# Antecedents of Dynamic Service Innovation Strategy: Empirical Evidence of Hotel Businesses in Thailand ปัจจัยเชิงสาเหตุของกลยุทธ์นวัตกรรมการบริการเชิงพลวัต: หลักฐานเชิงประจักษ์ของธุรกิจโรงแรมในประเทศไทย

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#### Abstract

This study aims to investigate both internal and external factors influencing the dynamic service innovation strategy. The data were obtained from survey that investigated 1,200 marketing directors or marketing executives of hotel businesses in Thailand. For the statistics used in analyzing data, multiple regression analysis was employed for the hypothesis testing. The results found that business experience, competitive learning, organizational resource, and environmental complementarity have significant influences on outcomes. In addition, conclusion and future research will be discussed. Both theoretical and managerial contributions support are clearly provided.

**Keywords:** Dynamic Service Innovation Strategy, Business Experience, Competitive Learning, Organizational Resource, Environmental Complementarity

#### บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่อทดสอบปัจจัยภายในและปัจจัยภายนอกที่มีอิทธิพลต่อกลยุทธ์นวัตกรรมการบริการ เชิงพลวัต ซึ่งเก็บรวบรวมข้อมูลจากผู้อำนวยการฝ่ายการตลาด หรือ ผู้จัดการฝ่ายการตลาด จำนวน 1,200 คน จากธุรกิจ โรงแรมในประเทศไทย โดยใช้การวิเคราะห์การถดถอยในการทดสอบสมมุติฐาน ผลการวิจัย พบว่า ประสบการณ์ในการบริหาร การเรียนรู้เกี่ยวกับการแข่งขัน ทรัพยากรขององค์กรและสภาพแวดล้อมที่มีความสอดคล้อง มีอิทธิพลเชิงบวกต่อผลลัพธ์ของ ธุรกิจ นอกจากนั้นผลการศึกษานี้ยังสามารถใช้เป็นข้อสรุปและแนวทางของงานวิจัยในอนาคต ทั้งด้านทฤษฎีและการสนับสนุน เชิงปฏิบัติได้อย่างชัดเจน

**คำสำคัญ**: กลยุทธ์นวัตกรรมการบริการเชิงพลวัต ประสบการณ์ในการบริหาร การเรียนรู้เกี่ยวกับการแข่งขัน ทรัพยากรขององค์กร สภาพแวดล้อมที่มีความสอดคล้อง

#### Introduction

Nowadays, business firms in the world face rapid changes in customer need, demand uncertainty, complexity, and high competitive in both manufacturing and service sectors. Moreover, businesses need to continually improve or change their strategies in order to survive and succeed. In order to succeed in business, organizations must adapt their ability to develop the dynamic capability to increase the fluctuation of the constantly changing environment (Eisenhardt & Martin, 2000). Therefore, dynamic innovation strategy is new services continuously and comprehend the underlying business logic of service provision. Dynamic service innovation strategies imply the ability of companies to continuously evaluate situations and introduce a new process, create new activities and adapt to the changing environment of the company to maintain competitive advantage and business success (Goldstein et al., 2002). In this research, the dynamic service innovation strategy is a combination of innovative service literature, in the dynamic environment of competing businesses. And, use the contingency theory that shows understanding the nature of corporate strategy is improved by examining its antecedents in terms of both internal and external factors (Atuahene-Gima & Murray, 2004; Venkrataman & Camillus, 1984). It is expected that the nature of corporate

strategy and organizational performance is better understood by examining the interactions between internal factors and external factors (Drazin & Van de Ven, 1985). As mentioned earlier, this research highlights the antecedents of dynamic service innovation strategy as the constructs of market driving vision, business experience, competitive learning, organizational resource, and environmental complementarity. The research was conducted with hotel businesses because hotel business develops new service models to enhance service innovation by emphasizing the importance of responding to customer satisfactory and more positive attitudes toward the services of the hotel business.

