

RATIONAL DECISION MAKING AND FIRM PERFORMANCE: EMPIRICAL EVIDENCE FROM SMEs IN THAILAND

การตัดสินใจอย่างมีเหตุผล และผลการดำเนินงานของธุรกิจ การศึกษาเชิงประจักษ์ของวิสาหกิจขนาดกลางและขนาดย่อม

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Abstract

The purpose of this paper is to investigate the effects of rational decision making on business performance of the SMEs in Thailand. This research was conducted by using questionnaires as research instruments for collecting data from 247 executives of the SMEs in Thailand. The research found that the rational decision making in aspect of identifying problem, gathering information and evaluating alternatives (EA) are significantly and positively correlated to the firm's overall performance. This research can be used as a guideline for the SME executives to create a business strategy and make an effective decision on business in order to improve their firm's performance.

Keywords: Rational decision making, Performance, SMEs, Decision making

บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาผลกระทบของการตัดสินใจอย่างมีเหตุผลที่มีต่อผลการดำเนินงานของวิสาหกิจขนาดกลางและขนาดย่อมในประเทศไทย โดยในการวิจัยครั้งนี้ได้ใช้แบบสอบถามเป็นเครื่องมือในการเก็บข้อมูลจากผู้บริหารของวิสาหกิจขนาดกลางและขนาดย่อมในประเทศไทย จำนวน 247 ราย ซึ่งผลการศึกษาพบว่า การตัดสินใจอย่างมีเหตุผลด้านการกำหนดปัญหา การเก็บข้อมูล และการประเมินทางเลือกมีผลกระทบทางบวกกับผลการดำเนินงานของวิสาหกิจขนาดกลางและขนาดย่อม ซึ่งงานวิจัยนี้เป็นประโยชน์กับวิสาหกิจขนาดกลางและขนาดย่อมในประเทศไทยที่สามารถใช้เป็นแนวทางในการกำหนดกลยุทธ์ทางธุรกิจและช่วยในการตัดสินใจทางธุรกิจได้อย่างมีประสิทธิภาพ

คำสำคัญ: การตัดสินใจอย่างมีเหตุผล ผลการดำเนินงาน วิสาหกิจขนาดกลางและขนาดย่อม การตัดสินใจ

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Introduction

Recently, small and medium enterprises (SMEs) become more important role in increasing employment and supporting economic growth in Thailand since the statistic shows there are 3,004,679 SMEs in Thailand in 2017 (approximately 98% of the total business in Thailand). The percentage of SME employment in Thailand to total employment grew steadily from 10,751,965 employees in 2016 to 11,747,093 employees in 2017, or it is approximately increased 9.30% employees in the SMEs sector. In addition, the SMEs are considered by Thai governments as the mechanism to create national growth of the country. As Thailand statistic shows the values of gross domestic product from the SMEs sector are around 4,048,753 million bath or 41.2% of total GDP in Thailand (The Center for Economic and Business Forecasting, 2017). In addition, SMEs also provide job opportunities in Thailand, as there are about 78.2% of total employments in Thailand working in SMEs sector. This is significantly higher than in other countries, where SMEs contribution to employment is around 30-60% (Ayyagari, Kunt & Maksimovic, 2014). Since SMEs are so important for the Thai economic system, it is important to increase their resilience and business performance in order to improve their competitiveness and supporting economic growth in Thailand. One of the ways to increase their resilience is to provide them with stable business strategy and management, especially the business decision making effectiveness of

the executives.

Decision making is one of the important key factors in business success. It is a basic duty of executive in all organization. The fate of organizations depends on the state and result of executive decision making. It is inevitable for executive to consider between a decision making, employees and business performance. Decision making can be defined as “the process of determining and selecting measures or action to solve a problem or issue” (Dehaghani & Badiei, 2014). Decision makings are deeply associated with individual’s productivities. Kaufmann, Meschnig & Reimann (2014) insist that a process of decision makings influences an outcome of decision makings, and the outcome is directly or indirectly linked to employee’s and organization’s performance.

