ENTREPRENEURSHIP AND SUSTAINABILITY CENTER

Publisher
http://jssidoi.org/esc/home

enterprise europe network
Business Support on Your Doorstep

OASPA

Scopus

Web of Science

Clarivate Analytics

INDICATORS OF STRATEGIC INTUITION FOR SMEs' ENTREPRENEURS: EVIDENCE FROM THAILAND*

Somnuk Aujirapongpan [1*], Yaninee Songkajorn [2], Yuttachai Hareebin [3], Sirichai Deelers [4], Jaturon Jutidharabongse [5]

[1,2,5] *School of Management, Walailak University, Nakhon Si Thammarat, 80160, Thailand*
[3] *Faculty of Management Science, Phuket Rajabhat University, Phuket, 83000, Thailand*
[4] *Faculty of Management Science, Silpakorn University, Petchaburi, 76120, Thailand*

E-mails:[1] asomnuk@wu.ac.th (Corresponding author); [2] yaninee_IMM@yahoo.ca; [3] yuttachai.mas@gmail.com;*
[4] *sirichai@ms.su.ac.th; [5] cjaturon@wu.ac.th*

Abstract. The main objective of this research is to study and develop the strategic intuition indicators of small and medium-sized enterprises (SMEs) in Thailand. The results will serve as a guideline for creating a model to develop the strategic intuition capability of entrepreneurs in Thailand in the future. The research studies relevant literature from empirical data and tests the consistency of a linear structural relationship model by using component analysis techniques. A questionnaire was used to collect data from a sample of entrepreneurs who are SMEs from the database of the Thailand Exporter Directory, the Ministry of Commerce. The results showed that the developed strategic intuition model is in harmony with empirical data, with the strategic intuition variables consisting of three main components: (1) Sensing capabilities, (2) Aggressive thinking capabilities, and (3) Strategic decision capabilities, with a positive value. It was also found that in each component of the measurement model, strategic insight had the same straightness, and the variability of the structural confidence values passed the standard criteria.

Keywords: strategic intuition; intuition indicator; entrepreneurs; SMEs; Thailand

---

1. Introduction

Nowadays, the road to either success or failure in business operations depend on entrepreneurs' decision-making (Simon, 1997; Robbins, 2003). Hence, in the 21st century, the most successful and innovative entrepreneurial leaders will focus on sustaining superior performance, strategies, and foresight and learn to challenge themselves occasionally (Srichan, Tachaphahapong, & Methakunavudhi, 2016). An entrepreneurial strategy confers a competitive advantage by selecting business solutions that eliminate some weaknesses and plan or correspond procedures for unique benefits and goals (Kouzes & Posner, 2012; Duggan, 2013). Many businesses have grown by leaps and bounds over the past year, as a result of entrepreneurs' abilities and their future predictions. Otherwise known as strategic intuition, this is one type of learning strategy that entrepreneurs use to learn more successfully. Hence, an effective business roadmap will help and develop the strategic intuitions of entrepreneurships in circular business advantages. For these reasons, this study develops strategic intuition indicators by using principal component analysis techniques to verify the dimensionality and structure of variables. The study includes an explanation of the statistical relationship between the smallest variables of latent variables (unobserved variables), referred to as their components. Wiratcha (1999) explained an important concept regarding the structure of principal component analysis, which some variables couldn't objectively identify and measure its physical characteristics. It is known as latent constructs/variables or unobserved variables. Nevertheless, all these details can provide accurate references. However, principal component analysis is part of a statistical–technical process to expose existing latent variables by differences between studying observed variables and analysis of variance. Hopefully, this study of strategic intuition will prove helpful to innovative entrepreneurs. In particular, the developed strategic intuition model can be identified more clearly and positive steps can be taken toward achieving the objectives of entrepreneurs in Thailand. The main objective of this research is to study and develop the strategic intuition indicators of small and medium-sized enterprises (SMEs) in Thailand and facilitate the development of strategic indicators to guide the model to promote the strategic intuition capability of entrepreneurs in the future.

2. Literature Review

2.1 Concepts and theories of developing indicators

Kanchanawassi (2002) stated the dimensional conceptualisations of the process of developing indicators that captured two concepts; 1) Developing indicators by either grouping variables or related components or by consistency with the representative status through a principle of theoretical logic. The next step is to set the priorities of variables or components that follows by developing process indicators to synthesise either variables or indicator components. 2) Developing indicators by analysing the empirical data, and then grouping either variables or related components by using a statistical method for creating indicators. Nowadays, for both these concepts most popular methods and modern trend in research methodology. Wiratcha (1999) suggests that the concept of developing indicators characteristics is similar to the process of studying variables but that each stage of a quality audit is likely to be divided between the different stages of developing indicators. Additionally, good and high-quality of developing indicators should be reliable, valid, capable, consistent, and acceptable (Gibbon, 1996). For the developing indicators' methodology that normally used factor analysis, by using empirical data. All things considered step by step; analysing and grouping variables. Through the developing indicators' concept that can defined in two methods; 1) Developing indicators by using Exploratory Factor Analysis (EFA), which develops the indicators as latent variables. This technique does not either identify the model or engage the support hypothesis. However, the developing indicator technique also has a weak point, in that its analysis of results is ineffective. For this reason, the technique identifies all variables in the model as the result of all components, and the variable error is irrelevant. 2) Developing indicators by using Confirmatory Factor Analysis (CFA), which develops the component analysis by estimating accuracy hypothesis model with theory engagement. This

