

Contents lists available at [ScienceDirect](#)

# Kasetsart Journal of Social Sciences

journal homepage: <http://www.elsevier.com/locate/kjss>

## Factor affecting innovativeness of small and medium enterprises in the five southern border provinces



Kritsadee Phuangrod <sup>a, \*</sup>, Sanguan Lerkiatbundit <sup>b</sup>, Somnuk Aujiraponpan <sup>c</sup>

<sup>a</sup> Faculty of Management Science, Prince of Songkla University, Songkhla 90110, Thailand

<sup>b</sup> Department of Pharmacy Administration, Prince of Songkla University, Songkhla 90110, Thailand

<sup>c</sup> Walailak Management School, Walailak University, Nakhon Si Thammarat 80161, Thailand

### ARTICLE INFO

#### Article history:

Received 12 February 2016

Received in revised form 7 July 2016

Accepted 8 July 2016

Available online 23 August 2017

#### Keywords:

entrepreneurs,  
innovativeness,  
small and medium enterprises,  
structural equation modeling

### ABSTRACT

This study tested a model of factors affecting the innovativeness of small and medium enterprises (SMEs) in the five southern border provinces using structural equation modeling. Data on innovativeness and its hypothesized antecedents were collected using questionnaires that were mailed to a study sample of 283 entrepreneurs in SMEs in the five southern border provinces. The fit indices showed that the proposed model had a good fit ( $\chi^2 = 207.99$ ,  $df = 96$ ,  $GFI = 0.92$ ,  $p < .001$ ,  $RMSEA = 0.064$ ,  $90\% RMSEA = 0.052-0.076$ ,  $NNFI = 0.97$ ,  $CFI = 0.98$  and  $SRMR = 0.051$ ). Learning orientation and proactiveness had direct effects on innovativeness, with significant path coefficients of 0.30 and 0.63, respectively. Networking and risk-taking showed indirect effects on innovativeness with path coefficients of 0.63 and 0.48, respectively. The research results can be used to set the guidelines for entrepreneurs to build innovativeness in their enterprises by creating a learning culture/behavior in the organization, building proactiveness, creating a business network with government and the private sector, as well as having courage to take risks when there is an opportunity.

© 2017 Kasetsart University. Publishing services by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### Introduction

Innovation is crucial to small and medium enterprises (SMEs) for their business survival because innovation is a key factor enabling organizations to use their knowledge, skills, or experience to develop new technologies, new processes, and new products or services for their business operations (Acs & Audretsch, 1988; McAdam, McConvery, & Armstrong, 2004). Innovation has a very important role to drive all small and large businesses to survive, to create economic and market potential, and to increase

competitive advantage for the business. Therefore, innovation has been added into the National Social and Economic Development Plan No. 11 (2012–2016) of Strategic Plan No. 4. The Plan emphasizes how innovation can be applied to drive SMEs and to develop and create a competitive advantage for the country (Economic and Social Council, 2012).

SMEs are a key element of the economy, accounting for 99 percent of all businesses. However, the Gross Domestic Product (GDP) of SMEs, which accounted for 37.4 percent of total GDP at the time of this research, has declined steadily since 2005 (Economic Commission and the National Society, 2014). Causes are: 1) an increase in the requirements and complexities of trade agreements at all businesses levels; 2) Thai SMEs still lack the ability to develop products to meet the standard; 3) Thai SMEs lack

\* Corresponding author.

E-mail address: [pkritsad@gmail.com](mailto:pkritsad@gmail.com) (K. Phuangrod).

Peer review under responsibility of Kasetsart University.

capacity to develop market opportunity; and 4) SMEs in Thailand have difficulty in accessing funding and loans from many financial institutions (Audet & St-Jean, 2007; Small and Medium Enterprises Agency, 2013). SMEs in the five southern border provinces have an average growth rate of 1.6 percent, while SMEs in other provinces in southern Thailand have a 2.1 percent growth rate. Furthermore, political instability and the insurgency in the three southern border provinces of Thailand and in the outskirt districts of Songkhla from 2005 to the present is a big barrier to economic growth, preventing market expansion and job creation by entrepreneurs. The consequences of this affect market development for SMEs, especially in the food and beverages group. Consequently, the food and beverages group received special focus in the action plan to promote SMEs in 2012–2016 (Small and Medium Enterprises Agency, 2013). SMEs in the food and beverages group need to have appropriate methods and to implement new innovations to drive their business growth and survival, as well as to increase their competitive advantage.

