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ปัจจัยที่ส่งผลต่อศักยภาพนวัตกรรมองค์การเชิงกลยุทธ์ :

การตรวจสอบเชิงประจักษ์ของธุรกิจบรรจุภัณฑ์ในประเทศไทย

FACTORS INFLUENCE ON STRATEGIC ORGANIZATIONAL INNOVATION
CAPABILITY: AN EMPIRICAL INVESTIGATION OF PACKAGING BUSINESSES
IN THAILAND

ยุพาภรณ์ ชัยเสนา

YUPAPORN CHAISENA

สุธนา บุญเหลือ

SUTTANA BOONLUA

นิติพงษ์ ส่งศรีโรจน์

NITIPHONG SONGSRIROTE

มหาวิทยาลัยมหาสารคาม

MAHASARAKHAM UNIVERSITY

มหาสารคาม

MAHASARAKHAM

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาปัจจัยที่มีอิทธิพลต่อการพัฒนาศักยภาพนวัตกรรมองค์การเชิงกลยุทธ์ ภายใต้ทฤษฎีเชิงสถานการณ์ โดยทำการศึกษาเกี่ยวกับธุรกิจบรรจุภัณฑ์ในประเทศไทย จำนวน 1,073 กิจการ กลุ่มตัวอย่าง เป็นผู้ดำรงตำแหน่งกรรมการหรือหุ้นส่วนผู้จัดการโดยไม่อาศัยความน่าจะเป็น ด้วยการสุ่มอย่างง่าย จำนวน 232 คน ใช้แบบสอบถามซึ่งพัฒนาขึ้นโดยการทบทวนวรรณกรรมเกี่ยวกับวัฒนธรรมองค์การที่ช่วยเพิ่มขีดความสามารถในการจัดการองค์การให้สูงขึ้น ทดสอบค่า IOC ได้เท่ากับ 0.67-1.00 เก็บรวบรวมข้อมูลได้กลับมาจำนวน 228 คน คิดเป็น อัตราการตอบกลับร้อยละ 21.20 วิเคราะห์ข้อมูลด้วยวิธีสมการถดถอยแบบกำลังสองน้อยที่สุดและนำเสนอด้วยวิธีการอนุมาน เพื่อสรุปข้อค้นพบ ผลการวิจัยพบว่า การสนับสนุนของผู้บริหาร ($\beta_1=0.15, p<0.05$) วัฒนธรรมองค์การที่ยั่งยืน ($\beta_2=0.30, p<0.01$) การมุ่งเน้นความมั่งคั่งของความรู้ ($\beta_3=0.23, p<0.01$) การเจริญเติบโตของการเอื้ออำนวยทางเทคโนโลยี ($\beta_4=0.18, p<0.05$) และบรรยากาศที่เอื้ออำนวยทางสภาพแวดล้อม ($\beta_5=0.11, p<0.05$) ส่งผลกระทบในเชิงบวก ต่อศักยภาพนวัตกรรมองค์การเชิงกลยุทธ์ ดังนั้นผู้บริหารควรให้ความสำคัญในการส่งเสริมและสนับสนุนให้กิจการมีปัจจัย ทั้งห้าด้านในการดำเนินธุรกิจ แสดงให้เห็นว่าการมุ่งเน้นนโยบายพัฒนาวัฒนธรรมองค์การให้สอดคล้องกับความก้าวหน้า ทางเทคโนโลยีและส่งเสริมความรู้ใหม่ๆ มาพัฒนาบรรจุภัณฑ์อย่างต่อเนื่อง เป็นแนวทางที่สำคัญต่อการพัฒนาศักยภาพ นวัตกรรมองค์การเชิงกลยุทธ์ของธุรกิจบรรจุภัณฑ์ในปัจจุบันเพื่อให้สามารถตอบสนองต่อความต้องการของลูกค้าได้เร็วกว่าคู่แข่ง

