Research Article

Strategic Adaptation of Local Business to Support the Eastern Economic Corridor Plan: Local Business in Rayong

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ABSTRACT

The purpose of this research is to identify the external factors, especially the government policy (Eastern Economic Corridor Plan, EEC), that influence firm performance through business adaptation of local business in Rayong. Also, this aims to empirically examine the path relationship between external factor, business adaptation and firm performance in Rayong local business, in order to enhance the understanding on the mechanism among these three variables. The proposed model has been designed by a conceptual framework based upon a review of theories, research findings and reports gathered from the relevant literature. A questionnaire survey conducted at the seminar for local business owners in Rayong, structural equation model (SEM) for data analysis and the proposed model with valid response from 120 local business owners in Rayong were utilized. The result of this research demonstrates that, in Rayong context, external factor especially the government policy (EEC) is positively related to business adaptation. The finding also points out that business adaptation has a positive impact on firm performance and it fully mediates the relationship between external factor and firm performance. In addition, this finding is also in line with the originality of the previous research and supports the conceptual framework in the context of emerging and developing country. In consequence of this research, the relevant parties such as government departments and local business in Rayong can use the result as a guideline for their own perspectives. The relevant government departments can conduct policies that benefit, both, large private firms and local business, while local business owners can conduct strategies for the business adaptation to prepare themselves for the effect of the government policy.

Keywords: Strategic Adaptation, Local Business, External Factors, Firm Performance, Eastern Economic Corridor Plan

บทความวิจัย

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บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์หลัก เพื่อระบุอิทธิพลของปัจจัยภายนอกของธุรกิจ โดยเฉพาะนโยบายของรัฐบาล (โครงการพัฒนาระเบียงเศรษฐกิจ พิเศษภาคตะวันออก) ที่มีผลต่อผลประกอบการของธุรกิจ ผ่านทางการปรับตัวของธุรกิจท้องถิ่นจังหวัดระยอง โดยการวิจัยนี้ยังมีจุดประสงค์ที่จะทดสอบเชิงประจักษ์ด้วยการวิเคราะห์เส้นทางระหว่างปัจจัยภายนอกของธุรกิจ การปรับตัวของธุรกิจและผลประกอบการของธุรกิจท้องถิ่นในจังหวัดระยอง ซึ่งจะทำให้มีความเข้าใจความเชื่อมโยงของทั้งสามตัวแปรมากขึ้น โดยแบบจำลองที่ได้นำเสนอนั้นถูกกำหนดตามกรอบแนวคิดที่ได้จากการทบทวนวรรณกรรมและทฤษฎีที่เกี่ยวข้อง ซึ่งในการทำวิจัยครั้งนี้ได้ใช้แบบสอบถามในการเก็บข้อมูลจากเจ้าของและผู้ประกอบการธุรกิจท้องถิ่นในจังหวัดระยองในการสัมมนาของหอการค้าจังหวัดระยอง แบบจำลองสมการโครงสร้างได้ถูกนำมาใช้ในการวิเคราะห์ข้อมูลที่ได้จาก 120 กลุ่มตัวอย่าง ผลลัพธ์ที่ได้จากงานวิจัยแสดงให้เห็นว่าปัจจัยภายนอกของธุรกิจ โดยเฉพาะนโยบายของรัฐบาล (โครงการพัฒนาระเบียงเศรษฐกิจ พิเศษภาคตะวันออก) มีผลต่อการปรับตัวของธุรกิจท้องถิ่นจังหวัดระยองอย่างแน่ชัด และการปรับตัวของธุรกิจยังมีผลกระทบอย่างเด่นชัดกับผลประกอบการของธุรกิจ รวมถึงเป็นสื่อกลางสำหรับความสัมพันธ์ระหว่างปัจจัยภายนอกของธุรกิจและผลประกอบการของธุรกิจ นอกจากนี้ผลของการวิจัยยังสอดคล้องกับงานวิจัยในครั้งก่อนและสนับสนุนกรอบแนวคิดในบริบทของประเทศที่เกิดใหม่และกำลังพัฒนา โดยผลการวิจัยจะเป็นประโยชน์ต่อผู้ที่เกี่ยวข้อง เช่น รัฐบาลสามารถใช้ผลการวิจัยในการกำหนดนโยบายที่ก่อให้เกิดประโยชน์ต่อทั้งเอกชนรายใหญ่และธุรกิจท้องถิ่น ส่วนเจ้าของธุรกิจท้องถิ่นสามารถกำหนดกลยุทธ์สำหรับการปรับตัวของธุรกิจ เพื่อเตรียมความพร้อมของธุรกิจต่อผลกระทบที่จะได้รับของนโยบาลของรัฐบาล

คำสำคัญ : กลยุทธ์การปรับตัวของธุรกิจ ธุรกิจท้องถิ่น ปัจจัยภายนอกของธุรกิจ ผลประกอบการของธุรกิจ เขตพัฒนาพิเศษภาคตะวันออก

1. INTRODUCTION

The concept of strategy of the firm is mostly conducted with the direction of the main operating business. However, in the context of local business, the actual strategy of the firm might have to rely on the opportunities and threats to the firm over time. The uncertainty of opportunities and risks for the local business may cause the owners of business to find an appropriate adaptation as this would seem especially relevant for these businesses (Drucker, 1995). Drucker had also stated that the business adaptation has been an important requirement for the local business to be successful. The business adaptation is conceptualized in terms of the firm's capacity to adapt which includes the organizational context (e.g. ability to change and adapt, organization experience, characteristic of entrepreneur) and external factors (e.g. customers, suppliers, government regulation, labor force, economic conditions, technology and competitors).

Local business is now facing many external challenges including rapid variation of technology (technology disruption), global natural resources, international trade policy, government policy, etc. These challenges refer to trends, factors, issues, causes or circumstances which have the potential to threaten the stability of local business. Because technology, natural resources, economy, government laws and regulations are common external factors affecting business organization which have become the significant issues for the local businesses (Anthony, 2002; Hartman & DesJardins, 2011; DeSimone , 2012). Especially, the government policy as the external factor is a key factor in addressing the adaptation in local business, as it has enormous power and influence to make the local business change for the better. There are several cases illustrating the effect of government policy to local businesses all over the world. Like the other cases, Rayong, a province in Eastern Thailand, has been the area that major government policies have been used to drive the economy of Thailand.