However, innovation can occur only when an organization or entrepreneur places emphasis and value on innovation development (Drucker, 2002). Two main characteristics—entrepreneurship and innovativeness—are needed in the entrepreneurs. Innovativeness is defined as “the ability of the organization or company to undertake the development of innovations including process innovation, product innovation, or innovative ideas in organization, etc.” (Aujiraponpan, Wattanasit, Janchai, & Kupparat, 2011). Innovativeness is an organizational behavior to develop innovation (Damanpour, 1991). Vuttiwong (2009) reported that innovativeness is very important in sustaining the competitive advantage of the enterprises listed on the stock exchange. Kirca, Jayachandran, and Bearden (2005) analyzed 11 studies and concluded that innovativeness has a positive effect on organizational operation. The studies in Thailand found that the components of knowledge management capability including skills, learning, and information, are positively correlated with innovativeness (Aujiraponpan et al., 2011). Vuttiwong (2009) also found that a commitment to learn, commitment to meet the needs of customers, recognizing and supporting new changes from the organizational leader, organizational structure, knowledge exchange within the organization, and rewarding are positively correlated with the ability to innovate. However, the previous studies emphasized big organizations that are different from the SMEs, especially the SMEs in the five southern border provinces, where some provinces have been affected by the insurgency. Moreover, previous studies were performed using Western theories which have been developed from different contexts from the organizations of interest in this study.

The objective of this study was to test a model of the factors affecting the innovativeness of SMEs in the five southern border provinces. The model was built using the results obtained from a previous qualitative study in the area (Phuangrod, 2015), combined with those from a literature review. The research conclusions will help to support the development of innovativeness of SMEs in the five southern border provinces.

## Literature Reviews

This study refers to the meaning of innovativeness defined by Wang and Ahmed (2004)—innovativeness is an organization’s overall innovative capability of the organization to present or introduce the new products to the market by combining strategic orientation with innovative behavior and process. These classify innovativeness into five aspects—products, processes, market, strategy, and behavior. These aspects were used in this study to measure innovativeness.

The proposed model of this study was derived from a previous qualitative study on the conditions facilitating innovativeness in SMEs within the five southern border provinces. Case study methodology (Yin, 2009) was used to study SMEs using various innovations located in Pattani. The data were collected using several methods, consisting of in-depth interviews, non-participant observation, and documentary search. The results showed that the innovativeness of the SMEs consisted of five important keys factors—risk-taking, networking, market orientation, proactiveness, and learning orientation. The willingness to take risk in the business leads to learning orientation and proactiveness. Networking creates confidence for the entrepreneur to take risk in business ventures. Market orientation results in proactiveness in the business and learning orientation (Phuangrod, 2015). The previous research (Phuangrod, 2015) combined with relevant research from the literature review are shown in Figure 1.

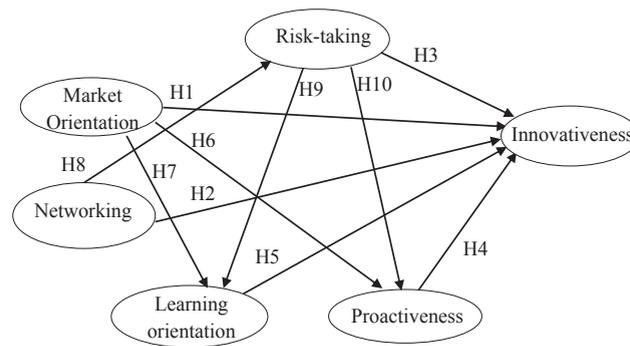
For this study, the hypotheses for factors affecting innovativeness are as follows:

### **Hypothesis 1. Market orientation positively influences innovativeness.**

Market orientation encourages the entrepreneur to try to understand the market demand and to introduce good quality products to the customer (Day, 1994; Fritz, 1996; Kohli & Jaworski, 1990). The results from previous study found that the application of marketing orientation by an entrepreneur results in trying to adapt the business operations in accordance with the needs of the consumers in order to meet market demand (Phuangrod, 2015). A company performed market surveys to determine the needs of customers and to learn about consumer behavior. Therefore, it can be concluded that market orientation is positively correlated with innovativeness. This study measured market orientation by the determination of two observed variables: 1) customer orientation, and 2) inter-functional coordination.

### **Hypothesis 2. Networking positively influences innovativeness.**

Networking is a network of social interactions and personal relationships that results in human capital (Burt, 1997). Networking creates the social capital for the entrepreneur (Coleman, 1988). Nybakk, Crespell, Hansen, and Ndubisi (2009) found that networking positively influences innovativeness. Networking helps to drive business growth and survival in the southern border provinces experiencing the insurgency and allows SMEs access to funding and other support from the government.



**Figure 1** Proposed model (see text for details on the hypotheses H1–H10)

Networking also allows the company to receive business information much earlier than its competitors; thus, this increases the company's competitive advantage. Government networks play important roles including: 1) providing useful information and programs to develop and increase entrepreneurial knowledge, 2) providing new market channels for product distribution, and 3) supporting the company in taking care of the security issue in the southern border provinces, finding the funding sources, and building partnerships between government and private business sectors (Phuangrod, 2015). Therefore, networking consists of two important elements: 1) business networking with the government and enterprises, and 2) business networking with the private sectors. This variable can be determined from two observed variables: 1) networking with the government and enterprises, and 2) networking with the private sector.