Recently, rational decision making in managing organizations is an obvious issue in organizational behavior research, in such a way that organizations are called the network of decisions and management is considered as the act of decision making. Management decisions merely cannot rely on personal intelligence, intuition and judgment, but it should be based on scientific investigations, statistics and infallible data. Therefore, the organizations should be organized in such a way that sufficient and accurate data be provided timely for the managers. Concurrent with the expansion of using “management information systems” in organizations, some of the scholars of the science of management and information has adopted another approach and designed

“decision making supporting systems”. The systems that produce appropriate information for solving a particular issue and managers’ decision. In fact, it can be said that nowadays, without required information, one cannot make effective decisions in an organization. In this regard, it is stated that information circulation, as blood circulation, has a basic role in maintaining life and health of a society.

In additions, the employees throughout all levels in organizations ought to make a decision on daily based, whether it is huge or not. Top managers, for instance, determine what products or services to offer in the markets, their organization’s missions and visions or where to locate a new factory. Middle managers decide production schedules or how to allocate pay raises. Non-managerial employees set a meeting venue or deal with customers complains. Employee’s decision making is, therefore, crucial for organization’s performances. Interestingly, making decisions in organizations are closely linked to employee’s perceptions. Robbins & Judge (2015) mention that individual decision makings are vital to improve organization’s effectiveness and those decisions are affected by individual’s perceptions. There, thus, are no doubts that individual perceptions are wildly related to decision making process and employee’s job performance in business.

In order to fully understand correlations between rational decision making process, and business performance, also the effect of the rational decision making on the business performance, it is important to know what is

a progress to make a decision in the business, what sorts of decision makings that firms’ use, and how decision makings influence to employee’s job effectiveness and efficiency, and effects on business performance. Therefore, this paper aims to investigate the effects of rational decision making on business performance, focusing on SMEs in Thailand.

Research Objective

The purpose of this research to investigate the effects of rational decision making on business performance of the SME business in Thailand

Literature Review

SMEs in Thailand are defined as either small or medium using the size of SMEs based on the number of employees and the value of total fixed assets excluding land value. Hence, an enterprise is categorized as SMEs if it has less than 200 employees and fixed capital with less than 200 million baht, excluding land and properties. Furthermore, SMEs in Thailand are classified into three categories based on the business sector: (1) Manufacturing sector, (2) the service sector, and (3) Trade sector which is composed by wholesale and retail. In addition, the Small to medium sized enterprises (SMEs) in Thailand can also defined as those employing less than 200 employees, having investment capital of less than 100 million baht, and fixed assets of less than 100 million baht (OSMEP, 2007)

There is much literature on decisions

making models. Some researches describe the quantitative and qualitative methods that can help decision-makers to structure and clarify difficult problems and to explore the implications of pursuing different option. For example, Blenko, Mankins & Rogers (2011) focus on the quality of decision making, emphasizing that decisions take longer than they should. They are made by the wrong people or in the wrong part of the organization or with the wrong information, and so turn out badly. In addition, some researchers found the decision making model associated with leaders and team in organization. Zeni et al. (2016) considers that when leaders in organization choose the right decisions, the organizations increase their performances.

In the rational decision-making models, decision makers analyze a number of possible alternatives from different scenarios before selecting a choice. A study done by Neumann and Morgenstern for example (as cited in Hastie & Dawes, 2000) demonstrated that when decision makers follow rational methodologies, it is possible to derive numbers that represent personal values, which are termed utilities. Shadmehr, Huang & Ahmed (2016) also believe that decision making is able to come by mixed between analysis of information, the evaluation of alternatives, and decision itself in order to implement business strategies.

Some literature emphasizes on the factors that influence decision making. For example, Juliusson, Karlsson & Garling (2010) state that future decision making is related to past decision

making. The research explains that if the past decision making lead to positive results, then it is more likely making similar decision in the future. Therefore, it can be said that future decisions making based on experiences in the past.

There is not much research based on the relationship between rational processing and firm performance. There are some experts tried to explain the rational decision such as Dean & Sharfman (1993) define procedural rationality as “decision process that involves the collecting information that relevant to the decision making, and the reliance upon analysis of this information in making the choice”. In addition, the theories of information process distinguish several elements of the rational decision-making including, collecting relevant information, extensively analyzing the data, evaluating several alternatives, and making probability assumptions about outcomes (Dean & Sharfman, 1993; Evans, Honkapohja & Mitra, 2010; Kaufmann, Meschnig & Reimann, 2014) analyses the used of an information processing approaches, and found that the importance of procedural rationality in business selection processes in light of its capacity to substantially influence the decision outcome. In addition, the activities of clarifying decision criteria, identifying a set of potential suppliers based on their strengths and weaknesses, and generating a list of alternative suppliers, can create greater negotiation power for the buying firm.

