THE IMPACT OF ENTREPRENEURIAL ORIENTATION ON NEW PRODUCT PERFORMANCE IN FOOD AND BEVERAGE BUSINESSES IN MAHASARAKHAM PROVINCE, NORTHEAST REGION OF THAILAND

Niramarn Ngammoh[1] and Sutana Boonlua[2]
[1, 2] Mahasarakham Business School, Mahasarakham University,
Mahasarakham, Thailand

ABSTRACT

The purpose of this research is to empirically investigate the effects of entrepreneurial orientation (EO) factors on new product performance (NPP) in food and beverage businesses in Mahasarakham province, northeast region of Thailand. The data were derived from a field survey of 64 managers/owner from food and beverage businesses in Mahasarakham province. The ordinary least square (OLS) regression analysis is conducted to examine all hypothesized relationships among variables. The results indicate that all four dimensions of entrepreneurial orientation (EO) which are innovativeness, proactiveness, risk-taking, and competitive aggressiveness positively affect new product performance (NPP). Consequently, firms should consistently begin and develop new products for business survival. New products not only increase the firm's survival rate but also enhance competitive advantage to the firms. In addition, the future research should be comparing the efficiency of entrepreneurial orientation and/ or comparative other business sectors to verify the generalizability of the results, increase the level of reliable results, and expand the usefulness of the results.

Keywords: 1) Entrepreneurial Orientation 2) New Product Performance 3) Customer Orientation 4) Food and Beverage Business

1. Introduction

Thailand has long been called "the kitchen of the world" with its abundant natural resources, highly-skilled workforce, and strength in research. Thai government designated the food industry as one of ten key growth engines in-line with the "Thailand 4.0" economic model (The Federation of Thai Industries, 2017). The Gross domestic product (GDP) in the manufacturing sector in 2017 totaled 4,186,483 million baht or 27.1% of total GDP. Considering the value of GDP by enterprise size, the value of GDP in the manufacturing sector came from large enterprises and others amounted to 2,686,983 million baht, accounting for 64.2%. The value of small and medium enterprises (SME) was 1,499,500 million baht or 35.8% of GDP total production sector in 2017. The value generated by small enterprises (SE) is 607,038 million baht or 14.5% and medium enterprises (ME) is 892,462 million baht or 21.3% of the nation's GDP. In terms of the role of SME, the most important sector was the food and beverage (F&B) sector with total value of 312,848 million baht of GDP in the manufacturing sector of the nation's followed by chemicals with 246,406 million baht and rubber products and plastic worth a total of 124,397 million baht. The SME in Thailand plays a significant role in establishing a foundation for sustainable development and enhancing economic progress (OSMEP,

[1] E-mail: Nirapae@gmail.com

2018). The northeast region is the largest in the country, with one-third of the population of Thailand (about 21 million from 66 million) (National Statistical Office, 2018) . Mahasarakham province is a province in the lower Northeast of Thailand, Mahasarakham is the 42nd largest province in the country with a population of 963,484 people, with important as one of the educational centers of the region. There are many educational institutions, including Mahasarakham University, Rajabhat Mahasarakham University, Institute of Physical Education Mahasarakham, Mahasarakham Campus Nursing Srimahasarakham Sri Maha Sarakham College of Nursing, Mahasarakham College of Agriculture and Technology, Mahasarakham Vocational College, Mahasarakham Polytechnic College, Wapipathum Technical College, and Phayakkhaphum Phisai Industrial and Community Education College. (Mahasarakham provincial Public health Office, 2018) Therefore, Mahasarakham province is appropriate as a study in food and beverage business.

This research is to provide a clearer understanding of the entrepreneurial orientation (EO) factors which are innovativeness, proactiveness, risk-taking, and competitive aggressiveness and to investigate the effects of the EO on new product performance (NPP) in the SME in F&B sector in Mahasarakham Province.

The research of EO is essential for NPP. It is because the SME in F&B sector can be lead to the successful development of new products. The SME needs to develop its own business and increase business potential.

