



Mediating Role of Innovation on the Relationships between Market Orientation and Firm Performance in Food and Beverage Industry in southern Thailand

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Abstract

The purpose of this study showed that incremental and radical innovation mediate the relationship between market orientation and firm performance in the context of Food and Beverage (F&B) industry in southern Thailand. Resources - Based View (RBV) and Strategic Innovation Theories (SIT) were applied to the study framework to reach an extensive comprehension of innovation practices in the F&B SMEs context. This study utilized a survey method to test the proposed model. A sample of 351 SMEs in the F&B industry in southern Thailand participated. The model was tested using SEM-PLS. The results revealed that market orientation significantly and positively related to innovation (both incremental and radical). Consequently, innovation positively related to the performance of SMEs. The originality of innovative development demonstrated in its effort to prioritize the importance of innovation in the context of F&B industry in Thailand.

Keywords: incremental innovation, radical innovation, market orientation, firm performance

Introduction

As many stated, SMEs act as the key driver of economic growth because of the critical role they play in enhancing the economy of a country (Ahmad, 2007; Charoenrat & Harvie 2014). SMEs also play a critical force in the economic and social development

of a country. (OECD, 2014), including those in the F&B industry. As Thailand becomes increasingly urbanized and its population ages and earns a higher income, there is a high market potential for food and beverage products. Since 2005, there has been a decline in the gross domestic product (GDP) of SMEs, which is considered to be 37.4 percent of total GDP. This figure presents the critical need to enhance the competitive advantage of SMEs especially in the face of globalization where SMEs need to compete in the globalization (Economic Commission and the National Society, 2014). Therefore, Thai government has incorporated innovation agenda into the Thai Industrial Development Strategy 4.0 for 20 years (2017-2036) in order to boost SMEs competitiveness. Innovation becomes an important tool to facilitate sustainable growth of the business (Chan and Anadon, 2016). As a result of the government's concentration on the national agriculture sector, Thailand food and beverage (F&B) industry has become an important part of the agro-based industry compared to other sectors. (Thailand Investment Review, 2016). This is the crucial challenge for the industry to be the growing competition not only from inside the region but also from abroad.

Moreover, innovation must be adapted from the production and export of general food products to the production and export of food products that add value. The industry also needs to meet the demands of consumers for health and nutrition (OSMEP, 2014; Biz focus 2015). Innovations are more and more effected by the contribution of SMEs. One area that has been highlighted lacking among the SMEs in F&B industry is innovation aspect (Saigosoom, 2013). Success in innovation agenda may result in better performance among these SMEs. Hence, the focus of this study is to dwell into the factors that promote innovation among SMEs in F & B industry which could subsequently lead to better performance of this sector. Effective innovation can accomplished by integrating the development of the business strategy and market positioning of a firm (Economic and Social Council, 2014). As argued by Gunawan et al (2016), SMEs must

continue to be proactive and innovative to enable them be better prepared for the upcoming competition.

In accordance with the resource-based view (RBV), the sources of competitive advantage, firms consider the internal resources and capabilities as valuable (Barney,1991; Wernerfelt, 1984). Hence, in this study, the focus will be rely on market



orientation (MO), that is an intangible organizational resources and capabilities as important factor that could contribute to different styles of innovation. Also, as suggested by Chaochotechuang and Mariano (2016) innovation in F&B needs further investigation to enhance the successful implementation of innovation, finally suggesting the need to integrate Strategic Innovation Theory (SIT).

Research Objectives

1. To examine the effect of market orientation on innovation of SMEs in F&B industry in southern Thailand.
2. To examine the effect of innovation on the performance of SMEs in F&B industry in southern Thailand.
3. To examine the mediating effect of innovation on the relationships between market orientation and the performance of SMEs in F&B industry in southern Thailand.

Literature Review

Firm Performance

Firm performance (FP) evaluates how successful an organization is in reaching its goals and objectives, as measured by various indicators (Hamon, 2003; Ho, 2008). FP can be measured from various perspectives or dimensions, namely financial implementation such as profitability, the return of investment, product competence such as product reliability, number of unique product features, and market performance such as market share, customer satisfaction (Jones, Lanctot, & Teegen, 2000,). According to Zott and Amit (2007), FP is a function of a fit between a business model and its strategy.

