasting and successful in the future.

Junell and Ståhle (2011) indicated the measurement tool for renewal capability, which renewal capability can be measured by the case organization, strategic capability and power to change. In addition, measurement of renewal capability related to organization's ability to implement renewal processes through effective maintenance, whether by incremental development, or radical innovation. Therefore, this research proposes measurement tool of strategic renewal capability by assessed the level of ability of operational maintenance, environmental adaptation, business development and organizational innovation.

Figure 1: Conceptual Model of Antecedent Variables and Strategic Renewal Capability



Strategic renewal capability also has been recognized as essential to dynamic capabilities because dynamic capabilities refer to the ability to renew the competencies to conform to the changing business environment by integrating, adapting, and reconfiguring organizational resources to achieve survival and sustainability (Helfat et al., 2007). Therefore, dynamic capability theory is applied to explain the relationships among the antecedent variables of strategic renewal capability and strategic renewal capability. The antecedents of strategic renewal capability in this research are follows:



Forward-Looking Vision

The vision of the senior managers is a key factor influencing organizational change (Bonn and Fisher, 2011). Barr, Stimpert and Huff (1992) stated that although firms may operate in the same environment, they may implement different strategies for organizational change due to the vision of their senior managers. Therefore, the vision of managers is critical to organizational renewal because they inevitably direct the organization in response to their assessment of the operating environment. In addition, the forward-looking vision is defined as a clear guideline relating to the operations of the organization in the future. As discussed by Cooper and Cronin (2000) and Meadan et al. (2010) planning improves performance and influences innovation.

In this research, forward-looking vision refers to setting guidelines for the future operation of an organization to ensure its long term success. Vision must be formulated by senior managers to ensure that a firm has the ability to adapt and develop its future growth potentials. In addition, a forward-looking vision must be based on a clear conception of the present situation of the organization, and its future objectives that focus on its long term goals.

As has been discussed, forward-looking vision is associated with effective organization renewal and accordingly it must take account of a wide range of possibilities in relation to future organizational change, and the key factors that are identified as promoting organizational development (Conger, 1989). Likewise, Price (2001) has suggested that forward-looking vision contributes to the motivation of employees who implement change. Forward-looking vision clearly influences the future operations of an organization and hence enhances capability for organizational renewal. Therefore, the following hypothesis is proposed :

Hypothesis 1: Forward-looking vision will positively relate to strategic renewal capability

Learning Utilization

The capability of an organization to learn from its past, its learning ability, is recognized as an important benefit to overall business performance (Nahapiet and Ghoshal, 1998). It is identified as an important resource of an organization and brings with it the ability of the organization to achieve a competitive advantage (Grant, 1996; Kogut and Zander, 1992). In addition, several studies have suggested that the capability of an organization to learn from its past leads to performance enhancements (Appleyard, 1996; Decarolis and Deeds, 1999; Prieto, 2003). Learning ability has also been considered as a capability that is essential to enable response to changes in the internal and external environment and to build and maintain competitive advantages (Teece, Pisano and Shuen, 1997). Thus, utilization of learning is an important capability for continuous improvements and for renews the organization in accordance with the needs of an uncertain environment (Jaw and Liu, 2003).

In this research the focus is on learning capability that enables a firm to exploit knowledge, as stated above, to enhance previous knowledge and combine it with new knowledge, which is related to organization renewal capability. Thus, this form of learning utilization can be defined as an ability to take advantage of organizational learning to create and develop the cognitive abilities to achieve the objectives of the firm. This also includes knowledge



distribution, apportionment, maintenance and integration having the potential to improve a firm's renewal capabilities.

Numerous studies have shown that learning utilization promotes organizational performance improvement (Egan, Yang and Bartlett, 2004; Ellinger et al., 2002). Dodgeson (1993) stated that learning utilization improves innovation activity efficiency, efficacy and capabilities to promote renewal capabilities. In addition, March (1991) suggested that the benefits of learning should enable firms to enhance their ability for relating to renewal capabilities. Moreover, learning is a necessary step in the dynamic capabilities of the organization. Teece, Pisano and Shuen (1997) stated that strategic renewal capability is a dynamic capability. Therefore, learning utilization is seen to promote strategic renewal capability. Therefore, the following hypothesis is proposed :

Hypothesis 2: Learning Utilization will positively relate to strategic renewal capability

Resource Complementarity

The resource-based view of the firm emphasizes the importance of a firm's resources as a key factor for organizational capability (Grant, 1996).