Therefore, the aim of this research is to empirically investigate the effects of entrepreneurial orientation (EO) factors on new product performance (NPP) in food and beverage business in Mahasarakham province which is locate in the northeast region of Thailand. The main research question of this study is "How do innovativeness, proactiveness, risk-taking, and competitive aggressiveness affect new product performance?"

2. Literature Review

This research, the resource-based view and contingency theories are applied to explain the effects of entrepreneurial orientation factors on new product performance. These two theories proposed that the decisions and managements in organization of the best practices and solutions are depended on internal and external factors that affect to new product performance (Kreiser & Davis, 2010).

Resource-based view (RBV)

All resource acquisition techniques have one thing in common: entrepreneur seek to discover effective ways of utilizing organizational resources (Bontis, 1999). Maintained competitive advantage results from a firm' s unique resources and capacities that consist of management skills, organizational process and skills, information, and knowledge (Barney, 1991). For a small business entrepreneur, EO is equivalent to management skills and is a unique intangible resource that leads to competitive advantages (Runyan et al., 2006).

Contingency Theory

The contingency approach describes two-way interactions, specifically in our context: the interaction between EO and characteristics of the external environment, or between EO and internal contexts, and their joint influence on firm performance (Wiklund & Shepherd, 2005). As EO is a context-dependent strategic orientation (Rauch et al., 2009), the strength of the relationship between EO and firm performance might be depending on the characteristics of the external business environment (Kreiser & Davis, 2010), including environmental hostility and market growth for a firm's products or services.

Therefore, theories are an appropriate theory for explaining in the conceptual framework in Figure 1.

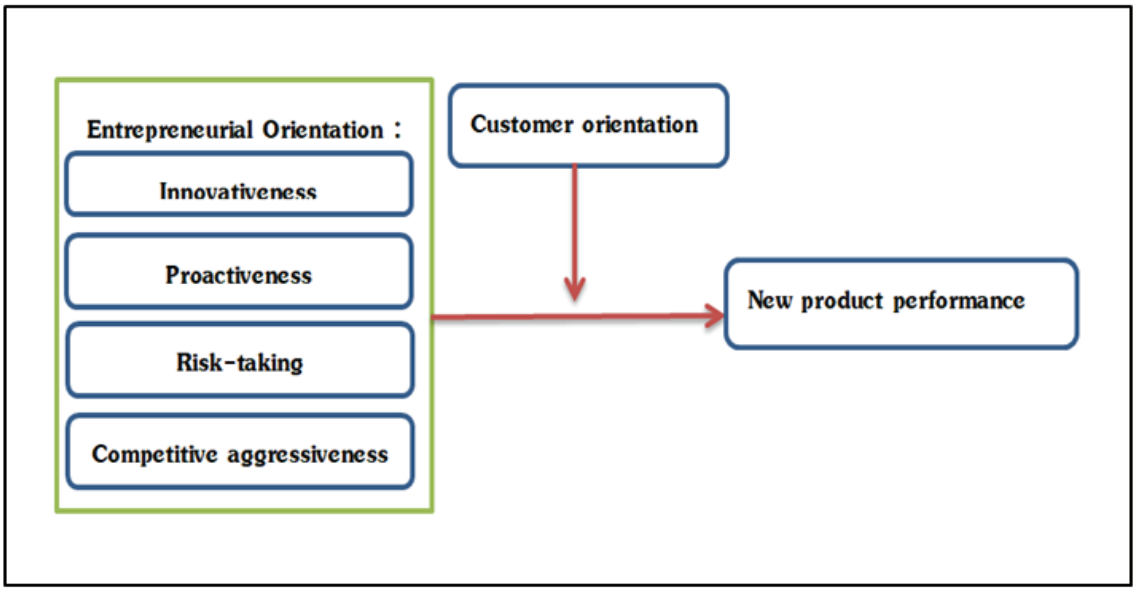

Figure 1: Conceptual model

The definitions of each variable in this research are explained as follows.

Entrepreneurial Orientation (EO)

Entrepreneurial Orientation has become one of the main concepts in entrepreneurship studies for the last three decades (Covin et al., 2006). Nowadays entrepreneurial orientation (EO) is one of the most popular concepts within the studies of entrepreneurship. It refers to the strategy making process which provides organizations with entrepreneurial activities and decisions. This concept captures different practices, activities and processes that help firms to create value and perform effectively (Lumpkin and Dess 1996). Prior research suggests that while the benefits of EO can only be realized through actual innovation activities, EO does not automatically develop into such activities (Arzubiaga, Kotlar, Massis, Maseda and Iturralde, 2018).