Interestingly, Skýpalová & Blaskova (2015) found that SMEs are vulnerable to make a

decision for its effectiveness because they have uncertainty or poor information. Moreover, great making decision is for developing a product innovation through R&D or the adoption of technologies that lead for firms to increase marketing strategy and sales. Although a few scholars argue that business performance and decision making are crucial, there are lacks of researches on the issues related to SMEs in Thailand. Thus, this research will investigate the influence of rational decision making on business performance of the SME business in Thailand.

Research Methodology

Population

The populations in this research are the 636,630 SMEs that registered as a juristic person in Thailand (Institute for Small and Medium Enterprises Development, 2017).

Sample

The sample size in this research is identified by using the Krejcie and Morgan' table. Therefore, from 636,630 SMEs entrepreneurs, the minimum sample in this research will be 384 owner or executive managers of the SMEs in the Thailand. This research used 400 executive managers of the SMEs business in the Thailand as a sample. The sample was selected by using computer random.

Measurement

Questionnaires in this research consist of 4 parts.

Part 1 asks for key informants' general information including gender, age, marital status, education, work experience, and income per month.

Part 2 focus on the general information of the SMEs businesses, including information on business type, operating capital, firm age, number of employees, and income per year.

Parts 3 asks for the executive opinion on the rational decision making, which measuring items are anchored by five-point Likert scale as 1 = strongly disagree to 5 = strongly agree.

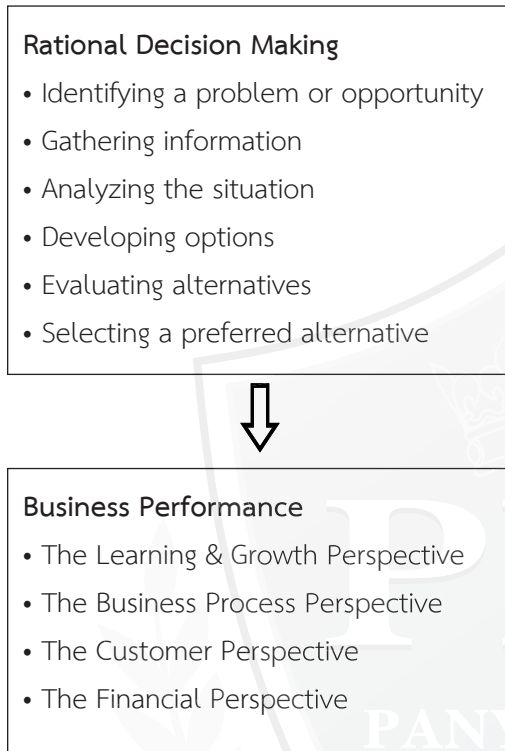
Part 4 present the opinion of SMEs executive on the firm performance. There are two performances. The measurement items in this part are anchored by five-point Likert scale from 1= strongly disagree to 5 = strongly agree.

Data collection

The key informants are executive of SMEs in Thailand. This research used questionnaire mail survey for collecting data. It is appropriate because it is a widely-used method for large-scale data collection in geographical area, mailing questionnaires is effective (Neuman, 2006). The questionnaires, as a research instrument were mailed to 400 SMEs businesses in Thailand. There were 249 questionnaires returns, and 247 were completed. According to Aaker, Kumer & Day (2008), the effective 20% response rate for a mail survey, without an appropriate follow-up procedure, is considered to be sufficient.

Research Model

The research framework in this research presents in a diagram below:



Dependent Variable

Firm Performance is set as a dependent variable in this research since the firm performance is of key interest for the top management of a company. If firm performance is weak, managers need to intervene in order to return to the path of growth. This research applied balanced scorecard (BSC) model to measure business performance. The firm performance in this research including

1. The Learning & Growth Perspective

This perspective aims to examine staffs skills. It is also including staffs training, knowledge, and business culture.