In addition, resource complementarity supports the operation of organizational business processes. On the one hand it increases the opportunities for organizational changes and facilitates the growth of a firm (Bruton and Rubanik, 2002). On the other hand, resource complementarity promotes the security of an organization has suggested that an organization needs to have resource complementarity to deal with the impacts of economic turbulence. If an organization has sufficient resource complementarity it will be better able to survive in a turbulent environment. This ability to survive due to resource complementarity is associated with organizational renewal. Therefore, organizational renewal capability in a firm is positively related to its resources complementarity.

From the perspective of strategic renewal capability, resource complementarity refers to the availability and the sufficiency of the resources, controlled by the organization which will be a determinant of organizational renewal efficacy. In this context the resources of the organization may be both a tangible or intangible assets. Previous research has investigated the concept of resource complementarity in terms of renewal capability, Junell and Ståhle (2011) who studied it as a measurement tool for strategic renewal capability. The results of these studies suggest that loss of resources by a firm may result in it being unable to adapt quickly. Slow adaptation will affect the capability of a firm to achieve continuous and the mature development. This leads to the conclusion that the ability of a firm to achieve effective depends on the availability of resources; resources complementarity is directly related to the ability of renewal capability. Thus, it is clear that resources complementarity on strategic renewal capability is impacted. Therefore, the following hypothesis is proposed :

Hypothesis 3: Resources complementarity will positively relate to strategic renewal capability

Technology Growth

The growth of technology is an important factor which organizations cannot afford to ignore especially in relation to their business operations (Syers, Ussahawanitchakit and



Jhundra-indra, 2012). Technology growth is associated with success of organizations. Technological growth increases organizational performance through the support mechanisms and facilitation that it provides (Baroni and Tavares, 2001; Perrott, 2007). In addition, technological growth generates new challenges and opportunities for new value propositions including the creation of responses to the needs of market diversity (Jirawuttinunt and Ussahawanitchakit, 2011). Hence, technology growth is expected to encourage organizational realignment for renewal.

In this research, technology growth is defined as the continuous change or development of technology that affects changes in organizational operations. Firms adopt technological processes to enhance operational strategies to synchronize their operations with technological environmental changes (Atuahene-Gima and Murray, 2004, Jaworski and Kohli, 1993). It is the through a recognition of the advances and the speed of continuous technological growth that organizations can adopt technology to improve their functional processes to promote renewal capability (Glazer & Weiss, 1993).

A number of previous studies agree that the growth of technology as an external factor affects organizational change (Prašnikar et al., 2008; Syers, Ussahawanitchakit and Jhundra-indra, 2012). To deal with rapid technology growth, organizations may need to modify themselves through adaptation and development to keep pace with technological changes in their operating environments; an aspect of organizational renewal (Rudez & Mihalic, 2007). Hence, technology growth stimulates organization's capability for renewal.

Hypothesis 4: Technology growth will positively relate to strategic renewal capability

Market Change

Market change is widely accepted as one of the important external factors influencing organizational operations (Duncan, 1972). Many factors may bring about market change. Changes in politics, technology, culture, society and economy may collectively and individually, directly and indirectly, and more often than not cumulatively, affect the behavior of organizational stakeholders. In addition, market changes may offer either opportunities or threats relative to the survival and the growth of an organization (Sookaneknun, Ussahawanitchakit and Boonlua, 2013). Hence, organizations need to be responsive to market dynamics in order to understand how to adapt to market changes and create renewal capability to ensure their survival and the sustainability as market environments change.

In this research, market change is defined as the unstable, rapidly and continual modification of the surroundings of business operations, which are external factors affecting the adjustment of the organization to its environment. The environment is subject to political, economic and societal changes, to name but a few. In addition, the behavior of stakeholders may have a significant influence on the business operations of organizations (Ashill and Jobber, 1999). The complexity of market change is amplified by its unpredictability, which again may have either a positive or a negative impact on organizational business (Lissack and Gunz, 2005). In addition, this theory explains that external factors are important to the survival of organizations as changes in the external environment impact on organizational performance. Hence,



organizations must have a capability for adaptation and development through the processes of organization renewal (Gordon and Miller, 1976; Anderson and Lanen, 1999). Hence, these ideas lead to posit the following hypothesis.