technique can decrease the negativity and weak point of exploratory factor analysis (Pinyo, 2018). A survey of many international studies provides an overview of a developing indicators' topic, which is developing the indicators from the database and checking the accuracy of the hypothesis model. The developing indicators were created by methodology and empirical analysis that uses the Structural Equation Model (SEM). Meanwhiles, a theory is formalised model that is both consistent and correspondent with empirical data. Also included is the structural equation model, which is an effective tool for estimating the parameters of the developing indicators (Tan, 1992; Ashworth & Harvey, 1994; Joseph & Joseph, 1997).

2.2 Concepts and theories of the strategic intuition

Intuition is a mental process that involves instinctive feeling rather than conscious reasoning and quick decision-making stemming from knowledge-based experience (Miller & Ireland, 2005). From the scientific perspective, the human recognition process consists of five senses. However, the concept of this research is intuition, represented by a sense of foresight arising from one's own instinct. Khatri and Ng (2000) explain intuition as being part of some entirely subconscious level. This level of thinking differs from systematic thinking. This is consistent with Dane and Pratt (2007), who state that the past experiences of leaders are as important as are effectiveness and efficiency in a leadership role. A leaders' relevant experience and background can enable them to identify the critical factors of phenomena. Phaskyud (2012) explains that the capacity of foresight is the part of the vision of a leader, focusing attention on what matters most. A useful vision must be rooted in a leader's past and has gained remarkable for his/her perfect wisdom to explain future scenarios. In addition, Dadds (2008) reports that the processes of categorising and evaluating competitors to understand their strengths and weaknesses are important for business competition in enabling business leaders to determine how their competitors will respond to their next move and process-perspective. Koksat (2007) defines the concept of intuition as the transference of feeling to the surrounding environment and understanding of the basics of new beginnings. Schmidt (1996) identifies intuition as the key point of communication systematic-process and environment. Aujirapongpan and Jutidharabongse (2017), studied the following strategic intuition development concept from Duggan (2013). They found that the intuition development process consists of 4 steps: 1) Learning the successions and examples from history. Entrepreneurs should have former business experience, irrespective of whether it is of success or of failure. These direct or indirect reasonings can be transferred to the next step of business thinking. 2) Creating presence of mind, which is thinking outside the box, associated with concentration and from a new perspective. 3) Reflecting the innate idea and flash of insight. This involves integrating two previous steps to arrive at intuition through concentration. 4) Operating as the resolution. Operating at peak efficiency and being ambitious can drive realistic strategies. Jutidharabongse, Aujirapongpan, and Ritkaew (2020) describe the development of dynamic knowledge management capability and strategic intuition. They find that development of genuine wisdom by systematic knowledge management through conscious mental concentration can lead to the next stage of strategic intuition. The successful development of the skill of intuition is based on the condition of mind whereby past and present states are blended. Thinking creatively and freely allow one to have many and greater perspectives on events (Duggan, 2013). In considering the components in strategic intuition, Aujirapongpan and Jutidharabongse (2017) explain this concept from an eastern perspective related with Buddhist practices (three studies). Three studies consist of morality, concentration, and wisdom. One's mental state and knowledge state are both important for problem-solving. The strategic intuition indicators are represented and summarised in Table 1.

Table 1. The strategic intuition indicators

Indicators	Researchers
1. Intention and bringing of the learning experiences from the past situations in making decision, automatically.	Aujirapongpan & Hareebin (2020), Jasińska (2019), Ramhit (2019).
2. Capability of the changing signal for the market environments.	Bunge (1983), Radin (1997).
3. Integration of thoughts in order to better perceive customers' needs.	Allinson, Chell & Hayes (2000).
4. Feasibility analysis of future custormers' needs.	Bradley (2007).
5. Composite indicators and the tendency of future customers' needs.	McCraty, Atkinson & Bradley (2004).
6. Comparative thinking methodology of past situations in order to identify causes of problems.	Aujirapongpan, Ru-zhe & Jutidharabongse (2020), Patel, S. & Mehta, K. (2017).
7. Basics of multi-perspective analysis for problem solving in an organisation.	Aujirapongpan & Hareebin (2020).
8. Practical techniques of proactive mindset application for identifying current customers' needs.	Liu, Shiue, Chen & Huang (2019), Agor (1984), Burke & Miller (1999).
9. Data collection techniques for strategic planning-decision.	Myers (2002).
10. Evaluation of meticulously thinking outcomes, before making them part of the strategic planning.	Mitchell, Friga & Mitchell (2005), Aujirapongpan, Ru-zhe & Jutidharabongse (2020).
11. Identification and analysis of causes of organisation problems.	Gong & Blijleven (2017).
12. Optional identification for organisation's strategic objectives that outline expected results.	Aujirapongpan & Hareebin (2020), Myers (2002), Riqueleme & Watson (2002).
13. Analysis of the options leading to the organisation's solutions.	Kahneman (2003), Bradley (2006).
14. Comparison of the options which are most possible and appropriate for strategic decision.	Voronkova, Nikishkin, Frolova, Matveeva, Murzagalina & Kalykova (2019).
15. Evaluation of individual options regarding their extent of significance and insignificance.	Sedighi, Lukosch, Van , Brazier, Hamedi & Van (2017), Wang, Geng & Gao (2018).