### **Hypothesis 3. Risk-taking positively influences innovativeness.**

Risk-taking is a willingness of the entrepreneur, who operates the business in a way that challenges the entrepreneur's knowledge and ability, to take business risks including a financial loss, among others. Several researchers determined that risk-taking is one of the entrepreneurial characteristics having a positive correlation with innovativeness (Hult, Hurley, & Knight, 2004; Rhee, Park, & Lee, 2010). Previous study also found that risk-taking leads to the development of new products, production systems, and new sale channels for the company. This is the major factor driving business survival and business growth in the area. Moreover, innovativeness encourages the entrepreneur to take risks (Phuangrod, 2015). The three observed variables that were used to measure risk-taking in this study are: 1) courage in adopting a trial and error approach, 2) courage to do something new, and 3) embracing failure.

### **Hypothesis 4. Proactiveness positively influences innovativeness.**

Proactiveness is a business operation that seeks for new ways or new opportunity in order to improve or develop the business by making a difference for the products or services, and a commitment to become a leader in the market. Several researchers reported that proactiveness is one of the entrepreneurial characteristics which has a positive correlation with innovativeness (Hult et al., 2004;

Rhee et al., 2010). An entrepreneur who has innovativeness usually operates the business very proactively. This allows that entrepreneur to bring new product trends to the market (Phuangrod, 2015). In the current study, this variable was measured by two observed variables: 1) make a difference for the market, and 2) market leadership.

### **Hypothesis 5. Learning orientation positively influences innovativeness.**

Learning orientation builds valuable and creative knowledge, leading to innovation (Siguaw, Simpson, &ENZ, 2006). Calantone, Cavusgil, and Zhao (2002) and Hult et al. (2004) found that learning orientation is positively correlated with innovativeness. The results in a previous study found that learning orientation allows critical thinking. The employees can benefit a lot from the learning and can use what they learned to adapt and develop the new creative products and systems (Phuangrod, 2015). The current study measured learning orientation from two observed variables: 1) enthusiasm for learning, and 2) being open minded.

### **Hypothesis 6. Market orientation positively influences proactiveness.**

An entrepreneur who wants to meet the needs of the customer must work to make a difference in their products and services in order to meet the requirements of the market that have never been fulfilled before. The entrepreneur also must have a commitment to becoming a market leader. All of these are the characteristics of proactiveness (Lin, Peng, & Kao, 2008; Rhee et al., 2010). Previous study found that entrepreneurs aimed to meet market demand by collecting data of customers' needs and criticism, to be used to create questions that entrepreneur needs to find the answers for. In order to answer all those questions, an entrepreneur needs to undertake business proactively, which involves developing new products involving either new packaging or new varieties of products (Phuangrod, 2015).

### **Hypothesis 7. Market orientation positively influences learning orientation.**

An entrepreneur, who wants to meet the needs of customers must learn to understand the customers' behavior by conducting market surveys and listening to feedback from the customers and use it to improve the business

(Grinstein, 2008; Kohli & Jaworski, 1990). An entrepreneur's intention to meet market demand leads to learning orientation. Nowadays, it is extremely competitive in business—information providers are concerned about and give importance to customer satisfaction. Therefore, the information providers are very enthusiastic in learning to meet the customer's needs by conducting market surveys, observing, and listening to customer comments (Phuangrod, 2015).

**Hypothesis 8. Networking positively influences risk-taking.**

Receiving support from both government/enterprises and the private sector helps to increase the confidence of the entrepreneur encouraging risk-taking in business investment to further develop the business (Grinstein, 2008). Previous study showed that an entrepreneur obtained support from the government such as business matching between the company and other related companies, funding support for travel internationally to attend business exhibitions and other meetings, and improving business potential (Phuangrod, 2015).

**Hypothesis 9. Risk-taking positively influences learning orientation.**

An entrepreneur, who has courage to make a decision, do new things, and embrace failure in the business would try to learn in order to use the knowledge to support his decision-making and reduce the risks that may occur from such decisions (Ma'atoofi & Tajeddini, 2010; Rhee et al., 2010). Previous study found that risk-taking relates to learning orientation. Entrepreneurs have courage to think, to do, and to embrace failure. This courage drives learning which can be used to support the decision-making in the business operation such as an idea to proceed with the preserved fruit business allowed the entrepreneurs to learn by observing the customers, local wisdom, and their past business experience (Phuangrod, 2015).

**Hypothesis 10. Risk-taking positively influences proactiveness.**

The courage to do new things allows the entrepreneurs to seek for new opportunities in the business. The entrepreneur will always ask themselves questions about how to come up with things that are different from their competitors in order to become a leader in the market both inside and outside their business regions (Nasution, Mavondo, Matanda, & Ndubisi, 2011; Tajeddini, 2010). Phuangrod (2015) found that risk-taking drives proactive business operation, as entrepreneurs keep asking themselves questions about how to create innovation for products that are different from the competitors. This has the goal of increasing the company's competitive advantage to become a market leader.