Over the past thirty years, Thai government has launched the policy to increase the investment from both domestic and international investors in the Eastern part of Thailand which was known as the "Eastern Seaboard" (SPSO, 2017). This policy had been developed to support the heavy industry such as petrochemical, electronics and automobile industries which was the eras of industrial revolution called Thailand 3.0. The Eastern Seaboard consists of three eastern provinces namely Chachoengsao, Chonburi and Rayong covering over 13,000 square kilometres. The Eastern Seaboard is still a potential area for future development because of its readiness in terms of infrastructure; such as road and railway networks, as well as ports and industrial estates (SPSO, 2017).

As for moving forward to the era of Thailand 4.0 to accommodate next-generation industries by Thai government in 2018, the enhancement of the former Eastern Seaboard has been designed to be a leading economic zone by the development of the EEC project. This project has been constructed to be a driver of the country's investment in an advanced technology and innovation for the future generation including ten target industries to be promoted in the EEC, which are aviation, eco-friendly petrochemicals, bio-chemicals, medical hub, smart electronics, automation and robotics, affluent and wellness tourism, and digital industries (EEC, 2016). In order to support new coming industries, the government has launched further infrastructure improvement as planned for the EEC, for example, development of public utilities, high-speed railway lines towards three international airports; Suvannanbumi, Don Muang, and U-Tapao, double-track-railway lines connecting Thailand's industrial zones with the deep sea ports; Laem Chabang, Map Ta Phut, and Sattahip, extension of the motorway between Bangkok and Rayong, human resources, as well as investor's facilitation in the form of one-stop service centre (EEC, 2016).

To further attract foreign investors, the Board of Investment (BOI) has been considering new investment promotions via the Investment 4.0 policy. International investors who shall invest in the EEC will relish more incentive promotion package than current regulations of the BOI's package (BOI, 2017). EEC aims to drive Thailand forward with a more value-based and innovative-driven economy. Moreover, the EEC will grow into a modern metropolitan as a hub of trade and investment, while being a centre for regional transportation and logistics with significant human resources and tourist attractions.

As part of the EEC, there are six to seven industries investing in Rayong area including food processing, aviation, robotics, smart electronics, bio-economy and agricultural technology (EEC, 2016). This government policy will affect local businesses in Rayong either in positive or negative ways. With this challenging external factor, local business must create strategies to adjust themselves to support new challenges. Thus, Rayong Chamber of Commerce, with an objective to facilitate business and trade among businesses in Rayong and acts as the central coordinating agency between the government and the private sector, becomes the leading organization to provide knowledge or guideline for its member to operate the business among challenges by the EEC. Rayong Chamber of Commerce has been established for over 29 years by a group of local business owners comprised of several business owners from different sectors such as bank and finance, service, industry, agriculture, etc.

The purpose of this research is to examine the concept of adaptation as it relates to local business. Like the other local business in any parts of the world, local business in Rayong shall face new challenges from external factors such as the government policy. Especially post implementation of the EEC policy, Rayong shall become the most attractive target for foreign investors which will create both positive and negative consequences for local business in the province. Thus, the adaptation of local business becomes a key to improve their performance. Based on literature review, adaptation is concerned with making suitable adjustments to the business and its strategic focus as a growing concern and a successful business. Adaptation is conceptualized in term of the firm's capacity to adapt the strategies, which relies upon what and how much it adapts. In relation with the local business owners, a conceptual model and hypotheses are offered with the external factors. In this study, the survey conducted on a sample of the local business owners in Rayong was used to examine the relationships as specified in the model.

The content of this paper is organized according to the following framework. The literature reviewed and the hypotheses are developed in Section 2. Section 3 focuses on the empirical study, outlining data and variable measurement. Section 4 describes the empirical results and discusses the effect of business adaptation. Eventually, the concluding remarks and implications for research and limitation of this study are presented in Section 5.

2. LITERATURE REVIEW

Theoretical Underpinnings

Adaptation can be defined as the action of the business owners in operating business from the external factors and adjusting the business operation in relation to this influence (Stoica & Schindehutte, 1999). There is no organization that can be inactive over time, therefore, some adjustments, changes or adaptations seemed to be used in business operation. The purpose of this paper is to focus on strategic adaptation in local business. Business adaptation can be conceptualized in terms of external aspects affecting the business as it leads to a major transformation of organization and structure of the business.

In a local business context, numerous theoretical perspectives support the concept of business adaptation. For instance, contingency theory is a relevant foundation as it views the organization as a rationale which interacts with the external factor. The contingency factors, such as structure and strategy, as well as the environment, provide a set of pressures to which the organization must adapt in the long run (Donaldson, 1995). Organizational change is an incremental adaptation with the options to change, which are constrained by the external factors and the situation. In addition, Gruber (2007) had mentioned that the functional change is the most selected choice of organization adaptation. For example, there had been some studies on the role of planning in dynamic environments (Gruber, 2007) initial succession (Rubenson & Gupta, 1996) and innovation during organization decline (Mone, 1998).

In other related theoretical perspective, it is useful to consider the definition in political approach under which the organization is defined as a socially constructed system in political groups of various interests and power. However, Quinn (1978) had pointed out that all members in an organization have different power levels, determined by the position, credibility and information. The external factors may serve as the source of pressure for change. Change is about managing power relations and resources, so change is conducted by applying political activities to continuously drive the change process. However, the political approach argued that macro change is the result of micro changes conducted by individuals in the organization. Hence, change is identified as the small steps leading to major change through accumulation. In addition, strategic adaptation is another useful theory where strategic adaptation theorists generally set that organizations are capable of adapting to their changing external factors in different ways such as a continuous process of frequent incremental changes to their organizational structures and processes resulting in new organizational forms (Lam, 2005). Oliver (2012) had also explained that business adapts the strategy, business models, resources and capabilities at an increasingly frequent rate, where businesses are forced to consider the way to sustain their businesses in markets that are characterized by uncertainty, volatility and numerous disruptions. Adaptive capability has been considered as a business strategy to drive the business in high-velocity market conditions. Therefore, the ability to adapt the business will be the most effective way to sustain a business in the long-term. Moreover, Sanchez (2011) had allowed the possibility that an internal response may be motivated by something other than an external stimulus such as an initiative launch. Yusof and Aziz (2008) asserted the linkage between successful forecasting and successful strategic adaptation. Forecasting is how firms seek to reduce the risks posed by an uncertain future and by which they inform their strategic adaptation processes.