Source: Compiled by the authors

3. Methodology

This study explores the developed strategic intuition indicators of SME entrepreneurs in Thailand through qualitative research by exploratory factor analysis and confirmatory factor analysis. The study uses empirical data and questionnaires and verifies the correspondence model extract information on the associate with SMEs entrepreneurs in Thailand.

3.1 Sample and unit analysis

This research collected and analysed a sample of entrepreneurs in SMEs, in addition to all entrepreneurs that also engage in international knowledge and business and are involved in long-term strategic planning and control for their organisations. The presented assessments are based on reference data from 2,784 companies from the Thailand Exporter Directory, Ministry of Commerce (Updated 31st December 2017). The research sample was collected from 360 SMEs, based on research methodology and Structural Equation Modelling. Optimising balance that the sum of weights across equals the total matched sample size by 20 times of variables in Structural Equation Modelling (SEM) (Wiratchai, 1999). The unit of analysis of the current study is Proportional Stratified Random Sampling for each group of SMEs.

3.2 Research tools and techniques

This study used questionnaire methods as research tools to collect data for examining the relationships between variables. This methodology was adapted from current studies and research theories engaged in phase 1 of qualitative research. This study is set out in two sections: the first is survey questions about the personal information of entrepreneurs. The second is the components in the strategic intuition of entrepreneurs.

3.3 Data collection, analysis, and measurement

To achieve the study's research objectives, the researcher wrote and used a petition letter and questionnaires. Collecting and analysing the survey data for all executives via post mails. 1 month later, which of the following their results. Meanwhile, phone calls were made to identify the correct respondents from the firms. Many questionnaire answers were readily perceived, and some were intensely reacted to rejection. Based on the comprehensive results of the existing questionnaire answers, the researcher checked again to see whether some of the results suited the context of the research methodology. The researcher measured the consistency test of Linear Structural Relationship that is used in the SEM-Analysis technique. Meanwhile, the researcher used the LISREL program to develop empirical benchmarks of comparison that reflected the questionnaires. This included analysing the mean and standard deviations in the statistical data set. The Kaiser–Meyer–Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity were used to compare the observed correlation matrix and check for redundancy between the variables that can be summarised with a few numbers of factors by using the Partial Correlation and Identification of the Model. To study on the model configuration parameters, determine how the model runs by specifying the condition analysis. Includes, the Factor Analysis by using EFA and CFA to verify all factors and the consistency of theories. Representing a rational and logical set of relationships exist among all components.

4. Empirical Results and Discussion

4.1 Results

The researcher examined and studied the context of the validity of the measure used in data collection using 342 questionnaires (Aujirapongpan & Hareebin, 2020). The average survey response rate was 31.06% as respondent's submission. However, the survey response rate was confirmed as being enough to create the SEM by the sample size-information answers (See Table 2).

Table 2. Frequency and percentage of the sample size-information answers (n=342)

Information	Status	Frequency	Percentage
Gender	Male	303	88.60
	Female	39	11.40
Age	31 – 40 years old	55	16.08
	41 – 50 years old	129	37.72
	More than 50 years old	158	46.20
Education	Bachelor's degree	35	10.23
	Master's degree	295	86.26
	Doctoral degree	12	3.51
Work experiences	Less than 10 years	15	4.39
	10 – 15 years	42	12.28
	16 – 20 years	135	39.47
	More than 20 years	150	43.86
Position	Vice president / Executive Chief	39	11.40
	Managing director / Assistant managing director	252	73.68
	Chief officer / Manager	51	14.91
Length of business operation	Less than 10 years	50	14.62
	10 – 15 years	187	54.68
	16 – 20 years	97	28.36
	More than 20 years	8	2.34
Total number of staff employed	1 – 50 people	5	1.46
	51 -100 people	70	20.47
	101 – 200 people	267	78.07