**Methods**

*Sample and Data Collection*

The population in this study consisted of 164 managers or owners who were representative of food and beverage

SMEs in the five southern border provinces. The list of the population was collected from the database of the Department of Business Development, Ministry of Commerce, and the data in the Enterprises' Registration of Community Development in the five southern border provinces. The data were analyzed using a structural equation model (SEM). The researcher collected the data in all the sampling. Questionnaires were sent via mail, during August–October, 2014, and 283 (46%) were returned having been completed.

*Measures*

The developed questions were then checked for the content validity using the index of Item Objective Congruence (IOC) which was higher than 0.50. The testing was performed using "Think Aloud" (Acs & Audretsch, 1988) with five entrepreneurs. After that, it was pilot tested with 30 entrepreneurs. Cronbach's alpha coefficient ranged between 0.70 and 0.88. The measurement used was Likert's 5-point rating scale consisting of "strongly agree", "agree", "neutral", "disagree", and "strongly disagree". The final questionnaire contained: 1) questions to test the 3 observed variables of the risk-taking, namely, courage in trial and error (4 questions), courage in doing new things (4 questions), embracing failure (4 questions); 2) questions to test the 2 observed variables of building the business network, namely, networking with government/enterprise sectors (4 questions) and private sector (4 questions); 3) questions to test the 2 observed variables of proactive business operations, namely, making a difference (4 questions) and market leadership (4 questions); 4) questions to test the 2 observed variables of organizational learning, namely, enthusiasm for learning (6 questions), and being open minded (3 questions); 5) questions to test the 2 observed variables regarding market orientation, namely, emphasizing customer orientation (3 questions) and inter-functional coordination (4 questions); and 6) questions to test the observed variables of innovativeness of the organization consisting of the 5 aspects of: products, processes, marketing, strategies, and behaviors (4 questions for each aspect).

*Data Analysis*

The variance–covariance matrix was analyzed using confirmatory factor analysis and structural equation modeling using maximum likelihood (ML) in LISREL 8.52 (Jöreskog & Sörbom, 2003). The method requires multivariate normality of the data. Mardia's tests of multivariate normality indicated a departure from the assumption. However, ML is recommended when univariate skewness is less than 2 and univariate kurtosis is less than 7 (West, Finch, & Curran, 1995). The distribution of the data in this study conformed to this requirement. As a result, ML was used as the estimation method.

Goodness of fit of the models to the data was assessed using  $\chi^2$  statistics and fit indices as suggested by Hu and Bentler (1999), that is the root mean square error of approximation (RMSEA) and its 90% confidence interval, the standardized root mean square residual (SRMR), the

comparative fit index (CFI), and the Tucker–Lewis index (TLI). Brown and Cudeck (1992) suggested a value for the RMSEA of less than 0.05 would indicate a “close fit” and a value of 0.08 or less would indicate a “reasonable fit”. Values of the CFI and TLI close to 0.95 and an SRMR less than 0.08 reflect a good fit of a model to the data (Hu & Bentler, 1999). Comparative fits of nested models were evaluated using  $\chi^2$  difference tests.

## Results

### Sampling Group

The questionnaire response rate was 46 percent (283 out of 614) and of those responses, 50.2 percent were enterprises in Pattani province, 17 percent in Narathiwat province, 13 percent in Songkhla province, 10.6 percent in Yala province, and 8.5 percent in Satun province. The majority of respondents were females (77.7%), with ages ranging: between 41 and 50 years (34.5%), between 51 and 60 years (25.5%), and between 31 and 40 years (21.2%). The respondents had different levels of education including secondary school, high school, and Diploma level, which accounted for 29.3, 19.4, and 18.7 percent, respectively. Furthermore, 74.6 percent of the respondents were owners of enterprises with 13.1 percent being executive managers or presidents. Of the sampled organizations, 96 percent had less than 50 employees.

### Confirmatory Factor Analysis

The measurement model tested consisted of six latent variables of the study. The results are shown in Table 1 (Model 1). It was concluded that the model moderately fitted the data (RMSEA > 0.067, NNFI and CFI > 0.95 and SRMR = 0.051). However, the analysis found that two latent variables (“market orientation” and “learning orientation”) highly overlapped with their correlation close to 1.00. Thus, the researcher modified the model by merging these two variables to form a single variable named “learning orientation” (Figure 2).

The testing of the resultant measurement model with five latent variables (Model 3, Table 1 and Figure 2) showed that the model fitted well to the data (RMSEA = 0.065, NNFI and CFI > 0.95 and SRMR = 0.051). The comparison between the 5-factor and 6-factor models using the  $\chi^2$  Difference Test found that the two models showed a comparable fit to the data with no significant difference between models ( $\Delta X^2 = 1.94$ ,  $\Delta df = 5$  and  $p = .85$ ).