Innovation is proposed to promote the performance or effectiveness of a firm (Damanpour, 1991). It is reacting to changes in a firm's internal or external situation or a proactive

action taken to influence the environment. In any case, innovation enhance the natural growth of the business. According to Gatignon et al. (2002), the literature reviewed reported varied results due to the influences of dissimilar types of innovation on organizational outcomes. Morgan and

Berthon (2008) argued that exploitative innovation has a larger impact on organizational results than explorative innovation.



Similarly, Zhou et al. (2005) argued that radical innovation adopts competency to form markets, influence the character of the consumers, and adjust basic customer behaviours. Thus, radical innovations can advocate more productivity than incremental innovations. Radical innovations resulted in superior revenues to a firm's typical customers, while more market-based innovations are incorporated by new or developing markets, Zhou et al. (2005) concluded that both radical and incremental innovations should positively affect performance. Lisboa et al. (2011) suggested that radical innovation is positively associated with a firm's future performance, while incremental innovation was mostly positively related to current performance.

Innovation: Radical and Incremental

SMEs are aiming at building innovation as the main point to create sustainable competitive advantage (Dadfar et al., 2013). Innovation as a concept refers to the characteristics or types of emerging product or process. There are two types of innovation namely radical and incremental innovation (Darroch & Jardine, 2002). This study focuses on both radical and incremental innovation as a mediator of F&B performance. Innovation represents the level of the newness of an innovation (Darroch & Jardine, 2002). Radical innovation is derived from something new and related to key change and is usually applied through a specific innovation project based on a new product or process. Whereas, incremental innovation is derived from something improved and referring to a previous innovation, incremental, as well as added on, such as when changing the materials that were initially used to create a product or developing the operation of service (Bessant & Tidd, 2007).

Radical innovations or exploratory innovations are considered to fulfil the new customer's needs and the needs of an emerging market, provide new models, create new markets, or built new channels of distribution (Danneels, 2002; Jansen et al., 2006). However, radical innovation

may be referred to the characteristics of search, difference, experimentation, flexibility, and risk-taking. Meanwhile, incremental innovations or exploitative innovations are regarded as meeting the needs of the current customers or markets. Moreover, it can improve existing knowledge and skills increase established designs, broaden existing products and services, and increase the efficiency of existing distribution channels



(Danneels, 2002; Jansen et al., 2006). Cheng & Van De Ven (1996) defined exploration as a search of the behavior at firm-level, disclosure, investigation, risk-taking and innovation. While, exploitation constitutes performances categorized by means of explanation, awareness, efficacy, invention, and assortment. The main goal of an exploration strategy is to create an emerging business opportunities, where as an exploitation strategy points to the effective management of the firm's existing business opportunities.

In order to achieve a competitive advantage for sustainable development, businesses need to adjust and adopt various types of innovation. If businesses without experience start with incremental innovation, they will have a better chance of growing. However, the current business environment is characterized by vagueness, uncertainty, complexity, and ambiguity which require companies to go beyond incremental innovation and instead choose radical innovation (Szekely & Strebel, 2013). Innovation in the F&B from existing products, which largely consists of developing or producing new product variations is usually incremental rather than radical (A.I.A. Costa, and W.F.M. Jongen, 2006 and M.G. Martinez, 2014). Study by Baregheh, Rowley, Sambrook, and Davies (2012) on F&B firm in Italy also revealed that the firms are more developed on innovation than product innovation process while the majority of the developed product innovation is the kind of incremental innovation.

Innovation in F&B has the potential to grow in the Thai food industry. As consumers are concerned about health, resulted in the increasing of interest in the functional food. Accordingly, there is a potential success for the commercialization of functional foods in Thailand.

Market orientation: responsive and proactive

The main point of marketing theory is the idea of market orientation (MO) (Levitt, 1960; Ng, 2016). Customers trust and believe in certain firms because of the values they have. MO is one key strategy that desires a strong guarantee of a set of methods. MO creates superior value for customers as well as the business, and it helps forms superior performance. Hence, MO tends to be defined as the culture of the organization (Narver & Slater, 1990). This study adapted Narver et al.'s (2004) framework to define the MO construct (that consists of responsive: R and pro-active: P) as its basis. Responsive Market Orientation (RMO) is



defined as the generation, propagation, and responsiveness of market information regarding the existing product and market field and concentrates on the prompted needs of the customers, also as a customer-led culture (Atuahene-Gima et al., 2005; Narver et al., 2004).