Finally, insights regarding strategic adaptation in local business can be found in organizational learning theory. This initiated from the behavioural theory of the firm where the organization is a socially constructed system. The organization is an experiential and adaptive learning entity, which is defined as a relatively permanent change produced by experience (March, 1991). Since learning is useful for the organization, members in the organization must acquire the necessary knowledge. Importantly, learning occurs on multiple levels through multiple mechanisms as a process of compilation. Crossan (1999) had stated that the process of change occurs continuously and incrementally at the organizational level by routines, and at the individual level by behavioural and cognitive change. Organizational learning theory is one of the theories which analyze the process of change. With the attention of organizational learning theory, this theory could assist in describing the exploration and exploitation process of small firms (Wang & Chugh, 2014).

The Relevance of Business Adaptation in Local Businesses

In comparison with leading domestic firms, the local businesses are more vulnerable to external factors. In local business context, Oliver (2012) had stated that adaptation has been widely used in the strategy and organizational literature. As an effort to clarify terminology, three concepts of adaptation are distinguished as follows: (i) a state of adaptation is defined as a state in which an organization can survive the conditions of its external factors; (ii) adaptive ability is the capacity of an organization to react to changes due to its external factors and thus to maintain fit; and (iii) the process of adaptation can be categorized into a process of adaptive specialization and a process of adaptive generalization.

The adaptive model of strategy is derived from general systems theory and suggested that an organization constantly interacts with its external factors (Bess & Dee, 2008). With the prevailing environmental conditions, the firms focus to incrementally adapt their businesses in order to be competitive survivals. The strategic adaptation of the firm can be achieved by changing the competitive environment, where the concept of strategic adaptation has been extensively discussed as the need for organizational adaptation. However, Reeves & Deimler (2011) argued that firms could develop new adaptive learning capabilites by reshaping their business through the process of managed evolution. These capabilites consist of the ability to detect and act on signals in the external environment and ability to mobilize resources to proactively respond to changes in the environment. In addition, Barreto (2010) stated that there is the necessity for organizational fit with the external factors to achieve sustained firm-level performance especially under the conditions of change. To a significant extent, organizational survival depends on the adjustment and renewal capacities of strategy-making processes. Thus, organizations must adapt or die (Wick , 1995) and the survived organizations have to adapt to changing external factors as well as reveal the following possible ways of fitting such as relative adjustment, reorientation and strategic renewal.

Research Model and Hypotheses

2.1 Internal and External Factors on Business Adaptation

In local businesses' structure, most of them are operated by family members, whereas a minority of management employ external professional employees. Frank (2016) and Chrisman (2009) identified that there are four protagonists within a business who have influences on the business adaptation, which are defined as follows: (i) Incumbent – the founder and family members holding the senior management position in the business who have relinquished or are about to relinquish the position to new family members; (ii) Successor - the family members who have taken over the leadership position from the incumbent or are about to take over; (iii) Family: the family members (excluding the incumbent and successor) involved in the business who bring with them the nature, extent, and influence the family's values, members, and aspirations over the business, especially by defining its strategic goals and its daily management activities; (iv) Non-family members: employees who work in the business – independent professionals who bring skills into the business other protagonists may not possess. Dunemann and Barrett (2004) also supported that involving professional members could increase the probability of a succession on firm performance.

However, the external factor is another key issue for business adaptation in local business, which is necessary for the foundation of local business development. To improve the local business, the government sets the policy such as norms, rule and codes of conduct for local or regional business to be able to access or use the resource. Williamson (1998) pointed out that the external factor influences the change of local business because regulations and culture have changed norms and values to local, branch and regional rules. In addition, institutions governing personal relationships play an important role for business development in a small community (Howorth & Moro, 2006). The collaboration would develop interpersonal and inter-organizational networks. Also, the collaboration would identify structural gaps that hinder local businesses from accessing either social institutions or resources. Lastly, a final way to view the change situation is the Nadler-Tushman congruence model

(Burke, 2008), which provides an emphasis on the Nadler and Tuchman's term between the inputs and outputs and the transformation process. Inputs include the environment, resources, history, and strategies, while outputs are the effectiveness of the institution, how well the institution is functioning, how effectively departments communicate with one another, and how individuals behave. As a result, the success of adaptation to the external factors might be evaluated by organizational performance (Lin & Hui, 1997) in terms of mainly non-financial measures like flexibility which includes the forms such as pre-emptive flexibility, exploitive flexibility, protective flexibility and corrective flexibility (Levy & Powell, 2005).

Based on the available literature, it is possible to propose three variables that would seem especially critical for explaining the firm performance affected by the business adaptation. These three elements of business adaptation are adaptive capacity, degree of adaptation and types of adaptation strategy. First, the adaptive capacity can be linked to the organization, lack of resource and deliberate inefficiency. Specifically, there might be some behaviors that effect adaptive capacity of organization including developing promotional programs, long range market scanning, cultivating customer loyalty, monitoring competitors' pricing, monitoring customers, and screening and training personnel (Stoica & Schindehutte, 1999). Second, adaptation strategy conducts of the firm adjustments from the external circumstances. The adjustments come in terms of market, resource management and product (Ginsberg, 1988). There are some examples related to the adjustment e.g. efforts devoted to new product development, reliance on a broader product mix, speed of response to market developments, exploration of new markets and market segments, changes in facilities or locations, outsourcing and resource leveraging and experimentation with new sales, service and distribution methods. Third, the actual amount of adaptation shows the degree of modification which is the significant parameter of the business adaptation.