In the 5-factor model (Figure 2), the standardized factor loading for all latent variables ranged between 0.59 and 0.85. This indicated that the observed variables were highly correlated with the latent variables, or in other words, the observed variables were good measures of latent variables, indicating convergence validity. The correlation of each latent variable ranged between 0.43 and 0.80 indicating divergent validity or the conceptual difference between each of the five latent variables. Therefore, the researcher proceeded with further analysis using the model with the five latent variables.

### Analysis of Hypothesized Model

The relationship among the latent variables of the hypothesized model (Model 3 in Table 1) is shown in Figure 1 and the measurement model is shown in Figure 2. The model fitted well to the data (RMSEA = 0.068, NNFI and CFI > 0.95 and SRMR = 0.053). However, comparison between this model (Model 3) and the measurement model with five components (Model 2) using the  $\chi^2$  Difference Test found that the five components measurement model had a better fit than Model 3 ( $\Delta X^2 = 19.48$ ,  $\Delta df = 3$  and  $p < .001$ ).

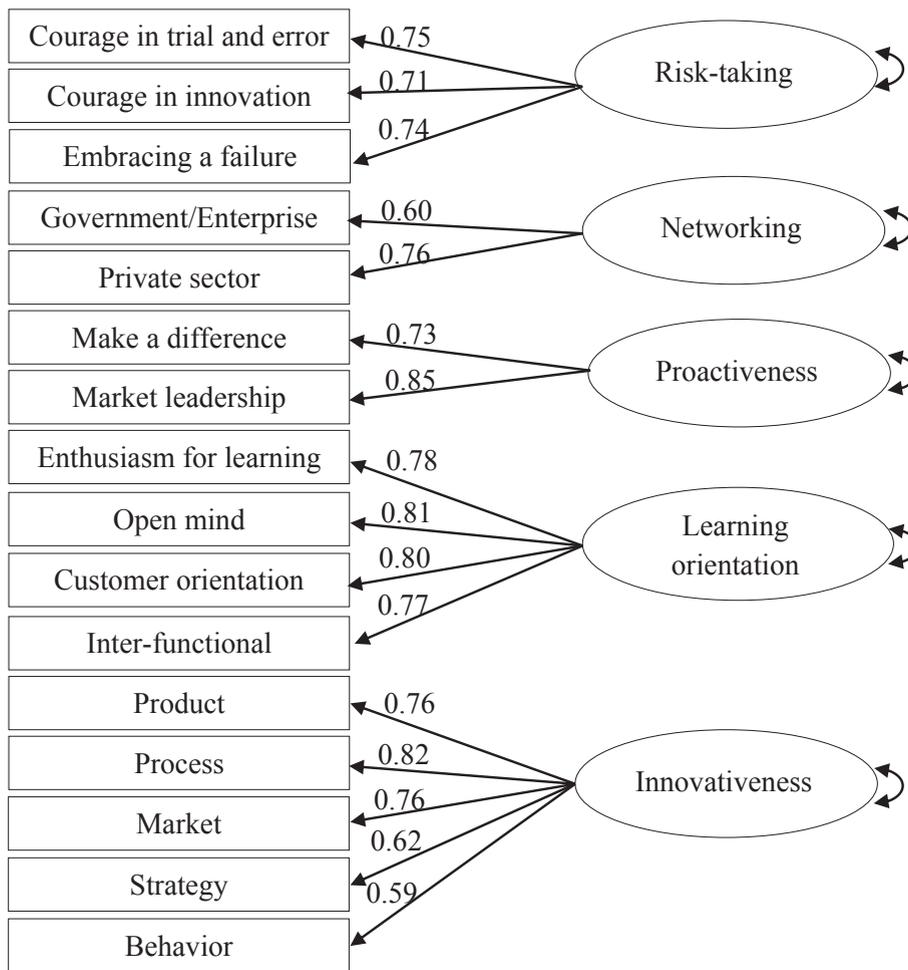
Therefore, Model 3 was modified after examination of the modification index with consideration of the theoretical possibility for adding suggested paths. One path was added into the model by indicating networking as an antecedent of proactiveness. Brown and Butler (1993) and Aldrich and Zimmer (1986) reported that networking of the organization allows the organization to potentially move forward very quickly. Networking is the key mechanism to access external information and resources, enabling the organization to do business very proactively in order to make a difference in the market and become a market leader. The modified model is shown in Figure 3. The results from the SEM are shown in Table 1 (Model 4).

The final model (Model 4) exhibited a fit to the data (Table 1) with an RMSEA greater than 0.05 but less than 0.08, with the 90% CI of the RMSEA having a lower limit of 0.05 and a higher limit less than 0.08, the NNFI and CFI being greater than 0.95, and the SRMR less than 0.08. The comparison between this model and the 5-component model using the  $\chi^2$  Difference Test found no significant difference of fit ( $\Delta X^2 = 3.16$ ,  $\Delta df = 2$  and  $p = .21$ ).