The analysis in Table 2 is based on data collected from 342 questionnaires. The results shown in Table 2 indicate that 303 people (86.60%) males are more likely to be vulnerable, compared to only 39 females (11.40%). The table also reveals that, on average, approximately 158 (46%) are more than 50 years old, approximately 129 (37.75%) are less than 50 years old, and approximately 55 (16.08%) are 31–40 years old. A total of 281 (86.26%) of the entrepreneurs have a Master's degree, 35 (10.23%) have a Bachelor's degree, and 12 (3.51%) have a Doctoral degree. A total of 150 (43.86%) of the entrepreneurs have more than 20 years' work experience, 135 (39.47%) have 16–20 years' work experience, 42 (12.28%) have 10–15 years' work experience, and 15 (4.39%) have less than 10 years' work experience. A total of 252 (73.68%) of the sample hold positions as managing directors and assistant managing directors, 51 (14.91%) hold positions as chief officers and managers, and 36 (11.40%) hold positions as vice presidents and chief executives. The table also show that 187 (54.68%) of the business have been in operation for 10–15 years, approximately 97 (28.36%) have been in operation for less than 10 years, approximately 50 (14.62%) have been in operation for 16–20 years, and approximately eight (2.34%) have been in operation for more than 20 years. A total of 267 SMEs (78.07%) have approximately 101–200 staff, 70 (20.47%) have approximately 51–100 staff, and five (1.46%) have approximately 1–50 staff.

In the next step of the study, the researcher analysed the components of EFA in the variables of 15 strategic intuition indicators. Studies has proven that didn't find the indicators less than 0.3. This means that the number of indicators and amount of questions are similar. Testing of the correlation matrix by Bartlett's Test of Sphericity yielded an approximate Chi-Square of 1,740.28, with 105 degrees of freedom, and a P value = 0.000. Significance level was 0.01, and the Kaiser-Meyer-Olkin statistic was 0.587, which means the correlation matrix of the latent variables is not the identity matrix. This study has confirmed that the relationships between variables and factors are enough to create either a component model or a strategic intuition indicators model at the international level. The components of weight indicators are shown in Table 3.

Table 3. component of weight strategic intuition indicators

Strategic intuition indicators	Component of weight		
	3	2	1
V1 Intention and learning from previous experience to guide automatic individual decision-making.	0.848	-0.101	-0.252
V2 Capacity for change and performance in the external environment of exporting business.	0.761	-0.407	-0.089
V3 Integrated customer thinking for better understanding customer needs and wants.	0.738	0.304	0.282
V4 Analysis of the feasibility of future clients' needs.	-0.614	0.304	0.208
V5 Clearly indicated details and trends of future clients' needs.	-0.547	-0.239	0.179
V6 Comparison methodology in former situations for cause finding.	-0.512	-0.070	0.059
V7 Basic of multiple perspectives' analysis for problem solving in organisations.	-0.432	-0.502	-0.005
V8 Adaptation technique of proactive thinking for finding customer needs.	0.023	0.780	-0.206
V9 Data collection technique from many places, which helps in strategic decision planning.	-0.110	-0.619	-0.317
V10 Critical thinking evaluation and using the results for strategic planning.	-0.281	0.501	-0.369
V11 Identification and analysis of the causes of an organisation's problems.	0.037	-0.398	-0.021
V12 Identification of multiple options for operational objectives of organisations.	0.055	0.024	0.615
V13 Optional analysis as the problem-solving guideline.	-0.188	-0.046	0.748
V14 Comparison between different possible options and selection of suitable options.	0.002	0.142	0.731
V15 Evaluated value consideration in significant options and disadvantage evaluation.	0.321	0.083	-0.543

Table 3 shows that the components have Eigenvalues of >1 and cumulative variance of approximately 48.735%. This means that all latent variables can explain the variance of three components (48.735). All components shown contribute significantly to the study (Shown in Table 4).

Table 4. Components of Eigenvalues, percentage of variance, and percentage of cumulative variance in strategic intuition components

Components	Initial Eigenvalues			Extraction Sums of Squared Loading		
	Total	Percentage of variance	Percentage of cumulative variance	Total	Percentage of variance	Percentage of cumulative variance
1	3.440	22.930	22.930	3.440	22.930	22.930
2	2.147	14.310	37.241	2.147	14.310	37.241
3	1.242	11.495	48.735	1.242	11.495	48.735

Table 4 confirms that the results can identify the strategic intuition indicators. All of them can be related with these concepts and theories;

1. Indicator V1–V6 defines respective components of ability to recognise opportunities (Sensing capabilities), or SI1, represented as either intuition capability or seeing opportunity. That leads to evaluated consideration for the imagination situation.

2. Indicator V7–V11 defines respective components of ability for proactive thinking (Aggressive thinking capabilities), or SI2, represented as thinking, previous experience, and the existing situation. The concept focuses on future situations that can respond to external factors.

3. Indicator V12–V15 defines respective components of ability to make decisions proactively (Strategic decision capabilities), or SI3, represented as conditions for making decisions in an organisational vision. Emphasis is placed on future situations related to the effectiveness of business competition.

The reliability of each component was assessed by using Cronbach's Alpha Coefficient (Cronbach, 1990). Each component must have acceptable reliability of Alpha Coefficient for each scale of no less than 0.70. This is an acceptable reliability result (Shown in Table 5).