Regarding to the concept of external firm perspective from the previous research, the external factors play the key role of the business adaption. This shall collaborate the local business to improve the weakness by developing interpersonal and inter-organizational aspects. Likewise, in the context of Rayong province, this concept should be used to study the local business. Based on this discussion, the following research hypotheses are proposed:

Hypothesis 1: External factors of the local business have influences on business adaptation.

2.2 Firm Performance Results from Business Adaptation

Rumelt (1991) said that performance is one of the most important constructs in the strategic management field. However, there is still a lively scientific debate about performance conceptualization and measurement (Franco-Santos, 2007). Firm performance has been recognized as being a multidimensional construct, including the firm financial and business performance, as well as its organizational effectiveness. Regarding to the stakeholder theory, Santos & Brito (2012) said that firm performance also includes other facets such as profitability, market value, growth, customer and employee satisfaction, as well as social and environmental responsibility. The measurement of firm performance is indeed one of the most critical aspects in strategic management research especially in relation to small- and medium-sized enterprises (SMEs) (Jarvis, 2000; Wood, 2006).

Even though there is widespread consensus among academics that objective measures of performance are preferable to subjective measures based on manager self-assessed judgments, the indicators on the performance of SMEs are hard to collect. Khan (2014) pointed out that most SMEs are, in fact, privately owned and are not legally required to publish their financial results. Even when available, accounting data of SMEs may be biased due to the lack of an appropriate auditing system. In addition, the owners are mostly unwilling to reveal their business financial data to outsiders (Gibcus & Kemp, 2003). Lastly, the owners may have other goals beyond profitability, such as independence, growth, or firm continuation (Peacock, 2004). Thus, numerous studies adopted subjective, perception-based indicators in order to measure the performance construct. For examples, the owners assess firm performance compared to major competitors in terms of profitability, return of investment, and financial goals. Senior managers assess firm performance compared to the average competitors of the sector, in terms of growth, profitability, market value, customer and employees' satisfaction, and social and environmental responsibility (Santos & Brito, 2012). In addition, the owners appraise market share, sales growth, customer satisfaction, return on investment, customer retention, and competitive position (Morgan & Strong, 2003).

Regarding the prior studies, they recommend that the successful entrepreneur needs both real opportunity in the marketplace and business concept for business adaptation. The business with the good fit in concept and market opportunity would tend to need less adaptation. Morris and Zahra (2000) suggested that determining the total amount of adaptation in a firm would require that one combines the amount of change occurred in various product, market and resource management activities of the firm over time. As a result, the successful entrepreneurs need both real opportunity in the marketplace and business concept. They also understand their own business to continue adapting. Further, the entrepreneurs should recognize that building adaptive capacity is an important priority of the business aspects. The local businesses are able to use the ability to adapt by making adjustments. There are some factors that can provide the adaptive capacity i.e. establishing resource slack, performance reviews, intelligence gathering and related activities. For the adaptation strategy, most importantly, the penetration of new market segments and the development of new services/products are the key drivers of strategy moves.

Moreover, there are some interesting researches on business adaptation which can describe how a firm adapts new business. First, starting with a concept of business, the entrepreneurs convert it into business opportunity by interacting with the external factors (Alvarez & Barney, 2007). Second, due to an external focus for business, the business designed a new model by integrating, combining, integrating and leveraging internal resources with the capabilities and resources of the ecosystem (Sanchez & Ricart, 2010) which can be completed through creating specialized value networks, innovative processes and resource reconfiguration. Third, under the condition of resource constraint, Chesbrough and Rosenbloom (2002) noted that innovations have been a key role to overcome challenges in order to design model to capture value.

In terms of firm performance, there are some discussions to identify the component of firm performance. O'Gorman (2001) suggested that the business owner has little thing to do with growth. However, others argued that the business owner must focus on growth as the dominant factor. Walker and Brown (2004) recommended that motivations, abilities and goals of entrepreneurs influence the direction of the business whether expend the business or maintain it. Greenbank (2001) also suggested that there are several business goals for the local business owner i.e. job satisfaction and control. Most importantly, there are some business owners that do not have intention to grow their business in which profit maximization is not an important goal (Greenbank, 2001; Walker & Brown, 2004). For this study, four perspectives have been the significant factors for the business to grow as a successful firm. Regarding to Snuif and Zwart (1993), four perspectives are as follows; (1) personal characteristics of the entrepreneur; (2) organizational development (stages of growth, life-cycle models); (3) business management (strategic and operational planning and control); and (4) industrial and locational aspects (market structure).

Traditionally, the concept of success is commonly used in term of financial indicators i.e. growth, profit, turnover, return of investment or number of employees (Walker & Brown, 2004; Simpson, 2004; Paige & Littrell, 2002; Walker & Brown, 2004; Greenbank, 2001). However, the financial measurements shall not be sufficient for evaluating the firm, hence, non-financial indicators should be added. Walker and Brown (2004) identified that non-financial measures of success include autonomy, job satisfaction, and the ability to balance work and family. Moreover, Simpson (2004) pointed out that many factors have been found to affect success of a firm including industry structure and competition, entrepreneurial decisions and objectives, employee relations, organizational culture, as well as education and training. The assumption behind these non-financial measures was that certain financial indicators have already been influenced (Walker & Brown, 2004). Greenbank (2001) sited that entrepreneurs usually have strong economic motivation to earn a good living or a satisfactory income. As the result, if business owners prefer good living, then economic growth should be high accordingly (Gray, 2002). Also, Gray (2002) stated that non-financial motivations and personal expectations are the main obstacles for growth of small business. In the same way, Walker and Brown (2004) showed that if the business owners believe that profits are not regarded as important, they tend to remain as they are. As a result, non-financial indicators of success are affected by the motivations and goal of entrepreneurs which have influenced the financial performance of the small firm. Although financial measurement, especially in terms of making a living, is important to the local business owners, incensement beyond that is not seen as important. The growth of business is not seen as a major issue or goal, thus it is not necessary to form an important measure of success. Consequently, growth is not actively pursued. Moreover, these businesses are likely to measure their performance by other criteria i.e. job satisfaction and satisfied customers.