From Figure 3, the standardized factor loading of all latent variables ranged between 0.59 and 0.84, indicating convergent validity. Construct reliability ranged between 0.63 and 0.87 and the average variance extracted ranged

**Table 1**  
Analysis results of confirmatory factor analysis and structural equation modeling

Model	$\chi^2$	df	p	RMSEA	90% CI of RMSEA	NNFI	CFI	SRMR
<b>Model 1</b> Measurement model with 6 components	202.89	89	<.001	0.067	0.055–0.080	0.97	0.98	0.051
<b>Model 2</b> Measurement model with 5 components (see Figure 2)	204.83	94	<.001	0.065	0.053–0.077	0.98	0.98	0.051
<b>Model 3</b> Structural equation modeling with 5 components	224.31	97	<.001	0.068	0.052–0.080	0.97	0.98	0.053
<b>Model 4</b> Modified structural equation modeling (see Figure 3)	207.99	96	<.001	0.064	0.052–0.076	0.97	0.98	0.051



**Figure 2** Measurement model with five factors. Note: All five factors are related. The figure does not show relationship lines between each variable in order to reduce the complexity of the graphic

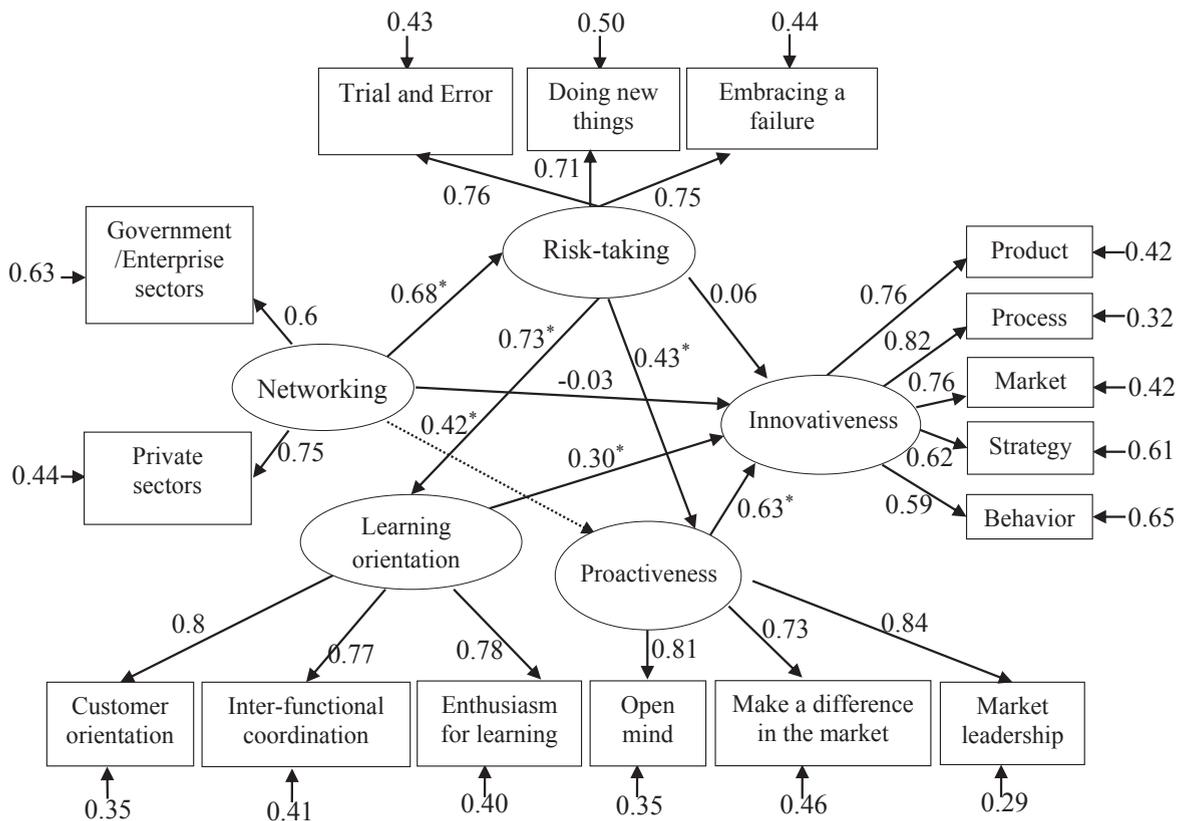
between 0.50 and 0.62. The latent variables in the model accounted for 71 percent of the variability in innovativeness. Factors with significant direct effects on innovativeness were proactiveness (path coefficient = 0.63) and learning orientation (path coefficient = 0.30). Networking and risk-taking did not have direct effects on innovativeness. These factors affected innovativeness indirectly. The risk-taking showed direct effects on learning orientation and proactiveness, which in turns influenced innovativeness. Therefore, risk-taking affected innovativeness indirectly (with an indirect path coefficient of 0.48). Networking had an indirect effect on the innovativeness by its relation with the risk-taking and proactiveness; networking's indirect coefficient was 0.63. However, considering all the effects (both direct and indirect) on innovativeness, innovativeness was highly influenced by proactiveness and networking followed by risk-taking and learning orientation.