คำสำคัญ : นวัตกรรมองค์การเชิงกลยุทธ์, ธุรกิจบรรจุภัณฑ์

ABSTRACT

The purpose of this research aims to investigate the influencing factors which affect the strategic organizational innovation capability. The contingency theory was used as a theoretical framework. The study was conducted with the packaging business in Thailand. Data collection uses questionnaires to gather information from managing directors or managing partners. The questionnaire was developed from a literature review on organizational innovation the enhances organizational management competence. In the quality test, IOC of each item ranged from 0.67-1.00. The completely and returned questionnaires are 228 questionnaires, which indicate the response rate as 21.25%. Data analysis with inferential statistics was conducted by choosing the ordinary least square regression (OLS). The results indicate the executive support policy ($\beta_1=0.15$, $p<0.05$), sustainable organizational culture ($\beta_2=0.30$, $p<0.01$), knowledge richness orientation ($\beta_3=0.23$, $p<0.01$), technological complementarity growth ($\beta_4=0.18$, $p<0.05$), and environmental munificence climate ($\beta_5=0.111$, $p<0.05$), have a positive influence on strategic organizational innovation capability. Therefore, the managers should pay the more concentration on corporate culture development policy, which consistent with the growth of technology and continuous improving the novel knowledge are the key factors of packaging business, which lead the firmness to meet the more competitive advantage than the other competitors, such the quick respond to serve the customer need.

Keywords : Strategic organizational innovation, Packaging businesses

INTRODUCTION

Global business competition is a result of the impact of an information technology, quality of goods and services, productions' proficiency and adaptive ability, which provide more flexibility of all businesses. It is necessary for all companies that operate in such circumstances look for effective tools to enhance adaptively capability. Innovation is one of the management tools to deal with rapidly changing environments by producing distinctive goods and services which are modified from something existing to be more modern and more effective (Pagell & Krause, 2004). Therefore, an innovation capability is the key factor which leads the organization to attain firms' success (Tsai, 2001).

However, creating innovative organizational strategies for success is still a challenge for executives (Cormican & O'Sullivan, 2004). Because of the factors that can promote organizational innovative behavior are based on causal factors which affect the creation of novel work and perception of creative climate in the organization. These climates are directly correlated with the organizational innovation support. An acceptance of knowledge and skill diversity which includes; the development of technology and the external environment, which are the key-driven factors to stimulate organizational innovation (Klein & Kozlowski, 2000).

Innovative ability is an antecedence of innovation which demonstrates the firm capability in new creation, whereas innovation is like an organizational instrument for improving competitive advantage (Hult, Snow, & Kandemir, 2003). It could, therefore, be concluded that firm needs to have the innovative competence. This was because the innovative competence lifts competitive advantage up significantly from gaining higher performance. Moreover, the innovative capability was a crucial strategic concept for the invention of strategic innovation in order to achieve the long-term goal (Noble, Sinha, & Kumar, 2002). Creativity of strategic innovation in organization has been remaining challenged for executives. This was because of most organizations have the problems in innovative retention for longer period of time. One of the main reasons was the creation of effective innovation in organization which has been ambiguous for managerial characteristic. Consequently, these organizations may not be able to understand the concept of innovative creation in the overview of organization and could not adapt this concept into practical (Wong & Chin, 2007). According to prior researches, although various types of innovation were emphasized on utilization for organization, but there was few researches mentioned on the development of firm capability to enhance new idea leading to innovative organization. Therefore, the purpose of this study was to contribute to this gap in the literature. For doing so, this led to the research question which was “How do antecedent factors that affect strategic organizational innovation capability?” The packaging businesses in Thailand were chosen as samples of this research.

RESEARCH OBJECTIVES

To examine the effect of five antecedents, including executive support policy, sustainable organizational culture, knowledge richness orientation, technological complementarity growth, and environmental munificence climate on strategic organizational innovation capability.

Literature review

This research investigated the relationships between five factors and strategic organizational innovation capability. The contingency theory was employed to support the linkage among variables in the model. The contingency theory explained that organizational structure is viewed as a function of context simultaneously determined by the external business environment, history, and other organizational factors (Anderson & Lanen, 1999). These external factors are environmental or industrial factors such as industry competition, government regulations, business environmental uncertainty, stakeholder involvements and expectations, technological change, society, and economic conditions (Sausser, Reilly & Shenhar, 2009). Furthermore, endogenous factors are the organizational factors or internal factors such as corporate vision, organizational climate, firm resources, experience, leadership, and firm policy. This leads to establishment or improvement of appropriate organizational management within changed situations in order to obtain growth and survival (Chenhall & Langfield-Smith, 1998). The antecedent factors include executive support policy, sustainable organizational culture, knowledge richness orientation, technological complementarity growth, and environmental munificence climate. The conceptual model of strategic organizational innovation capability is illustrated in Figure 1.