2. The Business Process Perspective

This perspective focus on internal business processes and procedures that lead to financial success and customer satisfaction.

3. The Customer Perspective

This perspective refers to an ability of the business to provide quality goods and services that meet customer satisfaction.

4. The Financial Perspective

This perspective refers to an ability of the business to provide timely and accurate funding data, which will always be a priority and managers, will do whatever necessary to provide it.

Independent Variables

Rational decision making refers to processes consists of a sequence of steps designed to rationally develop a desired solution. Typically these steps involve:

1. Identifying a problem or opportunity

Identifying a problem is the first step of rational decision making. It refers to recognize a problem or to see opportunities that may affect quality of decision making. It also defines as a gap between the current and the desired state situation that may be motivated the involved the decision.

2. Gathering information

It is ability to get data and analyzing data that will support decision.

3. Analyzing the situation

It refers to an ability of business to analyzing the situation, both current situation and estimate future situation that can improve

decision making.

4. Developing options

This refers to an ability of business to generate several possible options for supporting decision making.

5. Evaluating alternatives

After developing options, next the business might need to evaluate each alternative for supporting decision making. It is including setting criteria for evaluating, feasibility evaluating, and desirability.

6. Selecting a preferred alternative

The last step of rational decision making is making decision by selecting a preferred alternative. This based on the preferred alternative for possible in the future. It also included risks of making this decision.

are single. The majority of the education level of respondents obtains bachelor's degrees (61.5 percent) and about 23.5 holding graduated degree. There are about 15 percent of the respondents had lower than undergraduate level. For working experiences, there are approximately 31.6 percent of respondents had experience on the SME business between 5 to 10 years and around 22.7 percent have 11-15 years had experience on the SME business. There are only 10.4 percent had less than 5 years working experience on the SME business. Base on the respondent's income per month, most of the respondents received income per month less than 25,000 baht (32.0 percent) and around 25.5 percent of the respondent received more than 100,000 baht per month.

Firms Characteristics

Research Results and Discussion

Demographic Characteristics of the Respondents

The demographic characteristics of the 247 respondents who are the business owner or the executive manager in the SMEs business in Thailand shows that most of respondents (SMEs executive) are male (52.2 percent) and around 47.8 percent of the respondents are female. The span of age of respondents is between 30 to 40 years old (42.5 percent), and around 30.8 percent of respondents are between 41-50 years old and there are only 2.8 percent are over 60 years old. Considering the marital status of the respondent, most of respondents are married (69.6 percent), and approximately 25.5 percent of the respondents

The firm characteristics are described by business type, total asset values, firm age, number of employees, and approximately net income per year. The firm characteristics of the SMEs business Thailand indicates that most of SME businesses in Thailand had registered as a company limited (53.4 percent). There are around 34.4 percent of SME businesses in Thailand registered as a partnership, and about 12.1 percent are family businesses. Base on the total asset value, approximately 34.4 percent of the SME business in Thailand had total asset value 10,000,001 to 30,000,000 Baht, and around 28.7 percent had less than 10,000,000 Baht total asset value. There are approximately 15.8 percent of the SME businesses in Thailand hold total asset that value more than 120,000,000 baht.

Base on the number of employee of the SME business in Thailand, the result shows that over a half of the SMEs in Thailand had number of employees less than 50 persons. As can be seen in table, there are approximately 44.9 percent of the SME in Thailand had around 11-50 employees, and about 25.1 percent of the SME in Thailand had less than 10 employees. Moreover, the table indicates that is approximately 10.1 percent of the SME in Thailand had more than 200 employees. Considering the firm age, the results indicate that around 25.9 percent of SME in Thailand have operating time between 5-10 years and 25.1 percent are more than 25 years. It is interesting to note that there are 4.9 percent of the SME in Thailand had less than 5 years' operating time. According to income per year, almost half of the SME business in Thailand had average income per year around 5,000,000-10,000,000 Baht (45.7 percent) and around 38.9 percent of the SME business in Thailand received less than 5,000,000 Baht per year. The table also shows that around 8.9 percent of the SME business in Thailand had income more than 60,000,000 baht per year.