## Conclusion and Discussion

The study found that the factors affecting the innovativeness of the SMEs in the five southern border provinces

ordered from highest to lowest were: proactiveness and networking, risk-taking, and learning orientation, respectively. Proactiveness, which involves making a difference in the market and the intention to be a market leader by adding value to the existing business as well as improving or modifying of existing business, is performed in order to meet customer demand (Miller & Friesen, 1983; Wiklund & Shepherd, 2003). Therefore, proactiveness affects innovativeness.

A network does not have direct effects on innovativeness, but it affects the innovativeness indirectly by its relations with proactiveness and risk-taking. The finding that networking influences risk-taking was consistent with the results of qualitative research which showed that the support from the government/enterprise and private sectors including building business confidence, increasing the business's development potential, adding product value, and providing useful business information, build the confidence of the SMEs. It also builds courage in the SMEs' to take risks in order to turn a business crisis into an opportunity, to try new things, and to accept that negative results may occur. All of these will lead to learning, proactiveness, and innovativeness. Therefore, if the entrepreneurs would



**Figure 3** Structural equation modeling of the factors affecting innovativeness ( $p < .05$ )

like their businesses to survive and be able to continue creating new creative things for their businesses, networking is crucial, especially for a small business with limited resources.

Risk-taking does not have direct effects on innovativeness but has indirect effects due to its relations with proactiveness and learning orientation. This finding was consistent with the studies by Ma'atooft and Tajeddini (2010) and Rhee et al. (2010) which showed that courage in risk-taking by the entrepreneur is positively correlated with the entrepreneurs' enthusiasm for learning. The qualitative study found that courage in risk-taking of the entrepreneurs builds the entrepreneurs' passion for learning by observing and collecting data from the customer, customer inquiries, and using local wisdom and past business experience, to help their business operation. Therefore, if SMEs are willing to accept the failures that may occur from their business operation and are ready to take risks and try new things for their businesses, then they will have passion to learn, resulting in business/organization development and innovativeness. The risk-taking also has direct effects on the proactiveness; this finding was consistent with the finding of Tajeddini (2010) and Nasution et al. (2011).

Learning is thinking, searching, and sharing the knowledge as well as transferring that knowledge within the organization in order to build innovativeness (Calantone et al., 2002; Damanpour, 1991; Siguaw et al.,

2006). SMEs should emphasize learning and should open their minds to learning new things via different activities such as market surveys, observing and listening to customer comments, and training. These allow the entrepreneurs to increase their knowledge to develop new creative things for their business and to meet the customer demands, resulting in innovativeness.

### Recommendation

The entrepreneurs in SMEs in the five southern border provinces should create new organizational environments and cultures that help to develop innovativeness for their organization including: 1) SMEs should emphasize learning by informing everyone in the organization about the importance of learning and providing support to employees in time, funding, and the opportunity to learn. This will allow all employees to increase their knowledge, experience, and different working concepts that they can then use in order to achieve the organization's goals; 2) SMEs should try to create a difference, by becoming a business operation that emphasizes building new creative things for products, services, marketing, and features that are different from its competitors. Entrepreneurs should always ask themselves when creating the product what is outstanding about the new product; 3) SMEs should build a relationship with the government and private sectors individually and organizationally in order to have access to

important resources including business information, funding, business opportunities, innovation, and other support; and 4) SMEs should have courage to engage in trial and error. The SMEs should also encourage the employees to try to solve problems by themselves by using different methods or combining new and old methods in order to resolve the problems.

### Conflict of Interest

There is no conflict of interest.

### Acknowledgments

The researchers wish to express special thanks to the Office of the Higher Education Commission, Thailand for supporting a funding grant under the Program for Strategic Scholarships Fellowship Frontier Research Networks (specific to the southern region).