1. Factors of strategic organizational innovation capability

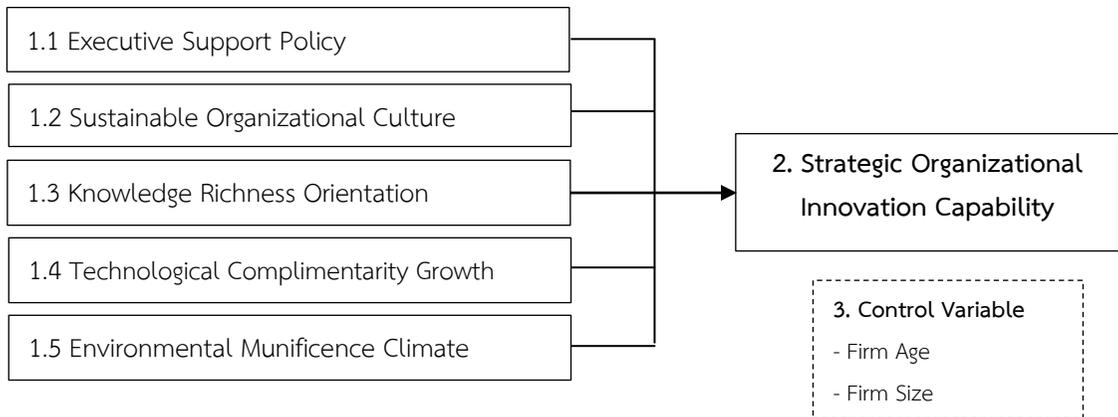


Figure 1 Conceptual Model of factors of strategic organizational innovation capability

1. Executive support policy (ESP) refers to the abilities of the executives to formulate principles and guidelines for supporting work processes to achieve organizational goals (Elkins & Keller, 2003). The policy of executives is crucial for the operation of the organization because it is the beginning of the administration and also affects a company's success. Many researchers have studied about executive support policy and found that top management team impacts on the firm's strategy to focus on innovation development (Talke, Salomo, & Rost, 2010). Besides, executive policies that support organizational innovation by serving a reward for employee can enhance the idea and support innovation, autonomy and challenges, and the inspiration and motivation by encouraging the process of new ideas generation. The hypothesis is, therefore, provided as follows:

Hypothesis 1 : Executive support policy has a positive influence on strategic organizational innovation capability.

2. Sustainable organizational culture (SOC) refers to the extent of the firm in supporting the systematic exchanges of personnel and it is used as a guideline for ongoing creative their works continuously (James et al., 2007). Prior research has discussed on organizational culture, such as: Jaca et al. (2016) which indicated that organizational culture contributed the innovation development. Likewise, Damanpour and Schneider (2006) stated that the managers influence on the outcome of the organization by creating a culture influencing the environment within the organization, and create the ability to change and innovation. Moreover, diversity of culture, and organizational structure are contributed the organizational innovation. Matinaro and Liu (2017) stated that the organizational culture and the ability of managers to support and contribute to innovative and organizational culture were important elements for the increase of innovativeness. Organizational culture affects innovativeness development. Therefore, the hypothesis is provided as follows:

Hypothesis 2 : Sustainable organizational culture has a positive influence on strategic organizational innovation capability.

3. Knowledge richness orientation (KRO) refers to the firm focusing on the creations, collections, exchanges, and applications of information in the systematic ways for leading to effective information management to increase the level of innovation to be higher than competitors (Becerra-Fernandez, Gonzalez, & Sabherwal, 2000). Knowledge helps in the production of information from data or information that is of little value as a data or information that is very valuable. Knowledge can help recognize and analyze data into valuable information. Accordingly, Delone & Mclean (2003) indicated that the use of the knowledge that flexibility would help in the innovativeness development of the organization. Moreover, Yu et al. (2013) found that the use of knowledge management system and organizational learning was the process of converting strategy into real innovation capability. It was consistent with Psomas and Jaca (2016) who found that knowledge management contributed to innovation capability. Therefore, the hypothesis is provided as follows:

Hypothesis 3 : Knowledge richness orientation has a positive influence on strategic organizational innovation capability.