#### Research Objectives

The main purpose of this research was to examine the relationship between the antecedent factor comprising market-driving vision, business experience, competitive learning, organizational resource, and environmental complementarity that affects the dynamic service innovation strategy in hotel businesses in Thailand. The key research question of this research is "How do market-driving vision, business experience, competitive learning, organizational resource, and environmental complementarity affect dynamic service innovation strategy?"

Literature review and hypothesis development

The research model of five antecedents and dynamic service innovation strategy is shown in Figure 1

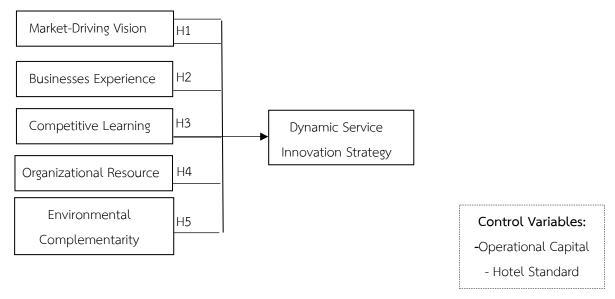


Figure 1: A Conceptual Framework

#### Dynamic Service Innovation Strategy

Dynamic service innovation strategy is derived from two concepts, service innovation strategy and dynamic environment. Moreover, dynamic service innovation combines existing and creative new resources and operational capabilities to enhance and maintain competitive advantage; and in line with company strategy, market changes, and company history (Hertog, et al., 2010). The aforementioned dynamic for service innovation might be an interesting alternative for measuring the ability of organizations to develop and implement concepts for new service (Teirlinck & Spithoven, 2013; Leiponen, 2012). In this study, the dynamic service innovation strategy refers to the company's ability to continuously evaluate situations and introduce a new process, create new activities and adapt to the changing environment of the company to maintain competitive advantage and business success (Goldstein, et al., 2002). Therefore, dynamic service innovation strategy is along these dimensions, namely, market driving vision, business experience, competitive learning, organizational resource, and environmental complementarity. These lead to the explanation of the understanding both internal and external environmental as following detail below.

#### The Effect of the Antecedents on Dynamic Service Innovation Strategy

This research concentrates the study of internal and external factors impact to dynamic service innovation strategy that comprises internal factors as market driving vision, business experience, competitive learning, and organizational resource. In addition, external factors consist of environmental complementarity following as the below.

#### Market-driving Vision

Market driving vision refers to firm's perspective, which is likely to change the market structure, technological innovation, and behavioral change for customers and competitors (Jaworski, et al., 2000). Market driving is the ability of the firm to changes in the evolution of industry through value creation process, service, and market (Hills

& Sarin, 2003). For competitive, firm must be both proactive and creative of innovation to survive (Prahalad & Ramaswamy, 2004). Therefore, market driving vision is firm focus on advanced technology industry, high levels of technology and market uncertainty and quick service innovation (Hills & Sarin, 2003). Market driving vision can be increased in the business environment, as innovation processes, understanding in service innovations, innovations in the end to end solutions and business models to make business success (Vos, 2010). Therefore, in this study, the effect of market-driving vision on dynamic service innovation strategy is hypothesized as follows:

Hypothesis 1: Market-driving vision is positively related to dynamic service innovation strategy.

#### **Business Experience**

Business experience refers to the information and skills of a company in the past that has led to current and future practices (Espedol, 2006; Kim, et al., 2009; Trainor, et al., 2008). The concept of a business may use information gained from experience to develop a focused approach to customer service (Arora et al, 2001). And, experience has to be related to knowledge and the quality of a firm's intangible resources (Roberts & McEvily, 2005). However, business experience must be market context congruence and can apply to new strategies in order to gain business success (Cho & Padmanabhan, 2005). Moreover, business experience also improves employee productivity by providing high quality services to meet the needs of our customers with greater capabilities (Chow, et al., 2006). Business experience may provide in many ways such as develop new service and processes, by focusing on the resource to gain the competitive advantage (Santamaría, et al., 2012). Consequently, the role of

business experience in this paper is hypothesized as follows:

Hypothesis 2: Business experience is positively related to dynamic service innovation strategy.