Innovativeness (INN)

Innovativeness is defined as the predisposition or tendency of a firm to engage in creativity and experimentation through the introduction of new products/services as well as technological leadership research and development (R&D) in new processes (Lumpkin and Dess, 1996). Innovativeness is defined as the development of original and creative solutions to address threats faced by the firm (Knight, 1997). Innovativeness can be conceptualized as firms willing to create new ideas and experimenting with these ideas (Lumpkin and Dess, 1996; Shirokova, et al., 2016). Also, innovativeness can be seen via solving problems, deriving solutions in a creative manner, and designing a new product or service (Kropp et al., 2008).

Proactiveness (PRO)

Proactiveness is defined as an opportunity-seeking, forward looking perspective of a firm characterized by the introduction of new products/services ahead of the competition and acting in anticipation of future demand (Lumpkin and Dess, 1996). Being proactiveness at the firm level involves the ability of the firm to engage new opportunities, manage new and coming trends, forecast future needs and demands of the customers, and identify challenges that may accompany new business ventures (Lumpkin and Dess, 1996). Proactiveness plays the strong pursuit by an organization to seek market opportunities and a keen focus on being a pioneer in innovation in an industry sector (Shirokova, et al., 2016).

Risk-taking (RIS)

Risk-taking is defined as involves taking bold actions by firms by venturing into the unknown, borrowing heavily, and/ or committing significant resources to ventures in uncertain environments (Lumpkin and Dess, 1996). Risk-taking is one of the dimensions of EO at the level of the firm, which involves firms taking risks by venturing into risky businesses, committing into ventures that utilize most of their resources, and getting into high liability with large sums of loans (Dess and Lumpkin, 2005). Risk-taking reflects the firm's willingness to take bold actions and devote resources to pursue opportunities with uncertain outcomes (Lisboa, Skarmeas and Saridakis, 2016).

Competitive aggressiveness (COM)

Competitive aggressiveness is defined as the intensity of a firm's efforts to outperform rivals and is characterized by a strong offensive posture or aggressive responses to the actions of competitors (Lumpkin and Dess, 1996). Competitive aggressiveness refers to a firm's propensity to directly and intensely challenge its competitors to achieve entry or improve position, that is, to outperform industry rivals in the marketplace. Competitive aggressiveness also reflects a willingness to be unconventional rather than rely on traditional methods of competing (Cooper, et al., 1995).

Customer orientation (CUS)

Customer orientation is defined as 'the set of behaviors and beliefs that places a priority on customers' interests and continuously creates superior customer value' Customer-oriented firms 'stay close to the customer', as means of identifying, understanding and monitoring customer needs (Thoumrungroje & Racela, 2013). Prior researchers have found that a customer orientation leads to the development of incremental product innovation (Im and Workman, 2004), a negative effect on radical product innovation (Song and Montoya-Weiss, 1998), and no relationship with product radicalness (Gatignon and Xuereb, 1997; Atuahene-Gima, 2005).

New product performance (NPP)

As for the outcomes of product innovation, there have been several ways by which they can be measured. A product innovation can be successful in terms of market acceptance without increasing market share or firm performance, such as in the case of intended cannibalization within the product line and replacement of obsolete products within the product line. Given the significance of the product innovation performance relationship to the strategy literature, include new product performance. The new product performance refers to the managers' ratings of overall success of a new product after commercialization (Song and Parry, 1997; Thoumrungroje and Racela, 2013).

Therefore, in this research, the proposed research framework above demonstrates a significant trend, and leads to the hypotheses as follows:

H_1: Innovativeness is positively related to new product performance.
H_2: Proactiveness is positively related to new product performance.
H_3: Risk-taking is positively related to new product performance.
H_4: Competitive aggressiveness is positively related to new product performance.
H_5: Customer orientation is positively moderate the relationships between entrepreneurial orientation and new product performance.