Proactive Market Orientation (PMO) emphasizes determining and meeting the hidden and new needs of the customers through the deal with market studies to find the market opportunities in future needs and cannibalizing sales of current products, also as a lead-the-customer culture. A PMO refers to the needs of which the customer is uninformed and points to the managers to suggest the need in order to realize and satisfy customers' hidden needs. In contrast, the RMO indicates that the customer is considerate that the managers is realized and are willing to focus on the customers' prompt needs.

Kohli & Jaworski, 1990; Narver & Slater, 1990 indicated that generally, MO has a positive effect on performance. However, from the perspective of MO, the function of innovation is hardly acknowledged (Atuahene-Gima,1995; Han et al., 1998; Narver & Slater, 1990; Zhang & Duan, 2010). It has been argued that the proactive component constitutes MO, aiming at concealed markets, and the responsive factor, underlining urgent markets (Narver et al., 2004). Scholars have found the correlation between MO and firm performance is indirect (Au & Tse, 1995; Sargeant & Mohamad, 1999). Thus, innovation act as mediator which may mediate the relationship between MO and performance (Agarwal et al., 2003; Sandvik & Sandvik, 2003). Also, it was found that product newness partially moderated the relationship between MO and new product performance (Manuela et al., 2012). The responsive and proactive components of MO influence innovations, but those influences may be different suggested by Jeen-Su Lim et al., 2017. Therefore, this study explored those potentially dissimilar impacts.

Market Orientation (MO) and innovation

The prior studies pointed out not only do more customer-oriented firms incline towards product advancement, but they also establish good customer relationships (Narver et al., 2004). Serna et al. (2013), Lado and Maydeu-Olivares (2001), Aldas-Manzano et al. (2005), Keskin (2006), Low et al. (2005; 2007), and Grinstein (2008) discovered market orientation to be influential on innovation. So, the higher their market orientation,

the higher their degree of innovation. RMO firms understand the fact that product's value decrease and therefore, they need to continually improve their services and productions (Lisboa et al., 2011b). RMO firms are characterized by exploitative factors such as proximity, refinement, efficiency, and implementation. Li et al. (2008) emphasized that an RMO focused firm concentrates on excellent customer segmentation and markets that are well equipped for incremental innovations. Therefore, this orientation may stunt the development of radical innovation.

On the other hand, customer voice might direct firms to just adjust their services to the present demands while disregarding proactive restructure of customer desires (Berghman et al., 2006). Likewise, Zortea-Johnston et al. (2012) argued that RMO inhibits the production of innovation and therefore is detrimental to radical innovation. However, there has been inconsistency found among the outcomes of research. Slater and Mohr (2006) pointed out that a PMO business culture is more strongly accompanied with radical innovation and new product achievement. The finding of the prior research showed that applying of marketing orientation by an entrepreneur produces efforts to adopt the business operations according to consumers demand to gratify the market needs (Phuangrod, 2015). A company performs market surveys to judge customer needs and behavior. Thus, the conclusion is made that market orientation is positively correlated with innovation.

Nevertheless, PMO is incongruent with the efficiency-oriented refinement area of incremental innovation and therefore would debilitate its influence on incremental innovation. It is expected that PMO will have a weaker impact on incremental innovations than would RMO. That is, PMO may defer incremental innovation just as firms with RMO may defer radical innovation. According to Narver et al. (2004), if a firm give to much priority exploitation, it is likely to be ineffective at catering to the demands of the market. Therefore, the following hypotheses are suggested:

- H1 MO has a positive effect on innovation.
- H2 Innovation has a positive effect on firm performance.
- H3 Innovation has a positive mediating effect on innovation and firm performance.



Resource-Based View Theory (RBV)

The resource-based view (RBV) defined as a firm's performance and sustainable competitiveness is determined by its internal resource capacity (Wernerfelt, 1984; Barney, 1991). RBV is the most broadly known theories of management (Kellermanns et al., 2014; Nyberg et al., 2014). Resources are described as all intangible and tangible assets, capabilities, organizational processes, firm attributes, information, knowledge, and others. To increase the efficiency and effectiveness, the firm use the power that allows them to grasp and execute strategies.