Effects of Rational Decision Making on Business Performance of the SME in Thailand

This research employs a bivariate correlation analysis of Pearson's correlation on all variables for two purposes. The first purpose is to explore the relationships among variables that included in the model. Another purpose is to verify the multicollinearity problem. The multicollinearity

problem exists when inter-correlation between independent variables exceeds 0.80 (Hair et al., 2010). In this research, the bivariate correlation procedure is subject to a two-tailed test of statistical significance at two levels as $p < 0.05$, and $p < 0.01$. The results of the correlation analysis of all variables in this research are shown in Table 1.

The Pearson Correlation Coefficient of the Rational Decision Making, which including 1) Identifying a problem or opportunity, 2) Gathering information, 3) Analyzing the situation, 4) Developing options, 5) Evaluating alternatives, and 6) Selecting a preferred alternative, is between 0.329 - 0.846, which all significant at 95 percent ($p < 0.05$) The result seem that the multicollinearity problem occur when inter-correlation analysis between independent variables exceed 0.80 (Hair et al., 2010), but correlation analysis is employed to initially investigate. Meanwhile, VIF is employed to test the interrelationship among independent variables in each equation. The maximum value of VIF in equation 1-4 is 4.380 and less than 10, therefore multicollinearity problem is not concerned. In addition, the correlations between each dimension of rational decision making and the business performance are demonstrated.

The results present that rational decision making are significantly positive correlated with each dimensions of business Performance, including The Learning & Growth Perspective (LP), The Business Process Perspective (BP), The Customer Perspective (CP), and The Customer

Perspective (CP) is between 0.230 - 0.801, which all significant at 95 percent ($p < 0.05$) respectively. Accordingly, the evidence suggests that there are inter-correlations among all of variables. Therefore, the results indicate no multicollinearity problems in this research; the result is lower at 0.8 (Hair et al., 2010).

This research employs the Ordinary Least Squares (OLS) regression to investigate the hypothesized effects of rational decision making on business performance. In addition, the regression equation is a linear combination of the independent variables that best explains and predicts the dependent variable. The regression equation generated is a linear combination of the independent variables that best explains and predicts the dependent variable. Then OLS is an appropriate method for examining the hypothesized relationships.

The effects of rational decision making on business performance are based on the model that propose in the chapter three. The hypothesis of this research is that the rational decision making had positively effect of firm performance. Table 1 presents the results of OLS regression analysis of effect rational decision making on business performance in overall.

According to Tables 1, the results present that the rational decision making in aspect Identifying problem (IP), Gathering information (GI), and Evaluating alternatives (EA) are significantly positive related to overall business performance of the SME in Thailand at 95 percent significant level ($p < 0.05$). However,

the Analyzing the situation (AS) and Developing options (DO) are not significantly affecting overall business performance of the SME in Thailand since p - values more than 0.05.

Table 1 Effects of rational decision making on overall business performance

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	.71	.16	4.29	.00*
Identifying problem	.13	.04	3.10	.00*
Gathering information	.08	.03	2.32	.01*
Analyzing the situation	.07	.04	1.57	.11
Developing options	.06	.04	1.52	.12
Evaluating alternatives	.12	.04	3.21	.00*
Selecting a preferred alternative	.34	.04	8.36	.00*

F - statistic = 69.477

R - square = 0.797

Adjust R - square = 0.635

Considering each dimension of the business performance, the results are presented in table 2-5. Table 2 indicates the effects of rational decision making business performance in aspect to the Learning and Growth Perspective. The

results found that there are three dimensions of the rational decision making has significant effect on business performance in aspect to the Learning and Growth Perspective at 95 percent significant level including Identifying problem, Gathering information, Evaluating alternatives, and Selecting a preferred alternative.

Table 2 Effects of rational decision making on the Learning and Growth Perspective

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	.54	.23	2.33	.02*
Identifying problem	.15	.05	2.65	.00*
Gathering information	.01	.05	.249	.80
Analyzing the situation	.08	.06	1.33	.18
Developing options	-.04	.05	-.81	.41
Evaluating alternatives	.17	.05	3.30	.00*
Selecting a preferred alternative	.46	.05	8.29	.00*

F - statistic = 45.863

R - square = 0.731

Adjust R - square = 0.534

The results of the effect of rational decision making of the business performance in aspect of

the Learning and Growth Perspective shows in table 3. The result indicated that the Developing options and the Selecting a preferred alternative has significant positive affect the Learning and Growth Perspective, while identifying problem, Gathering information, and Analyzing the situation have no significant related to the Learning and Growth Perspective.