#### Competitive Learning

Competitive learning refers to the knowledge of the firm, developing the competitive service, and forecasting the competitive situation for improving firm more successful than others (Fiol & Lyles, 1985). Learning process is the way to create, change and send new service offerings (Hipp & Grupp 2005; Kale and Singh 2007; Fuller, 2010). Therefore, competitive learning can help companies understand their competitors' strengths and weaknesses, and to create standards for new services (Lawless & Fisher, 1990). Moreover, competitive learning is important to the survival of the organization and especially in innovation as the result of the technological change and market outcomes (Lievens, et al., 1999). And, competitive learning is an important role that supports to create service innovation, and firm performance (Aragón-Correa, et al., 2007). Hence, this research hypothesized that:

Hypothesis 3: Competitive Learning is positively related to dynamic service innovation strategy.

#### Organizational Resource

Organizational resource refers to the organization of tangible and intangible resources for business processes, and is used to improve the organization (Pansuppawatt & Ussawanitchakit, 2011). Organizational resources are assets, capabilities, organizational processes, and information that are controlled by the company and used to improve organizational performance (Barney, 1991). Firms must continually acquire knowledge for their

customers with their knowledge of their supplier offerings and competitors develop resources that provide not only important to customers, but also compete with the market as well (Griffith, et al., 2006). Therefore, organizational resource attempts to adapt better service, innovative service that will give organization success in the marketplace and better than the competitors (Daugherty, et al., 2011). The proposition is as follows:

Hypothesis 4: Organizational Resource is positively related to dynamic service innovation strategy.

#### **Environmental Complementarity**

Environmental complementarity refers to the volatile business conditions, uncertainties, or a variety of external events that involved in the potential of the firm to continuous recognition, including rapid change and adaptation (Nicolau, 2005). Environment is the physical and social factors involved outside the organization, taking into consideration the decision-making of the organization (Li & Liu, 2012). And, environment is benefits for innovations that may occur during the manufacture of the service or in the aftermarket. the use of product or services by the end user (Vos, 2010). Complementarity is the ability to monitor the impact of corporate decision-making and the benefits of environmental information in anticipation of decision-making (Boyd & Fulk, 1996). Consequently, organizations must learn about environmental complementarity to understand, improve, or develop organizations' operations appropriate with external factors. Thus, this research proposed the hypothesis as follows:

Hypothesis 5: Environmental Complementarity is positively related to dynamic service innovation strategy.

#### Research Methodology

#### Sample Selection and Data Collection Procedure

Population and sampling frame in this study were 1,200 hotel businesses in Thailand. Based on the database of the Tourism Authority of Thailand. The unit of analysis in this study was marketing director or marketing executive who had responsibility for planning new services. With regard to the questionnaire mailing, 8 mailings were returned due to incorrect addresses or move to unknown locations. Therefore, 289 mail responses were useable or 24.89% of response rate (Aaker, et al., 2001). This paper tests non-response bias following the recommendation of Armstrong & Overton (1977) to ensure that the final sample represents the population of the research.

#### Measurements

The measurement items for all constructs were developed from the definition and literature review to fit with the Thai environment. Each construct was rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

#### Dependent Variable

Dynamic service innovation strategy using four-item scale was developed to measure new scale from the definition and relevant literature which is related to the new service.

#### Independent Variables

Market-driving vision is measured using the four-item scale to investigate how firms can offer operational policy on market leaders, modern technology to gain competitive advantage. Next, four-item scale was introduced to measure business experience by assessing how firms learn from the successes and mistakes of their previous experiences. Likewise, four-item scale was established to measure competitive learning by the potential

to develop learning in a constantly changing environment to improve the competitive process, understanding of the competitive environment, and helps companies run their businesses more efficiently. And, four-item scale was initiated to measure organizational resource by the level of sufficient and available resources, technology to support effective use of strategies, and efficient use of resources in performer. Finally, four-item scale is newly developed based on relevant literature and established to measure environmental complementarity by testing how firms are related to the degree of change in external organizations.