4. Technological complimentairty growth (TCG) refers to the technological advancements which are continually development affecting the performances of the businesses and the causes of the new business practices (Tutar, Nart, & Bingol, 2015). Previous research found that the technology oriented strategy is essential for the development of innovativeness and performance of Asian firms (Li & Zhou, 2005). This is in accordance with Tuominen, Rajala, and Möller (2004) who proposed that a technology-oriented for the firm to the modifications of the environment dynamic was associated with organizational innovativeness. Additionally, Omerzel (2015) also indicated that the technology growth and technology development was a key factor for the firm innovativeness. Moreover, Tutar et al. (2015) stated that the executive with focusing on technology would intend to the creativity, invention, new techniques, technologies, and methods to adjust the company's strategy and activities. They also found the focus on technology was positively correlated with innovation capabilities. Therefore, the hypothesis is provided as follows:

Hypothesis 4 : Technological complementarity growth has a positive influence on strategic organizational innovation capability.

5. Environmental munificence climate (EMC) refers to the rapid economic and social conditions change in business that support the operation to the facility quickly (Jung, Chow & Wu, 2003). In an intense competitive environment that full of technologies and developments in information technology, products and services are increasing by the expectations of customers and the intensity of the global economy. As a result, all companies applied competitive strategies to gain competitive advantage (Acar, 2012). Many organizations are facing rapidly changing environment, changing technology, shorter product life cycles, and globalization as a result organization needs to be creative and innovative in order to gain competitive advantage and survival. Previous research also indicated that the technology growth and environmental climate are key factors for the firm innovativeness. Therefore, the hypothesis is provided as follows:

Hypothesis 5 : Environment munificence climate has a positive influence on strategic organizational innovation capability.

Strategic Organizational Innovation Capability

Strategic organizational innovation capability refers to the ability the firm to adopt the new systems, policies, processes, concepts, products, and services to serve as a method and guideline for conducting business (Battisti & Stoneman, 2010). Environmental change affects the development of innovation within the organization. Organizations need to establish innovation to keep their existence in fierce competition striations. The organization must adapt for the more complicated environment than before, and in this context, innovation in business is an important factor for survival, and a lasting and effective competitive advantage (Floyd & Lane, 2000).

Control Variables.

There were two control variables as follow:

1. Firm age is measured by the period of time in business. It is a critical control variable that may have effects on management. Firm age is normally associated with better resource ability and higher competitiveness (Lau, Yiu, Yeung & Lu, 2008).

2. Firm size refers to how large or small the firm is, and is measured by the operational capital (Rothaermel & Deeds, 2006). On the other hand, some authors consider that large companies develop more innovations, while other studies advocate greater results of innovation by small businesses (Orfila-Sintes & Mattsson, 2009). Consequently, smaller firms are more likely to rapidly modernize their strategy than large ones. This research measured firm size by the operational capital in order to control for possible side effects (Zahra, Neubaum & Larrañeta, 2007).

RESEARCH METHODOLOGY

Data collection

The populations of this research were 1,073 packaging businesses in Thailand obtained from the online database of the Packaging Intelligence Unit, the Division of Industrial Economics, Ministry of Industry in Thailand (Ministry of Industry, 2017). The packaging businesses have become increasingly competitive due to the diverse and dynamic demands of consumers, for this reason, packaging businesses need to develop products and services that are creative and innovative at all times to survive (Garcia & Calantone, 2002). Hence, this industry should be aware to develop their innovations which reflect in the development of modern packaging and response to the changeable need of customers. A mailing questionnaire was used to collected data and 1,073 of them were sent to the key informants including managing directors or managing partners and the follow-up calls were made two weeks after mailing. There were 232 were returned with 228 usable which was 21.25% response rate. The testing of non-response bias is to investigate the responding results after questionnaire is returned. The important reason for this procedure is to avoid the bias problem occurring between respondents and non-respondents. The results provide that there were no statistically significant differences between two groups at a 95% confidence level (Armstrong & Overton, 1977). The instrument was developed from literature reviews on organizational innovation. While its validity and reliability were tested using a pre-test. The multiple regression analysis was used to improve all hypotheses testing.

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1. Variable Measurement

The instrument was developed from literature reviews on organizational innovation. The dependent variables, independent variables, and control variables were measured by using five-point likert scale.

2. Control Variables

There were two control variables in this study including firm size and firm age, which may influence on the relationships between variable in the conceptual model. Firm size was the operational capital (Rothaermel & Deeds, 2006), which was measured by dummy variable: 0 (50,000,000 Baht or less than) and 1 (more than 50,000,001 Baht). Whereas, firm age referred to the period of time in business (Lau, Yiu, Yeung, & Lu, 2008), which was measured by dummy variable: 0 (10 years or less than) and 1 (more than 11 years).