3. Research Methodology

Population and Samples

This research was conducted in two phases. The first phase involved secondary research such as reviewing of relevant literatures, journals, publications, books, and related information. The second phase, the primary data via structured questionnaire. The number of F&B SME in Mahasarakham province is 224 firms (Mahasarakham Municipality, 2018; Tha-Khon Yang Sub District Municipality, 2018).

The sample size for this research is calculated according to the formula recommended by Yamane (1973) which is as below:

$$n = N / (1+Ne^2)$$

$$n = 224 / (1+224(0.05)^2)$$

$$n = 224 / 1.56$$

$$n = 144$$

Thus, the sample size is 144 firms.

Data collection

Data were collected from F&B SME in Mahasarakham province, Northeast region of Thailand from the from the office Mahasarakham Municipality and Tha Khon Yang Sub District Municipality. The key informants were the managers/owner of F&B SME. The sample was selected using a simple random sampling method. With regard to the 144 questionnaires were delivered, from which 64 respondents were received. The response rate was 44.44%. Entrepreneurial orientation is measured by 32 item scale. The questionnaire consists of four parts designed to address the research objectives. Part one asks for key informants' information such as gender, age, education level, and homeland. Part two, three, and four are related to evaluating each of the items in the conceptual model and these are measured using a five point Likert scale ranging from 1=strongly disagree to 5 = strongly agree (Nunnally and Bernstein, 1994).

Reliability and Validity

The results for Cronbach's alpha coefficients for all variable in the research expressed 0.938. The result is greater than 0.70 which is suggested by Nunnally and Berstein (1994) that Cronbach' s alpha are greater than 0. 6 can acceptable. Furthermore, the factor loadings of each item are greater than the 0. 40 cut-off and are statistically significant (Nunnally and Berstein, 1994). Consequently, there is construct validity. In this research, the results found that each item of all variables is loading on a single factor and the range of factor loadings is between 0.508 and 0.754. As a result, the reliability and validity of all variables are assumed.

Data Analysis

For statistical analysis, the descriptive statistics such as mean, frequency, percentage, and standard deviation (S.D.) are used. Inferential statistics such as correlation matrix and regression analysis are used to identify whether there is any significant difference between variables of interests and to test the hypotheses.

4. Results

Characteristic of the Response

The majority of respondents are female (37 respondents, 57.8%), aged 36-45 years old (29 respondents, 45.3%), bachelors level of education (36 respondents, 56.3%) and northeast region homeland (61 respondents, 95.3%).

Table 1 presents descriptive statistics (mean and standard deviation) and correlation matrix for all variables. The maintaining power at 0.80 in multiple regression requires preferably observations for most research situation (Hair et al. , 2010) . Correlation coefficients of variables are ranging between 0.278-0.642. Variance inflation factor (VIF) is between 1.200 - 2.328. The VIF is less than 10, there is no multicollinearity problem on the relationships between independent variables (Nunnally, 1978). Thus, the response rate of research is regarded as acceptable.

Table 1: Descriptive Statistics and Correlation Matric

Variables	Mean	S.D.	INN	PRO	RIS	COM	CUS	NPP	VIF
INN	4.47	0.55	1						1.954
PRO	4.03	0.55	.602**	1					1.872
RIS	3.99	0.47	.642**	.605**	1				2.328
COM	4.24	1.41	.300*	.317*	.394**	1			1.200
CUS	4.14	0.49	.477**	.501**	.593**	.278*	1		1.636
NPP	4.22	0.48	.516**	.596**	.544**	.298*	.602**	1	-
** p < 0.01, * p< 0.05, S.D.= Standard Deviation									

Table 2 presents the results of the ordinary least squares (OLS) regression analysis for five hypotheses. The results indicate that the relationship between innovativeness, innovativeness, risk-taking, and competitive aggressiveness, customer orientation, and new product performance are presented.