Table 3 Effects of rational decision making on The Business Process Perspective

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	0.66	0.26	2.49	0.01*
Identifying problem	0.12	0.06	1.80	0.07
Gathering information	0.03	0.06	0.56	0.57
Analyzing the situation	-0.05	0.07	-0.68	0.49
Developing options	0.17	0.06	2.64	0.00*
Evaluating alternatives	0.12	0.06	1.95	0.05
Selecting a preferred alternative	0.41	0.06	6.93	0.00*

F - statistic = 32.386

R - square = 0.447

Adjust R - square = 0.434

The results of the effect of rational decision making on the business performance in aspect of the Customer Perspective (CP) in table 5 shows that rational decision making on Evaluating alternatives (EA) and Selecting a preferred alternative (SA) appeared to be 5 percent significant affect the Customer Perspective positively, while Identifying problem (IP), Gathering information (GI), Analyzing the situation (AS), Developing options (DO) have no significant related to the Customer Perspective.

Table 4 Effects of rational decision making on Customer Perspective

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	1.08	0.25	4.29	0.00
Identifying problem	0.02	0.06	.40	0.68
Gathering information	0.06	0.05	1.12	0.26
Analyzing the situation	0.01	0.07	-.24	0.81
Developing options	0.03	0.06	.53	0.59
Evaluating alternatives	0.25	0.05	4.28	0.00*
Selecting a preferred alternative	0.30	0.06	5.00	0.00*

F - statistic = 23.214

R - square = 0.367

Adjust R - square = 0.351

It is interesting to see that the business performance in aspect to financial perspective was influenced by evaluating alternatives (EA) and Selecting a preferred alternative (SA), since the statistic show the p value less than 0.05. However, identifying problem, Gathering information (GI), analyzing the situation (AS), have no significant effects of business performance

Table 5 Effects of rational decision making on The Financial Perspective

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	0.56	0.23	2.42	0.01*
Identifying problem	0.23	0.05	3.97	0.00*
Gathering information	0.24	0.05	4.72	0.00*
Analyzing the situation	0.27	0.06	4.29	0.00*
Developing options	0.09	0.05	1.62	0.10
Evaluating alternatives	-0.04	0.05	-.87	0.38
Selecting a preferred alternative	0.14	0.05	2.63	0.00*

F - statistic = 43.688

R - square = 0.522

Adjust R - square = 0.510

Overall, SME executive in Thailand had agree that the overall of rational decision making is very important for the business since its can helps them to improve the business performance. In addition, the SME executive in Thailand put more attention on the business performance in aspect to financial perception than other perception in business performance. Considering the effect of rational decision making and the business performance, the research found that the rational decision making show positive influence the business performance. Therefore, it can be concluded that the rational decision making can help the SME to improve their business performance.

Conclusion

The research found that most of respondents are male; span of age of respondents is between 30 to 40 years old. Most of respondents are married status. The majority of the education level of respondents obtain bachelor's degrees or under and they are working with the firms between 5 to 10 years. Base on the respondent's income, the most of respondents received the revenues less than 25,000 Baht per month regarding to characteristic of the SMEs business

in Thailand, most of firm had registered as a company limited. Based on total asset value, approximately 34.4 percent of the SME business in Thailand had total asset value 10,000,001 to 30,000,000 Baht. Moreover, the result shows that over a half of the SMEs in Thailand had less than 50 numbers of employees In addition, the results indicate that almost haft of the SME business have operating time between 5-10 years. According to income per year, almost haft of the SME business in Thailand had average income per year around 5,000,000-10,000,000 Baht

The results of regression indicate that that the results present that the rational decision making in aspect Identifying problem (IP), Gathering information (GI), and Evaluating alternatives (EA) are significantly positive related to overall firm performance of the SME in Thailand. In addition, the effect of rational decision making and the business performance, the research found that the rational decision making show positive influence the business performance. Therefore, it can be concluded that the rational decision making can help the SME to improve their business performance.

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