According to the conceptual theory of business adaptation and external factor as mentioned above, firm perspective affected by the external factors shall be the key role of business adaptation which indirectly and directly influences firm performance of local business (Sanchez & Ricart, 2010; Alvi, 2012; Peng, 2002; Tallman & Fladmoe-Lindquis, 2002; Tracey & Phillips, 2011). Also, the measurement of firm performance can be indicated through the business owners' characteristic. Thus, this key finding can create the hypothesis as listed below;

Hypothesis 2: Business adaptation of the local business has influences on firm performance

Hypothesis 3: External factor has significant impact on firm performance

The hypothesized conceptual model is represented in Figure 1.

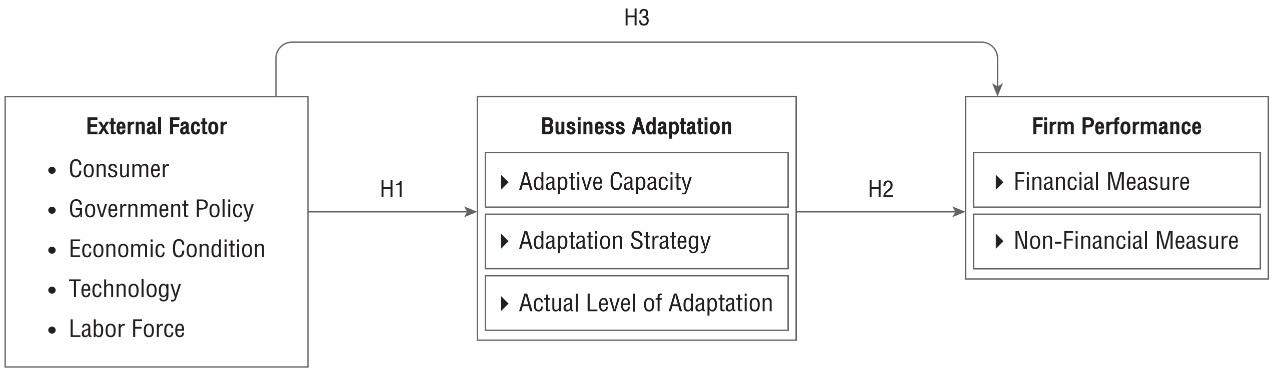

Figure1: Conceptual Model

3. RESEARCH METHODOLOGY

3.1 Sample and Data Collection

To evaluate the hypothesized relationship among the variables in the research conceptual model, descriptive research has been used. A questionnaire survey was conducted at the seminar for local business owners in Rayong province organized by the Rayong Chamber of Commerce. The sample respondents consisted of local businesses with the registration at the department of business development in Rayong province and have been listed as the member of the Rayong Chamber of

Commerce. Given the knowledge and experience by the Rayong Chamber of Commerce, these members were considered as having sufficient qualifications to understand the change in external factors i.e. government policy, customers behavior, technology, etc. and engage in varying degrees of business adaptation. The respondents who met the aforementioned criteria during the time period under this study were required to answer with regards to the original concept.

Prior the formal distribution of the survey, the researcher conducted a pilot test with a group of directors at Rayong Chamber of Commerce who have several years of experience in operating business in Rayong to ensure whether the questionnaire can be totally understood by the respondents and can measure variables accurately. After ensuring the quality of the questionnaire, the surveys were distributed with a cover letter to a sample of 185 suitable local business owners in Rayong at the seminar held by Rayong Chamber of Commerce. The owner/CEO of local business at the seminar were explained with the overview summary of the questionnaire and findings. Respondents took 15–20 minutes to complete the questionnaire and 120 respondents completed the questionnaire. A valid response rate at 64 percent appeared acceptable for this type of research (Hair, 2010). As using the advanced statistics in this research, it is necessary to conduct an appropriate sample size to match the statistic of data analysis. Therefore, the population size must be large enough (Tabachnick & Fidell, 1996) and the sample size should be at least 50 samples along with having at least 3 questions per variable. Moreover, structural equation modeling with maximum likelihood should be tested by the sample size at least 100 samples (Loehlin, 1992; Hoyle, 1995; Ding, Velicer, & Harlow, 1995; Kline R. B., 1998). In accordance with Hair (2010), if the number of constructs is not more than 5 and number of variables is more than 3, the appropriate sample size for analyzing structural equation modeling is at least 100 samples. Consequently, with 3 constructs, 6 variables and 26 questions in this research, the sample size should be at least 100 samples at the confident level of 95 percent with the error less than 5 percent.

The sampling method for this research was multistage sampling which included the Purposive Sampling and followed by the convenience sampling. With the descriptive statistics to analyze the characteristic of the respondents, the distribution of sample firms with regard to the respondents' status with the firm, the respondents' years of experience with the firm, firm's age, industry, firm size (number of employees, revenue, registered capital and fixed asset) are displayed in Table 1.

Table 1: Sample Distribution (n = 120)

Distribution	Sample	Percentage
Status of respondent with the firm		
Shareholder	49	40.8
Shareholder and Executive	39	32.5
Executive	29	24.2
Other	3	2.5
Firm's age		
Less than 5 years	22	18.3
6–10 years	27	22.5
11–15 years	11	9.2
16–20 years	8	6.7
21–25 years	11	9.2
Greater than 25 years	41	34.2
Respondents' years of experience at the Firm		
Less than 5 years	33	27.5
6–10 years	39	32.5
11–15 years	20	16.7
16–20 years	8	6.7
21–25 years	6	5.0
Greater than 25 years	14	11.7
Industry		
Agriculture	12	10.0
Industrial	16	13.3
Construction and Real Estate	22	18.3
Tourism	8	6.7
Consumption Goods	9	7.5
Foods and Drinks	29	24.2
Other	24	20.0

Table 1: Sample Distribution (n = 120) (Cont.)