In this study, operating capital (OC) was measured by investment of a firm using a dummy variable as 60,000,000 baht or less=1 and more

than 60,000,000 baht=2. Next, hotel standard (HS) was measured by standard of hotel using a dummy variable as four-star hotels=1 and five-star hotels=2. Therefore, operating capital and hotel standard are appropriately chosen as control variables.

#### Instrument Tests

The results are shown in Table 1 below. This analysis for all factor loadings are between 0.707-0.883, as being above the cut-off score of 0.4 and are statistically significant that the rule-of-thumb (Nunnally & Bernstein, 1994). The findings presented that all constructs in the models had Cronbach's alpha greater than 0.7, ranging between 0.719-0.866 (Cronbach, 1951).

Table 1: Results of Measure Validation

Constructs	Factor Loadings	Alpha Coefficient
Dynamic Service Innovation Strategy (DSIS)	0.743 – 0.873	0.866
Market Driving Vision (MDV)	0.740 - 0.852	0.788
Business Experience (BEX)	0.767 - 0.851	0.817
Competitive Learning (CLE)	0.707 - 0.883	0.719
Organizational Resource (ORE)	0.751 - 0.816	0.798
Environmental Complementarity (ECO)	0.718 – 0.815	0.782

The multiple regression analysis was manipulated for hypotheses testing in this research. The equation model for statistical analysis was presented as follows: Equation: DSIS

= 
$$\alpha_{\text{1}}$$
+  $\beta_{\text{01}}$ MDV +  $\beta_{\text{02}}$ BEX +  $\beta_{\text{03}}$ CLE+  $\beta_{\text{04}}$ ORE +  $\beta_{\text{05}}$ ECO +  $\beta_{\text{06}}$ OC +  $\beta_{\text{07}}$ HS +  $\epsilon$ 

#### Results and Discussion

Table 2: Descriptive Statistics and Correlation Matrix

Variables	DSIS	MDV	BEX	CLE	ORE	ECO	OC	HS
Mean	4.013	4.336	4.299	4.359	4.410	4.495	-	-
S.D.	0.411	0.406	0.420	0.398	0.407	0.388	-	-
DSIS	1.00							
MDV	0.330**	1.00						
BEX	0.418**	0.653**	1.00					
CLE	0.446**	0.530**	0.583**	1.00				

Variables	DSIS	MDV	BEX	CLE	ORE	ECO	OC	HS
ORE	0.441**	0.512**	0.525**	0.655**	1.00			_
ECO	0.382**	0.278**	0.360**	0.372**	0.335**	1.00		
OC	0.035	-0.045	-0.019	0.017	-0.058	-0.052	1.00	
HS	-0.002	-0.174**	-0.052	-0.052	-0.118*	0.032	0.083	1.00

<sup>\*\*</sup>p<.01, \*p<.05

Table 2 exhibits the descriptive statistics and correlation matrix for all variables. Variance inflation factors (VIFs) range from 1.152 to 2.124,

below the cut-off value of 10 (Neter, et al., 1985), meaning the independent variables are no multcollinerity problem in this study.