Table 5. Alpha Coefficient of strategic intuition components

Variables	Components	Alpha Coefficient
Strategic intuition (SI)	Ability to recognise opportunities (SI1)	0.953
	Ability for proactive thinking (SI2)	0.825
	Ability to make decisions proactively (SI3)	0.911

This study applied normal distribution tests using the results of basic statistical analysis, skewness, and kurtosis. The results show a normal distribution of data, meaning that most of the elements in the data set are close to the level of acceptance and are no more than 2.58 (Hair, Black, Babin, & Anderson, 2014). See Table 6.

Table 6. Basic statistical analysis results of strategic intuition components

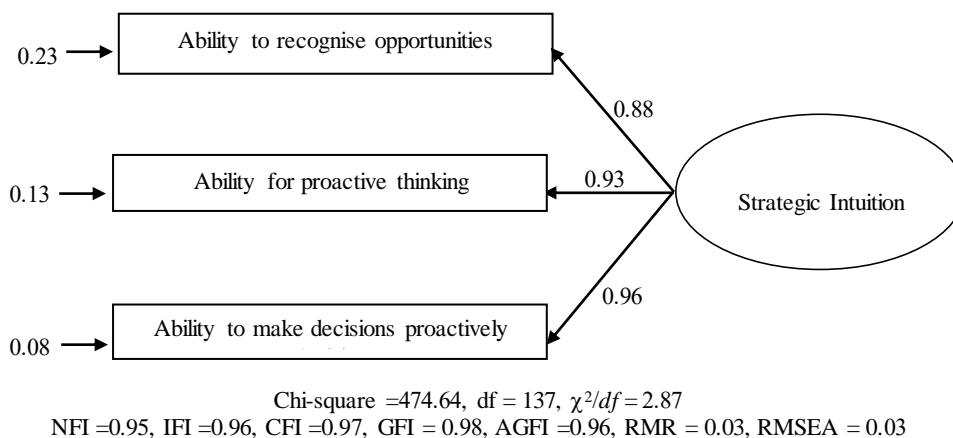| Components	$\overline{X}$	Comprehension	S.D.	SKEW	KURT
Ability to recognise opportunities (SI1)	3.821	High Level	0.319	0.325	-0.906
Ability for proactive thinking (SI2)	3.831	High Level	0.262	0.185	-0.301
Ability to make decisions proactively (SI3)	3.853	High Level	0.213	-0.075	0.280
Total	3.835	High Level	0.139	0.153	0.011

From Table 6, the variables of strategic intuition (SI) shows that the average level the of variables is high ($\overline{x}$ = 3.835). Meanwhile, the averages of the components of ability to recognise opportunity (SI1), ability for proactive thinking (SI2), and ability to make decisions proactively (SI3) are between 3.821–3.853. The standard deviation is between 0.213–0.319. Following the normal distribution tests of the variables of strategic intuition (SI), which measure by components or three variables; ability to recognise opportunity (SI1), ability for proactive thinking (SI2) and ability to make decisions proactively (SI3). See Table 7.

Table 7. The normal distribution tests

Variables	Skewness	Kurtosis	Normal Distribution
SI	0.153	0.011	√
SI1	0.325	-0.906	√
SI2	0.185	-0.301	√
SI3	-0.075	-0.280	√

The analysis in Table 7 is based on the normal distribution tests. The results indicate that all components or latent variables in three strategic intuitions have skewness of between -0.075–0.325 and kurtosis of between -0.906–0.010. In all these results, skewness is no more than 0.75 (absolute value) and kurtosis is no more than 1.5 (absolute value) based on the normal distribution concept, which results are suitable for CFA (Wiratchai, 1999).

The findings also indicate Construct Validity; this was tested through questions about the latent variables, using the average of the composite score. More than one question was used for the item parcelling to reduce the number of indicators in the structural equation and to increase the consistency of opportunities. This is an acceptance concept for the Structural Equation Analysis Technique. The results of the validity tests of strategic intuition used by the Measurement Model include the CFA using Lisral version 8.72. As the first results did not match the empirical data, the model was further developed and re-tested in question welders by testing and adjusting the Modification Indices (MI). After adjustment of the model, the results indicated that the model matched the empirical data (See Fig.1).

Chi-square =474.64, df = 137, $\chi^2/df = 2.87$
NFI =0.95, IFI =0.96, CFI =0.97, GFI = 0.98, AGFI =0.96, RMR = 0.03, RMSEA = 0.03

Fig. 1 The results of components validity analysis on strategic intuition measurement model (Developed model)

Fig.1, CFA of the strategic intuition measurement model after being further developed and re-tested. The overall results of measurements of the model's fit show that the proportion of Chi-square and degrees of freedom (χ^2/df) are 2.87, which is less than the acceptance criterion of three. More than or equal in 0.90 is the specify indexing. The acceptance criteria for indexes are GFI = 0.98, AGFI = 0.96, NFI = 0.95, IFI = 0.96, and CFI = 0.97. Meanwhiles, if it's less than 0.08 indexing. The acceptance criteria for indexes are RMR = 0.03 and RMSEA = 0.03. This means that the developed strategic intuition model matches the empirical data. In addition, the validity testing on the strategic intuition measurement model was measured by using the Component Fit Measure. The Measurement Model shows the variables of strategic intuition (SI), which consist of Factor Loading (Three components are positive). The component of "ability to recognise opportunities (Factor Loading = 0.88)" fluctuates in quantities deriving from the strategic intuition (77.0%), the component of "ability for proactive thinking (Factor Loading = 0.93) " fluctuates in quantities deriving from the strategic intuition (87.0%), and the component of "ability to make decisions proactively (Factor Loading = 0.96)" fluctuates in quantities deriving from the strategic intuition (92.0%). In addition, each components of strategic intuition model are the Convergent