Hypothesis 5 : Market change will positively relate to strategic renewal capability

Methodology

Sample Selection and Data Collection Procedure

This study selects software businesses in Thailand as the sample. The population was obtained from list on database of the Software Industry Promotion Agency (SIPA) of Thailand at the 25th of March of 2016. 855 questionnaires were mailed to the selected respondents by the chief executive officer (CEO) or executive director. With regard to the questionnaire mailing, 172 surveys were undeliverable because some firms were no longer in business or had moved to unknown locations. The valid mailing was 683 surveys, from which 163 responses were received. 156 completed surveys that were usable for purposes of analysis. The effective response rate was approximately 22.84 percent. According to Aaker, Kumar and Day (2001), the response rate for a mail survey, without an appropriate follow-up procedure, if greater than 20% is considered acceptable.

Variable Measurement

In this research, the measurement and evaluation of responses have been developed from several sources, including the relevant literature, definition of terms, and prior research instruments. Each construct in the conceptual model is measured against multiple items. All constructs in this research are abstract, they cannot be measured directly. The use of multiple items to measure abstract constructs is the one of the methods for solving this situation (Churchill, 1979). All items are measured by five-point Likert-type scales, ranging from 1 (strongly disagree) to 5 (strongly agree). The variable measurements of this research are described as follows:

Dependent Variable

Strategic renewal capability is evaluated by degree of specific capability to maintenance, development, adaptation and innovation to keep pace with environmental change and the organization uses this ability to build both survival and competitiveness to bring organizational success (Lee, 2001). It is measured by activities involving maintenance, development, adaptation and innovation of policy and operations under a changing environment of an organization. The measurement of learning utilization was based on eighteen new items in the questionnaire developed from the literature and the definitions of terms.

Independent Variables

The antecedents of strategic renewal capability consist of five internal and external variables: forward-looking vision, learning utilization, resources complementarity, technology growth, and market change. Each variable is separately measured by items developed from its definition, which is detailed as follows.

First, Forward-looking vision (FLV) is measured by potential goals assigned to the operation for the future success of the organization. It is committed to promoting the ability to



adapt and develop organizational growth by powering change in the organization from executives for the future image of the business. The measurements are based on five new items in the questionnaire developed from the literature and the definitions of terms.

Second, learning utilization (LUT) is defined as the ability to take advantage of organizational learning to create and develop cognitive abilities to achieve the objectives of the firm. It can be measured by the degree of knowledge distribution, apportionment, maintenance and integration for a potential to improve a firm's capabilities. The measurement of learning utilization was based on five new items in the questionnaire developed from the literature and the definitions of terms.

Third, Resource complementarity (RCO) refers to the completeness and the sufficiency of the resource that is controlled by the organization, which resource may be either a tangible or an intangible asset. It is assessed by potential capabilities to support the work of the business process to achieve corporate targets (Pansuppawatt and Ussahawanitchakit, 2011; Ray, Barney and Muhanna, 2004). The measurement of resource complementarity was adapted from research published.

Fourth, Technology growth (TGR) is defined as the recognition of the organization of the forward change of technology and the speed of continuous technology growth that is associated with the operation of organizational business (Glazer & Weiss, 1993). The degree of perceptions of changes in an IT environment, innovation, and communication system will be used for the measurement of technology growth. This construct was adapted from a study by Jirawuttinun and Ussahawanitchakit (2011), and was investigated through five questions in the questionnaire scale.

Fifth, Market change (MCH) is defined as the perception of the organization about the change in the market, which is unpredictable change, and has both a positive and negative impact on organizational business (Lissack and Gunz, 2005). Market change is measured by the level of awareness about political change, economy, society and the behavior of stakeholders that influence the business operations of the organization (Ashill and Jobber, 1999). The assessment of market change was based on the responses to four questions in the questionnaire.

Control Variables

Control variables in this research comprise age and size of the firm. For the analysis, firm age is represented by a dummy variable including 0 (less than or equal to 15 years), and 1 (more than 15 years). Firm size is represented by a dummy variable including 0 (less than 25 employees), and 1 (equals 25 or more employees).

Validity and Reliability

In this research, convergent validity was tested by the factor loading, which acceptable cut-off score was 40, as a minimum (Nunnally and Bernstein, 1994). For the reliability of the measurement, this research used the Cronbach's alpha by test the internal consistency of each construct. Coefficient alpha indicates the degree of internal consistency among items that should be greater than 0.70 (Hair et al., 2010).