Table 3: Results of Regression Analysis

Independent Variables	Dependent Variables			
	DSIS			
Market-Driving Vision (MDV): H1	.001			
	(.057)			
Business Experience (BEX): H2	.122*			
	(.059)			
Competitive Learning (CLE): H3	.122*			
	(.059)			
Organizational Resource (ORE): H4	.159**			
	(.056)			
Environmental Complementarity (ECO): H5	.166**			
	(.045)			
Operating capital (OC)	.097			
	(.086)			
Hotel Standard (HS)	.046			
	(.087)			
Adjusted R <sup>2</sup>	.279			
Maximum VIF	2.124			

<sup>\*\*</sup>p< .01, \*p < .05 Beta coefficients with standard errors in parenthesis

Table 3 shows the results of hypothesis testing for effects of antecedents on dynamic service innovation strategy. Hypothesis 2 predicts the impact of business experience on dynamic service innovation strategy. The result shows that this hypothesis is statistically significant ( $\beta$ =.122, P<.05). The results indicate that business experi-

ence may use the knowledge to focus practices and to serve a customer. Moreover, business experience can increase performance to give service for customer need (Chow, et al., 2006). Therefore, Hypothesis 2 is supported. Hypothesis 3 predicts the impact of competitive learning on dynamic service innovation strategy. The result shows that

this hypothesis is statistically significant ( $\beta$ = .122, P< .05). That is, organizations that increase their competitive learning will have an impact on the value of the organization that is an advantage of being a sustainable organization (Santos-Vijande, et al., 2005). Therefore, Hypothesis 3 is supported. Hypothesis 4 predicts the impact of organizational resource on dynamic service innovation strategy. The result demonstrates that this hypothesis is statistically significant ( $\beta$ = .159, P<.01). As stated in the previous researchers (Penrose, 1959), resources and capabilities are the basis for innovations. In addition, organizational resource attempts to modify the assets of the organization, such as improved services, innovative products that will make them more advanced in the market by identifying and creating competing capabilities that set them apart from competitors (Daugherty, et al., 2011). Therefore, Hypothesis 4 is supported. Hypothesis 5 predicts the impact of environmental complementarity on dynamic service innovation strategy. The result shows that this hypothesis is statistically significant ( $\beta$ = .166, P<.01). Environmental innovation is a new service, process, organization technique or marketing method that produces more environmental benefits than other methods. Therefore, environmental complementarity is the benefits of innovation that may arise during the manufacture of a service or in the aftermarket; use of a product or service by an end user (Vos, 2010). Therefore, Hypothesis 5 is supported.

Conversely, Hypothesis 1 proposes that there is no impact of market-driving vision on dynamic service innovation strategy. The result shows that this hypothesis is statistically not significant ( $\beta$ =.001, P>.10). From the results, according to prior studies, market-driving vision might be necessary to dynamic service innovation strategy. However, market-driving vision has evolved into

business systems within a unique that gives clients significant in terms of value, such as new prices or superior service level (Kumar, et al., 2000). Therefore, Hypotheses 1 is not supported.

#### Contributions

#### Theoretical Contributions

This research is an insight in providing clearer understanding of antecedent factors of dynamic service innovation strategy. It provides unique theoretical contribution expanding on previous knowledge and literature of dynamic service innovation strategy. Firstly, this research advances the literature by categorizing many antecedents (consist of market-driving vision, business experience, competitive learning, organizational resource, and environmental complementarity) and develops a model to test the relationships. The relationships between antecedent factors and dynamic service innovation strategy have been empirically examined in terms of the quantitative testing by collecting the data from hotel businesses in Thailand. The results reveal that business experience, competitive learning, organizational resource, and environmental complementarity has a positive significant effect on dynamic service innovation strategy. Besides, market-driving vision has no significant influence on dynamic service innovation strategy. Secondly, the relationships in the conceptual model is explained by contingency theory. It is mentioned that real business phenomena are complex due to many internal and external factors; for example, firm strategy and competitive forces. Therefore, the firm's resources and capabilities gain a sustainable competitive advantage that gives an increase in superior performance by differentiating new service from their competitors.