Validity, because of Construct Reliability: ρc is equal in 0.95. It means, that passed the criteria (> 0.60) and the fluctuation of Construct Reliability: ρv is equal in 0.85 that also passed the criteria (> 0.50) (Hair et al. 2014). See Table 8.

Table 8. The results of convergent validity in the strategic intuition model

Variables	Latent variables	Factor Loading			t	R^2
		B	S.E.	B		
SI	SI1	1.00	-	0.88	-	0.77
	SI2	1.07	0.04	0.93	26.50*	0.87
	SI3	1.15	0.05	0.96	24.01*	0.92
		ρc= 0.95, ρv = 0.85				

*P<0.05

4.2 Discussion

The researcher had developed and studied the indicators, which the concept of developed indicators by Empirical Definition. SEM identified three components of strategic intuition: (1) Sensing capabilities (ability to recognise opportunities), (2) Aggressive capabilities (ability for proactive thinking), and (3) Strategic decision capabilities (ability to make decisions proactively). In addition, SMEs in Thailand have a high level of strategic intuition and a wide variety of capabilities. Strategic decision capabilities are highest, followed by aggressive capabilities and sensing capabilities, respectively. These results match those of Aujirapongpan and Hareebin (2020), Myers (2002), Riqueleme and Watson (2002), Kahneman (2003), and Bradley (2007). The study shows that SMEs in Thailand have the ability to conduct environmental value assessment through experiences and self-management to identify existing problems. This includes Option analysis for problem solving by comparing all possible options. This is based on value consideration and strategic business value creation.

5. Conclusions

The analysis of EFA on strategic intuition variables by 15 indicators that affects to this research. Taking all these things into consideration helps in identifying the sub-components to be the guideline for developed strategic intuition capability through the Manifest Variables. The Manifest Variables consist of three components; (1) ability to recognise opportunities. This is intuitive capability, or seeing opportunities for learning in consideration and evaluation. This concept can create for each imagination situation. (2) ability for proactive thinking. This is thinking capability, which is based on data, previous experiences, and the existing situation. The concept focus on the future situation that can respond to external factors. (3) ability to make decisions proactively. This is the condition for making decisions in an organisational vision. Emphasis is placed on future situations related to the effectiveness of business competition. However, further research is needed to address other variables. Both individual factors and organisational factors, which affect the competitiveness of SMEs, should be added. This is an important, as these affect firms' performance, including how to study the indicators in each component and to build an effective measurement model. The strategic intuition capability of entrepreneurs is directly related to the strategic selection. Furthermore, the strategic selection of operative planning should be matched with organisational vision and missions. Hence, all entrepreneurs need to gain extensive knowledge and experiences to create and develop their strategic intuition capability. This research provides valuable input to further business start-ups and solutions.

References

Agor, W. H. (1984). Using intuition to manage organisations in the future. *Business Horizons*, 27(5), 49-54. https://doi.org/10.1016/0007-6813(84)90057-0

Allinson, W. C., Chell, E. & Hayes, J. (2000). Intuition and Entrepreneurial Behaviour. *European Journal of work and Organizational Psychology*, 9(1), 31-43. https://doi.org/10.1080/135943200398049

Ashworth, A. & Harvey, R. (1994). *Assessing Quality in Future and Higher Education*. London: Jessica Kingsley.

Aujirapongpan, S. & Jutidharabongse, J. (2017). Strategic intuition: The development of leader in the 21st century. *WMS Journal of Management,* 6(3), 125-133. https://so06.tci-thaijo.org/index.php/wms/article/view/99800

Aujirapongpan, S. & Jutidharabongse, J. (2017). The role of knowledge management in developing strategic intuition. *Suratthani Rajabhat Journal*, 4(2), 21-44. https://so05.tci-thaijo.org/index.php/srj/article/view/212539

Aujirapongpan, S. & Hareebin, Y. (2020). The effect of strategic intuition, business analytic, networking capabilities and dynamic strategy on innovation performance: The empirical study Thai processed food exporters. *Journal of Asian Finance, Economics and Business*, 7(1), 259-268. https://doi.org/10.13106/jafeb.2020.vol7.no1.259

Aujirapongpan, S., Ru-zhe, J. & Jutidharabongse, J. (2020). Strategic intuition capability toward performance of entrepreneurs: Evidence from Thailand. *Journal of Asian Finance, Economics and Business, 7*(6), 465 – 473. https://doi.org/10.9770/jesi.2020.7.4(25)

Bradley, R. T. (2007). The pscyhophysiology of intuition: A quantum holographic theory of nonlocal communication. *The Journal of New Paradigm Research*, 63(2), 61-97. https://doi.org/10.1080/02604020601123148

Bunge, M. A. (1983). *Treatise on Basic Philosophy*. Dordrecht: D. Reidel Publishing Company.