3. Reliability and Validity

The questionnaires were tested content validity by 5 experts. The content validity was checked by item objective congruence (IOC) of each item ranged from 0.67-1.00. The reliability of the measurements were evaluated by Cronbach Alpha coefficients. The result of the Cronbach Alpha coefficients was between 0.76-0.88 which were higher than standard score of 0.70. Factor analysis was employed to test the validity of data in the questionnaires. All items were measured in each construct which was extracted to be one principal component. Factor loading of each construct presented a value between 0.68-0.89 which were higher than the cut-off 0.40 indicating the acceptable construct validity (Hair et al., 2010). The result of measurement validation was presented in Table 1.

Table 1 Result of Measure Validation

Variables	Factor Loadings	Cronbach's Alpha
Executive Support Policy (ESP)	0.74-0.84	0.82
Sustainable Organizational Culture (SOC)	0.68-0.83	0.76
Knowledge Richness Orientation (KRO)	0.79-.088	0.87
Technological Complimentarity Growth (TCG)	0.84-0.89	0.88
Environment Munificence Climate (EMC)	0.73-0.89	0.80
Strategic Organizational Innovation Capability (SOIC)	0.76-0.80	0.84

4. Statistical Techniques

This research employed the ordinary least squares (OLS) regression analysis for examining the hypothesized relationship provided in prior sessions. In order to understand the relationship, the equation was provided as follows.

$$\text{Equation: SOIC} = \alpha + \beta_1 \text{ESP} + \beta_2 \text{SOC} + \beta_3 \text{KRO} + \beta_4 \text{TCG} + \beta_5 \text{EMC} + \beta_6 \text{FA} + \beta_7 \text{FS} + \varepsilon$$

RESULTS

Table 2 Descriptive Statistics and Correlation Matrix

Variables	ESP	SOC	KRO	TCG	EMC	SOIC
Mean	4.34	4.33	4.36	4.37	4.34	4.33
S.D	0.43	0.47	0.47	0.42	0.46	0.36
ESP	1					
SOC	0.56**	1				
KRO	0.48**	0.53**	1			
TCG	0.56**	0.59**	0.51**	1		
EMC	0.50**	0.47**	0.49**	0.48**	1	
SOIC	0.60**	0.68**	0.62**	0.63**	0.53**	1

** p < 0.05, N = 228

The results in Table 2 showed that all correlations were less than 0.80 and as between 0.47-0.68, p<0.01. In addition the correlations suggested that the maximum value of VIF was 1.94, which was lower than the cutoff score of 10. Thus, the multicollinearity problem was not found in this research.

Table 3 the testing of hypotheses 1 to 5 revealed that the causal factors have affected the strategic organizational innovation capability as explained below:

Table 3 Results of OLS Regression Analysis

Independent Variables	Dependent Variable (SOIC)
Executive Support Policy (ESP)	0.15**
H ₁	(0.05)
Sustainable Organizational Culture (SOC)	0.30***
H ₂	(0.05)
Knowledge Richness Orientation (KRO)	0.23***
H ₃	(0.05)

Table 3 (Cont.)

Independent Variables	Dependent Variable (SOIC)
Technological Complimentarity Growth (TCG)	0.18**
H ₄	(0.05)
Environment Munificence Climate (EMC)	0.11**
H ₅	(0.05)
Firm Age	-0.03
(FA)	(0.08)
Firm Size	0.03
(FS)	(0.08)
Adjusted R ²	0.61
Maximum VIF	1.94

p < 0.05, *p < 0.01

The results presented that executive support policy, sustainable organizational culture, knowledge richness orientation, technological complimentarity growth, environmental munificence climate were significantly and positively related to strategic organizational innovation capability ($\beta_1=0.15$, $p<0.05$; $\beta_2=0.30$, $p<0.01$; $\beta_3=0.23$, $p<0.01$; $\beta_4=0.18$, $p<0.05$; $\beta_5=0.11$, $p<0.05$, respectively). Thus, Hypothesis 1-5 were supported.