Distribution	Sample	Percentage
Registered Capital		
Less than THB 5 million	74	61.7
THB 6–10 million	16	13.3
THB 11–30 million	11	9.2
THB 31–50 million	7	5.8
THB 51–100 million	4	3.3
Greater than THB 100	8	6.7
Fixed Asset		
Less than THB 30 million	68	56.7
THB 31–50 million	17	14.2
THB 51–100 million	8	6.7
THB 101–150 million	8	6.7
THB 151–200 million	4	3.3
Greater than THB 200	15	12.5
Total Revenue		
Less than THB 5 million	45	37.5
THB 6–10 million	25	20.8
THB 11–30 million	17	14.2
THB 31–50 million	7	5.8
THB 51–100 million	3	2.5
Greater than THB 100	23	19.2
No. of Employees		
Less than 5 employees	54	45.0
16–25 employees	23	19.2
26–30 employees	9	7.5
31–50 employees	10	8.3
51–200 employees	17	14.2
Greater than 200 employees	7	5.8

3.2 The Measures

A self-report questionnaire had been designed in which business owners were asked to answer or response the best described perspective of their firm. The five-page questionnaire was organized into seven parts consistent with the hypothesized conceptual model. Three types of variable classified in this paper in associate with the hypothesized conceptual model include dependent variable, independent variable and mediator variables.

Dependent variables – *firm performance* – have two constructs to assess firm performance measured by financial and non-financial aspects as mentioned in parts 5 and 6 in the questionnaire. Independent variable – *external factor* – is the main effect of this researched model in representing the key areas of external factor to business adaptation as shown in part 1 in the questionnaire. Mediator variables – *business adaptation* – comprise of three constructs to express the business adaptation including adaptive capacity, adaptation strategy and actual levels of adaptation as described in parts 2, 3 and 4 in the questionnaire. Details of questionnaire can be divided into 7 parts as follows.

Part 1 was conducted with the external factors to the firms of respondent. The change of external factors was measured by asking the respondents to rate the change which their businesses have experienced since the establishing of the business in five aspects (consumers, government policy, economic conditions, technology and labor force). Each external aspect was assessed on a 5-point scale ranging from “no important” to “most important” guided by the questionnaire of Schindehutte and Morris (2001).

Parts 2, 3 and 4 measured the 3 components of business adaptation. To begin with, Part 2 was concerned with adaptive capacity with a measurement by a set of 5 items including market research, customer database, controls over operations, structure of organization and debt suggested by (Schindehutte & Morris, 2001). Each item was rated on a 5-point scale ranging from “no important” to “most important” where respondents characterized their business by marking the most appropriate match with each item. Second, degree of adaptation on changing to the core business and its strategic focus were conceptualized in terms of 5 components comprising of products or services, facility and location, marketing approach, financial resources and human resource priorities. Respondents were asked to identify these aspects as they have changed since inception where each component was characterized on a scale ranging from “no important” to “most important”. Last, adaptation strategy was measured by asking respondents to indicate their reliance on any of 5 specific strategies for adapting. Each strategy item was assessed on a 5-point scale ranging from “no important” to “most important” guided by questionnaire of (Schindehutte & Morris, 2001).

Parts 5 and 6 were concerned with the performance of the business. Part 5 was conducted to ask the respondents to indicate the firm performance in term of financial perspective including return of investment, profit rates and annual sales growth rates compared with last year profitability of their business. Three items of financial perspective were assessed by 5-point scales ranging from “no change” to “most change” guided by questionnaire of Zott (2011) and McNamara (2013). With the same concept as Part 5, part 6 was concerned with the firm performance in term of non-financial aspects which was assessed by 3 included autonomy of working, job satisfaction and ability to balance family and work as guided by questionnaire of Zott (2011) and McNamara (2013). Each non-financial performance was rated on a five-point scale ranging from “no change” to most change”.

Finally, Part 7 assessed the background of the respondents and the firm’s characteristics. For the respondents’ background with the firm, respondents were asked to indicate their role and the time duration they have been working with the firm. While, for the firm’s characteristic, respondents were asked to identify the type of business, firm’s age, registered capital of the firm, number of the employee, total revenue per year, asset size of the firm, and recommendation and suggestion.

Details of measurement description and properties for the variables in this research model are listed in Table 2.

Table 2: Sources used in Constructing the Conceptual Model

Measure	Item description	Sources
External Factor	Change in external factor measured by rating 5 key components including customers, government regulation, labor force, economic conditions and technology	(Schindehutte & Morris, 2001)
Business adaptation (three constructs)	Research on organization adaptation that tend to emphasize the components of adaptation comprising of three items as follows: - Adaptive capacity: market research, customer database, controls over operations, structure of organization and debt - Actual levels of adaptation: products/services, facility and location, market approach, financial resources, human resource priorities - Adaptation strategy: new product/service development, customer base, response to competitor moves, partnerships with other firms, outsourcing	(Schindehutte & Morris, 2001)

Table 2: Sources used in Constructing the Conceptual Model (Cont.)

Measure	Item description	Sources
Firm performance (two constructs)	Firm performance measured by both financial meters (sale growth, ROI, profit) and non-financial meters (autonomy, job satisfaction, ability to balance family and work)	(Zott, 2011) and (McNamara, 2013)

3.3 Statistical Methodology

In this research, two methodologies were used to analyze and test the hypothesis. First, descriptive statistic was used to find a principal statistic to explain characteristic of sample size i.e. age of business, size of business, paid up capital of business by calculating frequency and percentage. Second, structural equation modeling was chosen to find multivariate statistical analysis with the objection to test the relationship of hypothesis and harmony of model along with the hypothesis.

With the process to evaluate the normality of distribution, the skewness and kurtosis methods can be used to test whether the data conform to any distribution of interest (Tabachnick & Fidell, 2007). Skewness is a measure of the asymmetry and kurtosis is a measure of peakedness of a distribution, where the statistic within the range of –3 and 3 can be assumed that it satisfies the normality (Kline, 2005). In this research, skewness is in the range of –0.302 and –1.327 and kurtosis is in the range of –1.054 and 2.472 which imply the normality of distribution.

To test the reliability of the scale, the statistic conducted reliability analysis for each construct in which a series of Cronbach's alpha results is presented: 0.802 for external factor, 0.922 for business adaptation and 0.891 for firm performance. Three constructs of variables are generally acceptable when each coefficient alpha exceeds the level of 0.70. Therefore, this shows that the convergent reliability of each measurement is acceptable. Apart from convergent validity, discriminate validity can be evaluated by conducting constrained and unconstrained model for each pair of variables.