Burke, L. A. & Miller, K. M. (1999). Taking the mystery out of intuitive decision making. *Academy of Management Executive*, 13(4), 91-98. https://www.jstor.org/stable/4165589

Cronbach, L. J. (1990). *Essentials of psychological testing*. (5th ed.). New York: Harper Collins Publishers.

Dadds, M. (2008). Empathetic validity in practitioner research. *Educational Action Research,* 16 (2), 279-290. https://doi.org/10.1080/09650790802011973

Dane, E. & Pratt, M. G. (2007). Exploring Intuition and Its role in managerial decision making. *The Academy of Management Review, 32*(1), 33-54. http://homepages.se.edu/cvonbergen/files/2012/12/EXPLORING-INTUITION-AND-ITS-ROLE-IN-MANAGERIAL-DECISION-MAKING1.pdf

Duggan, W. (2013). *Strategic intuition: The creative spark in human achievement.* (2nd ed). New York: Columbia Business School Press.

Gibbon, F. (1996). *Monitoring education on quality indicators of lifelong learning.* London: Cassell.

Gong, Y. & Blijleven, V. (2017). The role of lean principles in supporting knowledge management in IT outsourcing relationships. *Knowledge Management Research & Practice*. 15(4), 533-541. https://doi.org/10.1057/s41275-017-0072-8

Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. (2014). *Multivariate data analysis.* (7th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Jasińska, M. (2019). Recognition and description of synergy conditions in teamwork in view of the grounded theory. *Entrepreneurship and Sustainability Issues. 7*(1), 375-397. https://doi.org/10.9770/jesi.2019.7.1(27)

Jutidharabongse, J., Aujirapongpan, S., Ritkaew, S. 2020. Dynamic knowledge management capability and strategic intuition of Thai entrepreneurs. *Entrepreneurship and Sustainability Issues*, 7(4), 2955-2966. http://doi.org/10.9770/jesi.2020.7.4(25)

Joseph, M. & Joseph, B. (1997). Service quality in education: a student perspective. *Quality Assurance in Education, 5*(1), 15-21. https://doi.org/10.1108/09684889710156549

Kahneman, D. (2003). A perspective on judgment and choice. *American Psychologist,* 58(9), 697-720. https://psycnet.apa.org/doi/10.1037/0003-066X.58.9.697

Kanchanawassi, S. (2002). *Applied statistics for behavioral research.* (3rd ed.). Bangkok: Chulalongkorn University Press.

Khatri, N. & Ng, H. A. (2000). The role of intuition in strategic decision making. *Human Relations,* 53, 57– 86. https://doi.org/10.1177%2F0018726700531004

Koksal, M. H. (2007). Consumer behaviour and preferences regarding children's clothing in Turkey. *Journal of Fashion Marketing and Management,* 11(1), 69-81. https://doi.org/10.1108/13612020710734418

Kouzes, J. M. & Posner, B. Z. (2012). *The leadership challenge: How to make extraordinary things happen in organizations.* San Francisco: Jossey-Bass.

Liu, J. Y., Shiue, W., Chen, F. H. & Huang, A. T. (2019). A multiple attribute decision making approach in evaluating employee care strategies of corporate social responsibility. *Management Decision, 57*(2), 349-371. https://www.emerald.com/insight/content/doi/10.1108/MD-03-2018-0230/full/html

McCraty, R., Atkinson, M. & Bradley R. T. (2004). Electrophysiological evidence of intuition: Part 1. The surprising role of the heart. *Journal of Alternative and Complementary Medicine,* 10(1), 133-143. https://doi.org/10.1089/107555304322849057

Miller, C. C. & Ireland, R. D. (2005). Intuition in strategic decision-making, Friend or foe in the fast-paced 21st century. *Academy of Management Executive,* 19(1), 19-30. https://doi.org/10.5465/ame.2005.15841948

Mitchell, J. R., Friga, P. N. & Mitchell, R. K. (2005). Untangling the intuition mess: Intuition as a construct in entrepreneurship research. *Entrepreneurship Theory and Practice,* 20(4), 653-679. https://doi.org/10.1111%2Fj.1540-6520.2005.00102.x

Myers, D. (2002). *Intuition: Its powers and perils.* New Haven: Yale University Press.

Patel, S. & Mehta, K. (2017). Systems, Design, and Entrepreneurial Thinking: Comparative Frameworks. *Syst Pract Action Res*, *30***,** 515–533(2017). https://doi.org/10.1007/s11213-016-9404-5

Phasukyud, P. (2012). *Intuition.* (7th ed.). Bangkok: FreeMind.