DISCUSSION

This research indicated that the executive support policy executive support policy is the main driving about the innovation project. Consistent with Tutar et al. (2015), confirmed that the executive with policy which focuses on technology will intend to creativity, invention, new techniques, technologies, and methods to adapt the company's strategies and activities. Furthermore, the focus on technology is positively correlated with innovation capabilities.

The results also presented positive significant relationship between sustainable organizational culture and strategic organizational innovation capability. It could explain that the sustainable organizational culture influenced with the environment within the organization, and generated the ability to change innovation. This was correspondent with Jaca et al. (2016) who indicated that the organizational culture and the ability of managers to support and contribute to innovative and organizational culture is an important element for the increase of innovativeness. Furthermore, the organizational culture is important in dealing with product innovativeness, because it affects innovativeness development (Abdullah, Shamsuddin, Wahab, & Hamid, 2014).

Moreover, the finding found that knowledge richness orientation was significantly and positively related to strategic organizational innovation capability. The finding shown that knowledge richness orientation with the integration of knowledge and the flexibility to use knowledge would help innovativeness development of organization (Delone & Mclean, 2003). Furthermore, fruitful of knowledge was essential for innovative organization to enhance long-term survival (Prajogo & Ahmed, 2006).

Furthermore, the result revealed that technological complementarity growth was significantly and positively related to strategic organizational innovation capability. It mean that technology growth and technology development was a key factor for the firm innovativeness. Consistent with Omerzel (2015), Yu et al. (2013), and Tuominen, Rajala, & Möller (2004) who indicated that technology oriented strategy was essential for the development of innovativeness and performance of firms.

Finally, the results indicated that the environmental munificence climate was significantly related to strategic organizational innovation capability. The finding was consistent with Amabile et al. (1996) who stated that the features of the environment affected the level of innovation of the firm. The perception of the work environment of the individual is an important factor of the creativity establishment. It was a key factor for the firm's innovativeness (Omerzel, 2015). Thus, Hypothesis 5 was supported.

Conclusion

The purpose of this research was to examine the investigated factor; executive support policy, sustainable organizational culture, knowledge richness orientation, technological complementarity growth, and environmental munificence climate on strategic organizational innovation capability. The results found that internal and external factors have a significant positive influence on strategic organizational innovation capability and are key factors to improve efficiency of strategic. Meanwhile, environment munificence climate resulted in the clear and concrete effect to together with the understanding innovation of personnel and to follow the specific procedure. However, there may be other external factors that affect strategic organizational innovation capability beyond this research. Thus, future research should consider additional variables, especially antecedent variables that may further explain the strategic organizational innovation capability such as government policy or economic fluctuations. Additionally, future research should consider other moderator variables such as knowledge management and learning orientation that more influence on the relationship between strategic organizational innovation capability and organizational.

SUGGESTION

1. Theoretical Contribution

This research expanded the existing knowledge and literature of the key causal factors leading to strategic organizational innovation capability, and to provide empirical investigation. It contingency theory to explain organization factors which affected strategic organizational innovation capability. Furthermore, this research also provided the important implications regarding the causal factors leading to the encouragement of strategic organizational innovation capability.

2. Professional Contribution

The creation of a strategic organizational innovation capability was upon on organizational key factors including executive support policy, sustainable organizational culture, and knowledge richness orientation. The organizations should, therefore, focus on determining their policy relate to the supporting collaborative personnel learning together with emphasizes the integration and application of organizational knowledge in order to development of strategic organizational innovation capability. Moreover, technological complimentarity growth and environment munificence climate were the key external factors that the firms should consider. The choosing technology that is appropriate and consistent with organizational features and environmental conditions impacting on firm performance.

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ผู้เขียนบทความ

นางยุพารณ์ ชัยเสนา

นักศึกษาระดับปริญญาเอก

หลักสูตรปริญญาปรัชญาดุษฎีบัณฑิต สาขาวิชาการจัดการ
มหาวิทยาลัยมหาสารคาม

เลขที่ 41/20 ตำบลขามเรียง อำเภอกันทรวิชัย

จังหวัดมหาสารคาม 44150

E-mail: yupaporn.chaise@gmail.com

ดร.สุรนา บุญเหลือ

อาจารย์ที่ปรึกษาวิทยานิพนธ์หลัก

ผู้ช่วยศาสตราจารย์ ดร.นิติพงษ์ ส่งศรีโรจน์

อาจารย์ที่ปรึกษาวิทยานิพนธ์ร่วม

มหาวิทยาลัยมหาสารคาม