In addition to examining if the model is appropriate and reliable, confirmatory factor analysis (CFA) was used to examine construct and discriminant validity. All factors received loadings over 0.6 and all the fit statistics indicated a good fit to the data as shown in Table 3. These results reveal good construct validity of the scale and the model. As such, all pairs of constructs reveal an adequate level of discriminant validity in Table 4. In the case that the figures of comparative fit index do not meet the criteria of measurement standard, model modification needs to be adjusted by considering from value of the modification index (MI). Given the analysis of statistic program, each modification index which is higher than 15 is considered to be adjusted. Post a completion of model modification, the hypotheses were tested by the path analysis to find the coefficient of both indirect and direct effect.

Table 3: CFA Results

Variables	Standardized Factor Loadings
External Factor	
Exfac1: Consumer	0.856
Exfac2: Government Policy	0.908
Exfac3: Economic Condition	0.822
Exfac4: Technology	0.875
Exfac5: Labor Force	0.787
Business Adaptation	
Adap1.1: Customer Database	0.862
Adap1.2: Control over Operation	0.830
Adap1.3: Structure of Organization	0.911
Adap1.4: Market Research	0.724
Adap1.5: Debt	0.811
Adap2.1: Product / Service	0.718
Adap2.2: Market Approach	0.786
Adap2.3: Financial Resource	0.782
Adap2.4: Facility and Location	0.868
Adap2.5: Human Resource Priority	0.871
Adap3.1: New Product / Service Development	0.820
Adap3.2: Customer Base	0.700
Adap3.3: Response to Competitor Move	0.870
Adap3.4: Partnership with Other Firms	0.897
Adap3.5: Outsource	0.840
Firm Performance	
FP1: Return on Investment (ROI)	0.926
FP2: Sale and Revenue Growth	0.858
FP3: Net Profit	0.928
NFP1: Autonomy	0.812

Table 3: CFA Results (Cont.)

Variables	Standardized Factor Loadings
NFP2: Job Satisfaction	0.886
NFP3: Ability to Balance Family and Work	0.768
Recommended levels	>0.60

Table 4: Measurement Reference (Structural Equation Modeling)

Index	Measurement Standard	Reference
Chi – Square	p. > 0.05	(Hair, 1998; 2006), (Bollen, 1989) and (Sorbon, 1996)
CMIN/df.	< 3.0	(Bollen, 1989) and (Diamantopoulos & Siguaw, 2000)
CFI	≥ 0.90	(Hair, 1998; 2006)and (Mueller, 1996)
TLI	≥ 0.90	(Bentler, 1999)
GFI	≥ 0.80	(Cheng, 2011)
IFI	≥ 0.90	(Hair, 1998; 2006) and (Mueller, 1996)
NFI	≥ 0.90	(Bentler, 1999)
RFI	≥ 0.90	(Bentler, 1999)
RMSEA	< 0.08	(Hair, 1998)

Note: Chi-square Mean/Degree of Freedom (CMIN/DF), Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI) and Root mean square error of approximation (RMSEA)

4. RESULTS AND DISCUSSION

4.1 Correlation Analysis

The mean, standard deviation and Pearson correlation coefficient of the involved variables are listed in Table 5. The results show that the relationship between external factor and business adaptation are both significantly associated with firm performance. In addition, the relationship between external factor and business adaptation significantly correlated, which is consistent with H1–H3. To ensure the accuracy and scientificity, other statistic was used to do further analysis.

Table 5: Mean, Standard Deviation and Correlation Coefficient

Variables	Mean	SD	External Factor	Business Adaptation	Firm Performance
1. External Factor	3.902	0.736	1		
2. Business Adaptation	3.972	0.650	0.789**	1	
3. Firm Performance	3.706	0.852	0.414**	0.537**	1

Note: ** $p < 0.01$ (Correlation is significant at the 0.01 level)

4.2 Aggregate Results

To test the proposed model, structural equation modeling analysis was performed. In addition, to test the mediation effect of business adaptation, the competitive model was built and estimated the parameters. As the fitting degree of the initial model was not satisfactory, regarding to the modification indices provided by AMOS, the modified model was revised by four pairs of error variables linkage. The modified overall model provided an excellent fit to the data with the index lower than 15. In addition, various fit indices were further evaluated including absolute fit indices, incremental fit indices and parsimony fit indices, and all these goodness-of-fit indices have satisfied the recommend criteria as referred in Table 4. Results on related fitness indicators such as Chi-square Mean/Degree of Freedom (CMIN/DF = 1.570 < 3.0) Goodness-of-Fit Index (GFI = 0.813 > 0.800), Comparative Fit Index (CFI = 0.923 > 0.900), Incremental Fit Index (IFI = 0.924 > 0.900), Tucker-Lewis Index (TLI = 0.911 ≥ 0.900) and Root mean square error of approximation (RMSEA = 0.069 < 0.080) indicate that the final conceptual model fits the data well. Thus, the modified model can be identified as the final model which will be used to test the appropriate hypotheses. Moreover, the path results can explain and reflect the causality in this research relatively effectively and rationally. The model constructs both direct and indirect impact models (Figure 2). First, the direct impact model was to verify the impact of external factor on business adaptation. The result of Figure 2 shows that when there is no intermediary role of other aspects, external factor is significantly positively related to business adaptation. Thus, *H1* is supported.

Second, the direct impact and mediating variable model (Figure 2) to verify the impact of business adaptation on firm performance and the relationship between external factor, business adaptation and firm performance. For the direct impact, the result of Figure 2 also shows that business adaptation has a positive direct impact on firm performance which *H2* is supported. In addition, path estimates in Table 6 provide support of *H1*, as the path between external factor and business adaptation is also significant and positive ($\beta = 0.91$, $p < 0.001$). The results also provide support for *H2*, as the relationship between business adaptation and firm performance is positive and highly significant ($\beta = 0.43$,

$p < 0.001$). Nevertheless, the result of path estimation does not provide support for H3, which implies that the relationship between external factor and firm performance is not significant ($\beta = 0.14$, $p > 0.001$).