The conception of RBV is it concentrates to the characteristics resources which is hard to imitate and as a source of high potential and competitive advantage (Barney, 1986; Hamel & Prahalad, 1996). Resources that are difficult to conveyed or obtained, that need a prolonged learning curve, or that require a major change in the organizational environment and the culture is more likely to be distinctive to the organization and, therefore, the competitors are unable to copy because it is not easy to imitate. As claimed by Conner (1991), the difference in the firm's performance is based on its possession of distinctive inputs and capabilities.

RBV was developed in the field of strategic management, and it tended to be used to study greater, more settled organizations. Moreover, the RBV was proposed for researchers to understand why some firms appreciate a competitive advantage and thereby perform better than other firms (Barney, 1991). Eventually, capabilities like intangible organizational resources like market orientation (MO), if effectively deployed, should simplify the growth of competitive advantage (Hult & Ketchen, 2001; Lonial & Carter, 2015), thereby improving performance.

Strategic Innovation Theory (SIT)

Strategic innovation theory (SIT) is a fundamentally different way of competing in an existing business and it starts with the innovation in one's business model leading towards a new way of playing the game (Charitui & Markides, 2003). While other academics argue that the organization's business model is at the heart of strategic innovation, not all researchers go till the extent of strategic innovation aiming at the disruption of the industry. Strategic innovation is about creation of new markets and leaps in customers (Gebauer, Worch, & Truffer, 2012) and (Schlegelmilch, Diamantopoulos,

& Kreuz, 2003). Strategic innovation has a clear aim of achieving competitive advantage by creating customer value and new market.

In this study, SIT was used together with RBV to support the suitability of innovation in the research context. Innovation is not always accomplished by the entrepreneur alone, but it is the joint effort of human resources in the organization and is often motivated by external market factors. The RBV has been widely deployed to conceptualize innovation from both strategic and resource-based factors such as entrepreneurial orientation, market orientation as well as resources, skills, competencies, and capabilities to achieve excellent firm performance. Sundbo (1998) proposed the strategic theory innovation such the companies' market orientation and strategic planning that forms the factors of innovation. Sundbo (2001) defined innovation as a strategic process that can be attained by creating a strategy and developing internal organizational processes.

The present study focused on radical and incremental innovation. In the studies of innovation, the dissimilarity between radical and incremental innovations are outlined. Radical innovation has been correlated with breakthrough innovations, whereas incremental is correlated with innovations within a model (Dosi, 1982).

The Theoretical Framework



Fig 1 The Research Framework

Methodology

For this study, the target population is SMEs in Food and Beverage (F&B) industry in southern Thailand. The SMEs are listed on the website of the Department of Industrial Works (DIW) of Thailand (www.diw.go.th). There are 3,757 F&B enterprises, which include small, medium, and large businesses. According to Kotey and Meredith (1997) and Nakhata (2010), the characteristics of SMEs are different based on the business

infrastructure environment which implies their geographic location. Most studies were done in the central region which includes its capital city Bangkok as reflected on the number of SMEs, SMEs infrastructures, and modern types of SMEs that operate. Hence, this study utilizes the stratified random sampling technique to identify the sample that meets the inclusionary criteria. The current research used measures adopted from previous studies. Cronbach's alphas of all variables were derived from previous literature. The values were acceptable, given the readings were well above 0.6 (Nunnally & Bernstein, 1994).

For the data analysis, the two types of software (i.e., SPSS and SmartPLS) were used in the present study. SPSS Version 23 was employed for descriptive statistics, and common method variance (CMV) whereas SmartPLS software was utilized for hypotheses testing.

Results and Discussion

The results revealed that in term of market orientation, for proactive market orientation, had a positive impact on proactive and innovation (incremental and radical innovation). On the other hand, there were no relationship between responsive and incremental and radical innovation. The results were in agreement with the concept proposed by Narver et al. (2004) that responsive market orientation focused on customers, which require radical production innovation.