### References

- Acs, Z. J., & Audretsch, D. B. (1988). Innovation in large and small firms: An empirical analysis. *The American Economic Review*, 78(4), 678–690.
- Aldrich, H., & Zimmer, C. (1986). Entrepreneurship through social networks. In D. L. Sexton, & R. W. Smilor (Eds.), *The art and science of entrepreneurship* (pp. 2–23). Cambridge, MA: Ballinger Publishing.
- Audet, J., & St-Jean, E. (2007). Factors affecting the use of public support services by SME owners: Evidence from a peripheral region of Canada. *Journal of Developmental Entrepreneurship*, 12(2), 165–180.
- Aurjirapongpan, S., Wattanasit, P., Janchai, A., & Kuppapat, P. (2011). The ability to manage knowledge with the innovative capability of enterprises that are innovative in Thailand. *Journal of Development Administration*, 51(1), 159–199.
- Brown, B., & Butler, J. E. (1993). Networks and entrepreneurial development: The shadow of borders. *Entrepreneurship & Regional Development*, 5(2), 101–116.
- Brown, M., & Cudeck, R. (1992). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Ling (Eds.), *Testing structural equation models*. Beverly Hills, CA: Sage.
- Burt, R. S. (1997). A note on social capital and network content. *Social Networks*, 19(4), 355–373.
- Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31(6), 515–524.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, 95–120.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555–590.
- Day, G. S. (1994). The capabilities of market-driven organizations. *The Journal of Marketing*, 58(4), 37–52.
- Drucker, P. F. (2002). The discipline of innovation. *Harvard Business Review*, 80, 95–104.
- Economic Commission and the National Society. (2014). *The economic situation was indications of SMEs in 2013–2014*. Retrieved from <http://www.sme.go.th>.
- Economic and Social Council. (2012). *National economic and social development plan No. 11. 2012–2016*. Retrieved from <http://www.nesdb.go.th>.
- Fritz, W. (1996). Market orientation and corporate success: Findings from Germany. *European Journal of Marketing*, 30(8), 59–74.
- Grinstein, A. (2008). The relationships between market orientation and alternative strategic orientations: A meta-analysis. *European Journal of Marketing*, 42(1/2), 115–134.
- Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- Hult, G. T. M., Hurley, R. F., & Knight, G. A. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management*, 33(5), 429–438.
- Jöreskog, K. G., & Sörbom, D. (2003). *LISREL 8.54. Structural equation modeling with the SIMPLIS command language*. Chicago, IL: Scientific Software International.
- Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing*, 69(2), 24–41.
- Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: The construct, research propositions, and managerial implications. *The Journal of Marketing*, 54(2), 1–18.
- Lin, C. H., Peng, C. H., & Kao, D. T. (2008). The innovativeness effect of market orientation and learning orientation on business performance. *International Journal of Manpower*, 29(8), 752–772.
- Ma'atooft, A., & Tajeddini, K. (2010). The effect of entrepreneurship orientation on learning orientation and innovation: A study of small sized business firms in Iran. *International Journal of Trade, Economics and Finance*, 1(3), 254–260.
- McAdam, R., McConvery, T., & Armstrong, G. (2004). Barriers to innovation within small firms in a peripheral location. *International Journal of Entrepreneurial Behaviour & Research*, 10(3), 206–221.
- Miller, D., & Friesen, P. H. (1983). Strategy making and environment: The third link. *Strategic Management Journal*, 4(3), 221–235.
- Nasution, H. N., Mavondo, F. T., Matanda, M. J., & Ndubisi, N. O. (2011). Entrepreneurship: Its relationship with market orientation and learning orientation and as antecedents to innovation and customer value. *Industrial Marketing Management*, 40(3), 336–345.
- Nybak, E., Crespell, P., Hansen, E., & Lunnan, A. (2009). Antecedents to forest owner innovativeness: An investigation of the non-timber forest products and services sector. *Forest Ecology and Management*, 257(2), 608–618.
- Phuangrod, K. (2015). *Development of innovativeness among small and medium enterprises in the five southern border provinces Thailand: Case study in food and beverage industry* (Unpublished doctoral dissertation). Prince of Songkla University, Songkhla. [in Thai]
- Rhee, J., Park, T., & Lee, D. H. (2010). Drivers of innovativeness and performance for innovative SMEs in South Korea: Mediation of learning orientation. *Technovation*, 30(1), 65–75.
- Siguaw, J. A., Simpson, P. M., & Enz, C. A. (2006). Conceptualizing innovation orientation: A framework for study and integration of innovation research. *Journal of Product Innovation Management*, 23(6), 556–574.
- Small and Medium Enterprises Agency. (2013). *Situation SMEs and outlook for the year 2013–2014*. Retrieved from <http://www.sme.go.th>.
- Tajeddini, K. (2010). Effect of customer orientation and entrepreneurial orientation on innovativeness: Evidence from the hotel industry in Switzerland. *Tourism Management*, 31(2), 221–231.
- Vuttivong, P. (2009). *The impact from the perspective of learning resources and organizational capabilities in innovation of enterprises listed on the stock exchange of Thailand* (Unpublished doctoral dissertation). National Institute of Development Administration, Bangkok.
- Wang, C. L., & Ahmed, P. K. (2004). The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *European Journal of Innovation Management*, 7(4), 303–313.
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with non-normal variables: Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 56–75). Beverly Hills, CA: Sage.
- Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(13), 1307–1314.
- Yin, R. K. (2009). *Case study research: Design and methods*. Los Angeles, CA: Sage.