Table 2: Determinants of the entrepreneurial and new product performance of the food and beverage business in Mahasarakham province

Variables	Coefficients
Constant	.080
Innovativeness	.312** (.094)
Proactiveness	.442** (.093)
Risk-taking	.260** (.093)
Competitive aggressiveness	.371** (.093)
Entrepreneurial orientation x Customer orientation	-.094 (.060)
R^2	.502
Adjusted-R^2	.459
F-Statistic	11.709**

** p < 0.01, Standard errors are in parentheses

Table 2 shows that the F-statistic is significant, suggesting that the model not only fits the data well, but also indicates the robust relationship between explanatory variables and dependent variable. The results also show that the model explains a considerable amount of the variance in performance (adjusted R^2 = 45.9% which the inclusion of performance improves the model's fit) (Inmyxai and Takahashi, 2009). This suggests that

the entrepreneurial orientation of the food and beverage business in Mahasarakham province, northeast region, Thailand, is significant and positively affected by innovativeness, proactiveness, risk-taking, and competitive aggressiveness factors. This evidence supports hypotheses 1, 2, 3, and 4 at the statistical significance of 1% level of significance. Hypothesis 5 is not supported at the 1% and 5% levels of significance.

There are four hypothesized supported which can conclude that entrepreneurial orientation contributes to new product performance in food and beverage business in Mahasarakham province, northeast region, Thailand. The findings can be ranked based on the size of the standardized β-coefficients. The strongest key factor is in proactiveness ($\beta = .442$, $p<0.01$) , followed by competitive aggressiveness ($\beta = .371$, $p<0.01$) , innovativeness ($\beta = .312$, $p<0.01$) and risk-taking ($\beta = .260$, $p<0.01$), respectively. The results of regressions in entrepreneurial orientation factors indicate a positive relationship with new product performance.

Innovativeness. The findings indicate that the innovativeness drivers factor has a positive relationship with new product performance. Food and beverage business in Mahasarakham province, northeast region of Thailand with a clear innovativeness drive can increase their firm's growth. Innovativeness in helping SMEs turn their EO into actual innovations, which is critical to sustaining performance and surviving in increasingly dynamic competitive environments (Kollmann and Stöckmann, 2014), orientation toward innovation and renewal seems to be a relevant way for family businesses to orient themselves toward the external environment (Stenholm, Pukkinen and Heinonen, 2016). Therefore, hypothesis 1 is supported.

Proactiveness. The findings indicate that the proactiveness drivers factor has a positive relationship with new product performance. proactive orientation is positively associated with firm growth both in family and nonfamily businesses (Stenholm et al., 2016). In addition, proactiveness helps entrepreneurs to introduce new products and services ahead of the competition and to act in anticipation of future demands (Jalali, Jaafar and Ramayah, 2014). Therefore, the hypothesis 2 is supported.

Risk-taking. The findings indicate that the risk-taking drivers factor has a positive relationship with new product performance.Risk-taking enables SMEs to commit remarkable resources to ventures in uncertain environments. Thus, political decision-makers who are responsible for economic policy should seriously consider ways to create strong incentives that support SMEs engaged in growth actions with high risk-taking characteristics (Jalali, et al., 2014). Therefore, the hypothesis 3 is supported.

Competitive aggressiveness. The findings indicate that the competitive aggressiveness drivers factor has a positive relationship with new product performance. Entrepreneurial orientation is critical for their success business (Li, Huang & Tsai, 2009). Therefore, the hypothesis 4 is supported.

5. Conclusion

The research aims to examine the impacts of entrepreneurial and customer orientations and their relationships with new product performance outcomes. The data were collected from a survey of managers from food and beverage business in Mahasarakham province, northeast region, Thailand. Entrepreneur, executive officer were key informants. There are five hypotheses proposed for testing by employing OLS regression analysis. The results indicate that four dimensions of entrepreneurial orientation are significant to attain outcome of new product performance.

This research can facilitate managing to identify key dimension of entrepreneurial orientation by bringing the innovativeness, proactiveness, risk-taking, and competitive

aggressiveness for building a new product that could lead to competitive advantage to meet the changing needs of the environment with rapid variability.

The future research should collect more numbers of SME in other provinces to compare the efficiency and/or comparative other business sectors in order to verify the generalizability of the results, increase the level of reliable results, and expand the usefulness of the results. In addition, the findings draw on a single study. The robustness of the results from this research, therefore, needs replication studies.

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