#### Managerial Contributions

According to the research results, this study provides evidence that is useful guidelines for executives should encouraging changes in the behavior of customers for sustain competitive advantages and to gain profitability. Especially, firms should focus on business experience, organizational resource, and environmental complementarity to search for new knowledge that leads to the creation, development, improvement, and transform of the service model. In addition, increasing competitive learning organizations should focus on creating a competitive advantage of generating innovation or changing the service model to differentiate it from competitors. In support of this research, hotel businesses can adapt themselves to the uncertain business environments by adapting core competency in order to ensure the building of competitive advantage. Accordingly, executives must use their competencies and capabilities to push their organizations to gain an excellent outcome of business operations.

### Future Research Direction and Limitations

The population of this research is scoped as only hotel industrial sectors. Thus, the generalizability of the findings is limited to only explain hotel sector. These findings may have been varied if a broader range of companies had been selected. Consequently, future research may be collecting data from other sampling populations with differentiation in types and characteristics in order to improve, increase, and expand the validity and reliability to this study. Furthermore, market-driving vision in this research was not supported. Therefore, future research should have hypothesis on the re-investigation in order to obtain beneficial results.

#### Conclusion

This study investigates the relationship of antecedence effect on dynamic service innovation strategy. The data collection were conducted with hotel businesses in Thailand an multiple regression analysis was employed for the hypothesis testing. Certainly, those of the relations are positively significant and partially supported. Especially, further study is needed to conceptualize the measurement of some dimensions antecedents of dynamic service innovation strategy that are not significant in other context. For the suggestion, the research should be an interesting point that moderators may play a better moderating role on the relationship between antecedents and dynamic service innovation strategy, such as service culture.

#### References

- Aaker, D.A., Kumar, V., & Day, G.S. (2001). *Marketing Research*. New York: John Wiley & Sons.
- Aragón-Correa, J. A., García-Morales, V. J., & Cordón-Pozo, E. (2007). Leadership and organizational learning's role on innovation and performance:

  Lessons from Spain. *Industrial Marketing Management*, 36(3), 349-359.
- Armstrong, J. S. and Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, *14*(3), 396-402.
- Arora, A., Arunachalam, V. S., Asundi, J., & Fernandes.
  R. (2001). The Indian software services industry.

  \*Research Policy, 30(8), 1267-1287.
- Atuahene-Gima, K., & Murray J. (2004). Antecedents and outcomes of marketing strategy comprehensiveness. *Journal of Marketing,* 68(4), 33-46.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal Management,* 17, 99 120.

- Boyd, B. K., & Fulk, J. (1996). Executive scanning and perceived uncertainty: a multidimensional model. *Journal of Management*, 22 (1), 1-21.
- Cho, K. R., & Padmanabhan, P. (2005). Revisiting the role of cultural distance in MNC's foreign ownership mode choice: The moderating effect of experience attributes. *International Business Review, 14*(3), 307–324.
- Chow, I. H. S., Lo, T. W. C., Sha, Z., & Hong, J. (2006). The impact of developmental experience, empowerment, and organizational support on catering service staff performance. *International Journal of Hospitality Management, 25*(3), 478-495.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16.297–334.
- Daugherty, P. J., Chen, H., & Ferrin, B. G. (2011).

  Organizational structure and logistics service innovation. *The International Journal of Logistics Management*, 22(1), 26-51.
- Drazin, R., & Van de Ven, A. (1985). Alternative forms of fit in contingent theory. *Administrative Science Quality, 30*, 514-539.
- Eisenhardt, K.M., & Bhatia, M.M. (2000). Organizational complexity and computation. *In Companion to Organizations*, Baum JAC (ed.). Blackwell: Oxford, UK.
- Espedal, B. (2006). Do organizational routines change as experience changes?. *The Journal of Applied Behavioral Science*, 42(4), 468-490.
- Fiol, C., & Lyles, M. (1985). Organizational learning. *Academic Management Review, 10*, 803-813.
- Fuller, J. (2010). Refining virtual co-creation from a consumer perspective. *California Management Review, 98,* 122–130.
- Goldstein, S.M., Johnston, R., Duffy, J., & Rao, J. (2002). The service concept: the missing link in service design research?, *Journal of Operations Management, 20*, 121–134.