Table 1 shows the results of measurement verification of the 30 sets of pretest data. Both factor loading and Cronbach's Alpha were tested. The factor loadings were tabulated and



the range of variables was between 0.549-0.873, which it indicates that construct validity is at acceptable levels.

Moreover, the range of Cronbach's alpha coefficient was between 0.752-0.908, all of which was greater than 0.7. Therefore, it can be concluded that all items in this research have sufficient internal consistency.

Table 1: Result of Measure Validation

Variables	Factor Loadings	Cronbach's Alpha
Strategic Renewal Capability (SRC)	.549 - .737	.908
Forward-Looking Vision (FLV)	.703 - .861	.837
Learning Utilization (LUT)	.653 - .847	.828
Resources Complementarity (RCO)	.671 - .841	.850
Technology Growth (TGR)	.646 - .873	.869
Market Change (MCH)	.731 - .797	.752

Statistical Techniques

The Ordinary Least Squares (OLS) regression analysis was applied to examine the hypotheses. Given the range of distribution of data collected in this research, across a wide range of variables, both interval and categorical regression analysis was appropriate to test the relationships among all variables (Hair et al., 2010). From the conceptual model and hypotheses, the following two equation models are formulated:

$$\text{Equation 1: SRC} = \alpha_1 + \beta_1 \text{FAG} + \beta_2 \text{FSI} + \epsilon_1$$

$$\text{Equation 2: SRC} = \alpha_2 + \beta_3 \text{FLV} + \beta_4 \text{LUT} + \beta_5 \text{RCO} + \beta_6 \text{TGR} + \beta_7 \text{MCH} + \beta_8 \text{FAG} + \beta_9 \text{FSI} + \epsilon_2$$

Results and Discussion

The correlations among each dimension of strategic renewal capability, its consequential relationships are shown in Table 2. The results show that the correlation among the antecedent of strategic renewal capability, including operational maintenance focus, environmental adaptation orientation, business development capability and organizational innovation enhancement are between 0.458 - 0.721. These correlations do not exceed 0.8, so they are within the limits as recommended by Hair et al. (2010). In addition, the maximum VIF value of four dimensions of strategic renewal capability is 1.930 which is well below the cut-off value of 10 (Hair et al., 2010). Thus, this research identified no multi-collinearity problems.

Hypothesis testing, of the results of OLS regression analysis are presented in Table 3. Firstly, the results indicate that forward-looking vision has no significantly to strategic renewal capability ($\beta_3 = 0.087$, $p > 0.10$). Huff and Huff (2000) explained that forward-looking vision is defines as the broad direction of organizational operations, it is not specific to renewal capability. Moreover, the forward-looking vision requires both the process and the cooperation of its members in order to affect the operations of the organization (Walsh, 1988). So, forward-looking vision may not affect the strategic renewal capability. **Therefore, a hypothesis 1 is not supported.**



Table 2 : Descriptive Statistics and Correlation Matrix

Variable	SRC	FLV	LUT	RCO	TGR	MCH	FAG	FSI
Mean	4.123	3.953	4.051	3.919	4.164	3.947	-	-
SD	.484	.550	.578	.576	.533	.455	-	-
SRC	1							
FLV	.644***	1						
LUT	.681***	.665***	1					
RCO	.721***	.674***	.711***	1				
TGR	.671***	.614***	.628***	.632***	1			
MCH	.521***	.458***	.369***	.395***	.531***	1		
FAG	.068	.033	.080	.078	.039	.062	1	
FSI	.007	.000	-.091	-.007	-.053	-.054	.269***	1

Note : *** p < .01

Secondly, the results show that there is relationship between learning utilization and strategic renewal capability ($\beta_4 = 0.218$, $p < 0.01$). Likewise, numerous studies have shown that learning utilization promotes organizational performance improvement (Egan, Yang & Bartlett, 2004; Ellinger et al., 2002). Dodgeson (1993) stated that learning utilization improves an organization's ability to promote innovation activity efficiency and efficacy, and capabilities. Likewise, a study of Rothaermel and Deeds (2004) demonstrated that learning promotion positively affects new product development and innovation. In addition, Cheng, Niu and Niu (2014) found the link between learning and adaptation, which these are the potential of strategic renewal. **Thus, a hypothesis 2 is supported.**

Table 3 : The Results of Regression Analysis for the Effects of Antecedents on Strategic Renewal Capability