Pinyo, T. (2018). Techniques for interpreting the results of factor analysis in research work. *Panyapiwat Journal. 10*(Special Issue), 292-304. https://journal.pim.ac.th/uploads/content/2018/07/o_1cjnk0uj0186n1o6s1o0sn2o16rta.pdf

Radin, D. I. (1997). Unconscious perception of future emotions: An experiment in presentiment. *Journal of Scientific Exploration,* 11(2), 163-180. https://www.scientificexploration.org/docs/11/jse_11_2_radin.pdf

Ramhit, K. S. (2019). The impact of job description and career prospect on job satisfaction: A quantitative study in Mauritius. *SA Journal of Human Resource Management,* 17(a1092). https://doi.org/10.4102/sajhrm.v17i0.1092

Riqueleme, H. & Watson, J. (2002). Do venture capitalists' implicit theories on new business success/failure have empirical validity. *International Small Business Journal,* 20, 395-418. https://doi.org/10.1177%2F0266242602204002

Robbins, L. G. (2003). Maternal-zygotic lethal interactions in drosophila melanogaster: Zeste-white region single-cistron mutations. *Genetics,* 103, 633-648. https://pubmed.ncbi.nlm.nih.gov/17246119/

Schmidt, A. M. (1996). Cross-language identification of consonants, part 1. Korean perception of English. *The Journal of the Acoustical Society of America, 99(*5), 3201–3211. https://doi.org/10.1121/1.414804

Sedighi, M., Lukosch, S., Van S. S., Brazier, F. M. T., Hamedi, M. & Van B. C. (2017). Employees' participation in electronic networks of practice within a corporate group: Perceived benefits and costs. *Knowledge Management Research and Practice,* 15(3), 460-470. https://doi.org/10.1057/s41275-017-0059-5

Simon, H. A. (1997). *An Empirically Based Microeconomics.* Cambridge, UK: Cambridge University Press.

Srichan, T., Tachaphahapong, S. S. & Methakunavudhi, P. (2016). A factor analysis of leadership in the twenty first century of student organization board. *Journal of Research Methodology.* 29(2), 139-156. http://cuir.car.chula.ac.th/handle/123456789/50933

Tan, D. L. (1992). A Multivariate Approach to the Assessment of Quality. *Research in Higher Education,* 33(2), 205-226. https://doi.org/10.1007/BF00973579

Voronkova, O. Y., Nikishkin, V., Frolova, I. I., Matveeva, E., Murzagalina, G. & Kalykova, E. (2019). Importance of the process of teaching the basics of social entrepreneurship for the sustainable development of society. *Entrepreneurship and Sustainability Issues 7*(2), 1048-1058. https://doi.org/10.9770/jesi.2019.7.2(18)

Wang, Y., Geng, S. & Gao, H. (2018). A proactive decision support method based on deep reinforcement learning and state partition. *Knowledge-Based Systems,* 143, 248-258. https://doi.org/10.1016/j.knosys.2017.11.005

Wiratchai, N. (1999). *LISREL: Statistical analysis for research* (3rd ed.). Bangkok: Chulalongkorn University Press.

Somnuk AUJIRAPONGPAN, Ph.D., is an associate professor in accounting and director of Graduate Study in Innovation Management and Business Development Program, School of Management, Walailak University, Thailand. He received his Ph.D. in technopreneurship and innovation management from Chulalongkorn University. His professional expertises are managerial accounting, cost accounting, knowledge management, innovation management and entrepreneurship development. His publications have appeared in various national and international academic journals about managerial accounting, entrepreneurship and business development. He also is a corresponding author of this article who provides the intellectual input, designs and approves the protocols to be followed in the study.
ORCID ID: https://orcid.org/0000-0001-6275-9053

Yaninee SONGKAJORN, Ph.D., is a lecturer in Graduate Study in Innovation Management and Business Development Program, School of Management, Walailak University, Thailand. She received her Ph.D. in technopreneurship and innovation management from Chulalongkorn University. Her publications have appeared in various national and international academic journals about innovation management and entrepreneurship development.
ORCID ID: https://orcid.org/0000-0002-0474-4619

Yuttachai HAREEBIN, Ph.D., is a lecturer in Faculty of Management Science, Phuket Rajabhat University, Thailand. He received his Ph.D. in business administration from Walailak University. His publications have appeared in various national and international academic journals about human resource management and business administration.
ORCID ID: https://orcid.org/0000-0002-4578-0720

Sirichai DEELERS, Ph.D., is an assistant professor in management of Faculty of Management Science, Silpakorn University, Thailand. He received his Ph.D. in management from Silpakorn University. His publications have appeared in various national and international academic journals about innovation management, business administration and information management.
ORCID ID: https://orcid.org/0000-0002-6521-1795

Jaturon JUTIDHARABONGSE, Ph.D. in business administration from Walailak University**,** is a research assistant of Graduate Study in Innovation Management and Business Development Program, School of Management, Walailak University, Thailand. His publications have appeared in various national and international academic journals about knowledge management and human resource development.

ORCID ID: https://org/0000-0002-1571-778X

Make your research more visible, join the Twitter account of ENTREPRENEURSHIP AND SUSTAINABILITY ISSUES: @Entrepr69728810