Based on the resource based view by Barney (1991), if a firm will able to possess VRIN characteristics of internal assets (which are Valuable, Rare, Imperfectly imitable, and Non – substitutable), the organization can improve and accomplish excellent performance and sustainable competitive advantage. It implies that because of F&B SMEs industry may be lacking in terms of the key resources needed in doing business, thereby, the firms may not have strategic flexibility to compete their competitors in Thai F&B industry. As supported by Sanchez (1995), in achieving successful flexibility, a small and medium firm is expected to be able to optimize its business processes and achieving operational efficiency by utilizing adaptive resources and reconfiguring the processes. Similarly, Supeno, Sudharma, Aisjah, and Laksmana, (2015) indicate that a SME which is able to manage its intellectual capital



optimally will improve its capability which in turn can effectively implement strategies and making it flexible organization.

Table 1 The mediating effect of innovation on market orientation and firm performance

Hypot hesis	Relationship	Path Coefficient (β)	T Values	R ²	P Values	Result
H1a	Proactive Market Orientation -> Incremental Innovation	0.259	2.669***	0.52 5	0.004	Supported
H1b	Responsive Market Orientation -> Incremental Innovation	-0.002	0.020		0.492	Not Supported
H1c	Proactive Market Orientation -> Radical Innovation	0.256	4.027***		0.000	Supported
H1d	Responsive Market Orientation -> Radical Innovation	-0.129	1.884**		0.030	Not Supported
H2a	Incremental Innovation -> Firm Performance	0.144	1.668**	0.34 7	0.048	Supported
H2b	Radical Innovation -> Firm Performance	0.481	6.245***		0.000	Supported
	Proactive Market Orientation ->	0.037	1.328*		0.092	Supported
H3a	Incremental Innovation -> Firm Performance					
H3b	Proactive Market Orientation -> Radical Innovation -> Firm Performance	0.123	3.344***		0.000	Supported
H3c	Responsive Market Orientation -> Incremental Innovation -> Firm Performance	0.000	0.018		0.493	Not Supported
H3d	Responsive Market Orientation -> Radical Innovation -> Firm Performance	-0.062	1.725		0.042	Not Supported

Conclusion and Recommendation

This research employs RBV primarily focuses on researching the relationship between a firm's resource and innovation. Next, the current study examines the effects of exploration and exploitation methods relating to radical and incremental innovation and the difference they make on firm performance. Apart from those contributions, since this research uses firms in the context

of an emerging economy instead of the usual samples in previous researches that are a part of developed economies, the results of this study would support a knowledge of entrepreneurship



and innovation behavior of SMEs in the emerging markets. Moreover, the decision on incremental and radical innovation has a fundamental role in firm performance. Outward-looking views of MO provides market knowledge and result in new decisions to exploit and/or explore opportunities for innovation (Kocak et.al, 2015).

The results of this study have significant theoretical implications to resources-based view (RBV) and strategic innovation theory (SIT). In the view of a theoretical perspective, the results confirms and extends the RBV' confirmation that resources include intangible assets (Barney, 1991: Unger et al., 2011). Particularly, our findings showed that MO served as intangible resources that can enhance and thereby improve performance of the F&B SMEs.

From a perspective of practical, SMEs practitioners or entrepreneurs concerning the advantage of applying multidimensional of capabilities or resources that impact firm performance. F&B SMEs owners and managers can obtain innovation in their marketplaces by simultaneously demonstrating some level of proficiency in a combination of organizational capabilities, including MO. It seems that the functions of a combination of resources through innovation act as an intervening latent construct representing firm performance. As such, F&B SMEs should improve the ability to be an effectively advantage, adopt and employ a set of capabilities and resources to achieve firm performance, thereby obtaining a broaden appreciation of their operating environment. This kind of broad perspective should intensify the operation's ability to increase entry obstacles and impede competitor efforts at imitation, thus, supporting the development of a sustainable competitive advantage.

The present study focuses on Thailand's SMEs in food and beverage firms without allowing sector differentiation. Nevertheless, this sort of limitation is true of most studies in industrial marketing management and entrepreneurship. Hence, to generalize these discoveries, further research within other countries, other degrees of economic development, and within other industrial sectors is necessary. Also, the current research focuses on the effects MO. However, other strategic dimensions may be instrumental in incremental and radical innovation. Therefore, further research should examine the other strategic methods' effects on radical and incremental innovation. Finally, investing the



effects of differing levels of MO on innovation would add a significant new contribution to the literature.

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