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

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A B S T R A C T

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.

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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 business levels; 2) Thai SMEs still lack the ability to develop products to meet the standard; 3) Thai SMEs lack

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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, & Kuppapat, 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; Kohl & 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). Nybak, 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.
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