Independent Variables	Dependent Variables ^a	
	SRC	SRC
Forward-Looking Vision (FLV : H1)		.087 (.074)
Learning Utilization (LUT : H2)		.218*** (.077)
Resources Complementarity(RCO : H3)		.320*** (.077)
Technology Growth (TGR : H4)		.186** (.072)
Market Change (MCH : H5)		.178*** (.059)
Firm Age (FAG)	.152 (.178)	-.020 (.108)



Independent Variables	Dependent Variables ^a	
	SRC	SRC
Firm Size (FSI)	-.030 (.202)	.122 (.123)
Adjusted R ²	.008	.637
Maximum VIF	1.078	2.528

*** p<0.01, ** p<0.05, ^a Beta coefficients with standard errors in parenthesis

Thirdly, the results reveal that resources complementarity has a significantly positive effect on strategic renewal capability ($\beta_{55} = 0.320$, $p < 0.01$). The study of Junell and Ståhle (2011) found that loss of business resources may make an organization too slow for adaptation and innovation as it affects the capability for strategic renewal. This is which consistent with the results of this study. **Thus, a hypothesis 3 is supported.**

Fourthly, the results indicate that technology growth has a positive effect on strategic renewal capability ($\beta_6 = 0.186$, $p < 0.05$). Many researchers found that the continuous technology growth improve the performance of all functional processes of the organization (Glazer & Weiss, 1993). Prasnikar et al. (2008) agreed that the growth of technology as an external factor affects organizational change. It is able to put pressure on an organization's investment in organizational technology in order to be able to compete with competitors (Allred & Swan, 2004; Xue, Ray & Sambamurthy, 2012). To deal with rapid technological growth, organizations need to modify themselves by renewal capability to keep pace with technological change (Rudez & Mihalic, 2007). **Thus, a hypothesis 4 is supported.**

Finally, the results demonstrate that market change has positive and significance on strategic renewal capability ($\beta_7 = 0.178$, $p < 0.1$). Contingency theory explains that external factors are important to the survival of the organization because the changes of the outside environment impact on organizational performance. Hence, organizations must have a capability for development for organization renewal (Anderson & Lanen, 1999; Gordon & Miller, 1976). Under the concept of the contingency theory, market change is an external factor driving the organization to have renewal capability to achieve survival and the sustainable development of the organization. **Therefore, a hypothesis 5 is supported.**

With respect to the control variables, firm age and firm size shows there are no significant influences on strategic renewal capability.

Contributions

Theoretical Contribution

This research attempts to expand knowledge regarding the importance of factor that it promotes strategic renewal capability in an organization. It helped broaden understandings of concepts underpinning strategic renewal capability by offering antecedent variables of strategic renewal capability in terms of forward-looking vision, learning utilization, resources complementarity, technology growth and market change. This research also indicates that dynamic capabilities involve specific strategic processes within organizations to build, integrate, and reconfigure competencies to succeed in environmental change. Furthermore, this research



has emphasized the importance of dynamic capability theory. The results of this research confirm the core attributes of dynamic capability which lead a firm to renewal capability.

Managerial Contributions

This study has given significant implications to executives, executives must pay attention to activities that support their firms' renewal capabilities, such as organizational vision and learning. The vision promoted by top management needs to identify and respond to change through improving internal performance or by such strategies as introducing innovative products. Moreover learning utilization can enhance executives' decision making abilities. Executives must take into account other external factors that encourage the renewal capability such as technology growth and market change.

In addition, executives should assist their employees by ensuring that they have the necessary resources to respond to internal and external challenges. The availability of resources within an organization is one of the most essential determinants of renewal capability. Likewise, managers must take into account external factors that encourage renewal capability by responding to technology growth and market change.

Conclusion

This study suggests the effect of the five antecedents, the independent variables, including forward-looking vision, learning utilization, resources complementarity, technology growth and market change on the four dimensions of strategic renewal capability. 156 software businesses are employed as the sample of the study. The data is analyzed by regression analysis. The empirical results reinforce the conclusion that learning utilization, resources complementarity, technology growth and market change are an important factor of strategic renewal capability.

For the limitations of this research, the software industry has a high turnover rate as many firms drop out of the industry while at the same time new firms are always entering this industry. Hence the membership list of the Software Industry Promotion Agency (SIPA) is not always up to date. Therefore, future research may employ other sampling populations with differentiation in types and characteristics in order to compare the results and outcomes; and at the same time, to gain more research credibility and confirm the generalizability of the research.

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