- Griffith, D. A., Stephanie, N., & Qimei, C. (2006). The performance implications of entre-preneurial proclivity: a dynamic capabilities approach.

  Journal of Retailing, 82(1), 51-62.
- Hertog, P., Aa, W., & Jong, M.W. (2010). Capabilities for managing service innovation: towards a conceptual framework. *Journal of Service Management*, *21*(4), 490-514.
- Hills, S. B., & Sarin, S. (2003). From market driven to market driving: An alternate paradigm for marketing in high technology industries.

  Journal of Marketing Theory and Practice, 11(3), 13-25.
- Hipp, C., & Grupp, H. (2005). Innovation in the service sector: the demand for servic specific innovation measurement concepts and typologies. *Research Policy*, 34(4):517–535.
- Jaworski, B., Kohli, A. K., & Sahay, A. (2000). Market Driven Versus Driving Markets. *Academy of Marketing Science*, *28*(1), 45-54.
- Kale, P., & Singh, H. (2007). Building firm capabilities through learning: the role of the alliance learning process in alliance capability and firm-level alliance success. *Strategic Management Journal*, 28,981–1000.
- Kim, J.-Y., Kim, J.-Y., & Miner, A.S. (2009). Organizational learning extreme performance experience: The impact of success and recovery experience. *Organization Science*, *20*(6), 958-978.
- Kumar, N., Scheer, L., & Kotler, P. (2000). From market driven to market driving. *European Management Journal*, *18*(2), 129–142.
- Lawless, M. W., & Fisher, R. (1990). Sources of durable competitive advantage in new products. *Journal of Product Innovation Management,*7, 35-44.
- Leiponen, A. (2012). The benefits of R & D and breadth in innovation strategies: a comparison of Finnish service and manufacturing firms. *Industrial and Corporate Change, 21*(5), 1255-128.

- Neter, J., Wasserman, W., & Kutner, M. (1985).

  \*Applied Linear Statistical Models. Homewood, Illinois: Irwin.
- Nicolau, Juan L. (2005). Valuing the business environment on daily basis. *European Journal of Operational Research*, 164, 217-224.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Validity. Psychometric theory*, 99-132.
- Pansuppawatt, P., & Ussahawanitchakit, P. (2011).

  Strategic organizational creativity of medical and cosmetic businesses in Thailand: An empirical investigation of the antecedents and consequences. *International Journal of Strategic Management*, 11(2), 1-25.
- Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. New York: John Wiley.
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-Creation experiences: The next practice in value creation. *Journal of Interactive Marketing,* 18(3), 5-14.
- Roberts, P.W., & McEvily, S. (2005). Product-Line expansion and resource cannibalization. *Journal of Economic Behavior & Organization,*57, 49-70.

- Santamaría, L., Nieto, M. J., & Miles, I. (2012). Service innovation in manufacturing firms: Evidence from Spain. *Technovation*, *32*(2), 144-155.
- Santos-ViJande, M.L., Sanzo-Pérez, M.J., Àlvarez-González, L.I., & VázquezCasielles R. (2005).

  Organizational learning and market orientation: interface and effects on performance. *Industrial Marketing Management, 43*, 187-202.
- Trainor, T.E., Brazil, D. M., & Lindberg, T.(2008).

  Building knowledge from organizational experience: approaches and learned from US army base camp workshops. *Engineering Management Journal*, 20(2), 37-45.
- Teirlinck, P., & Spithoven, A. (2013). Formal R&D management and strategic decision making in small firms in knowledge-intensive business services. *R & D Management, 43*(1), 37-51.
- Venkatraman, N., & Camillus, J. C. (1984). Exploring the concept of "Fit" in strategic management.

  Academy of Management Review, 9(3), 513-525.
- Vos, A. H. (2010). Service Innovation: Managing
  Innovation from Idea Generation to Innovative
  Offer. M.B.A. Thesis, University of Twente, 1-9.