For the result of the indirect impact, as the path between external factor and business adaptation is significant and positive, so is that between business adaptation and firm performance. Thus, external factor can indirectly influence firm performance through the mediating role of business adaptation (indirect effect is $0.91 \times 0.43 = 0.39$). In addition, with the insignificant relationship between external factor and firm performance, this means that external factor only has an indirect impact on firm performance. Therefore, the results prove that business adaptation is a fully mediating effect between external factor and firm performance.

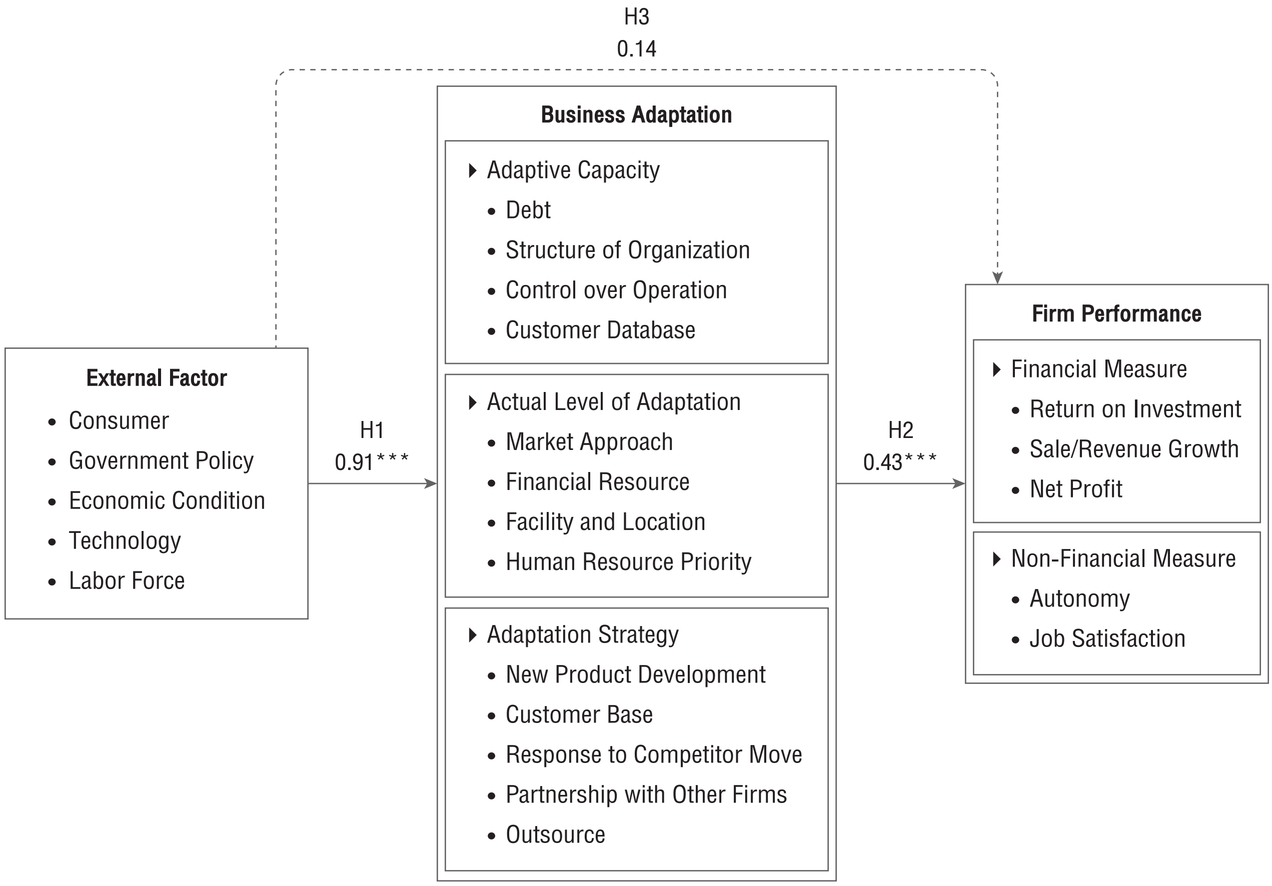

Figure 2: Direct and indirect impact model

Notes: CMIN/DF = 1.570, GFI = 0.813, IFI = 0.924, TLI = 0.911, CFI = 0.923, RMSEA = 0.069

Table 6: Fit results of the modified structural model

Path	Path Coefficients	SE	CR	p-value	Standandized Path Coefficients
External Factor (H1) ➔ Adaptation	1.032	0.181	5.679	***	0.911
Adaptation (H2) ➔ Firm Performance	0.657	0.145	4.105	***	0.433
External Factor (H3) ➔ Firm Performance	0.226	0.611	0.369	0.712	0.137
External Factor ➔ Technology	1.000				0.673
External Factor ➔ Economic Condition	1.332	0.193	6.893	***	0.745
External Factor ➔ Government Policy	1.268	0.191	6.650	***	0.698
External Factor ➔ Consumer	1.034	0.164	6.322	***	0.664
Adaptation ➔ Outsource	1.000				0.611
Adaptation ➔ Partnership with Other Firms	0.922	0.155	5.961	***	0.635
Adaptation ➔ Response to Competitor Move	0.904	0.142	6.370	***	0.720
Adaptation ➔ Customer Base	1.034	0.162	6.375	***	0.719
Adaptation ➔ New Product Development	1.101	0.161	6.840	***	0.797
Adaptation ➔ Human Resource Priority	1.064	0.161	6.593	***	0.731
Adaptation ➔ Facility and Location	0.875	0.155	5.651	***	0.607
Adaptation ➔ Financial Resource	0.957	0.152	6.318	***	0.694
Adaptation ➔ Market Approach	0.830	0.135	6.137	***	0.678
Adaptation ➔ Debt	0.939	0.129	7.288	***	0.618
Adaptation ➔ Structure of Organization	0.915	0.160	5.725	***	0.623
Adaptation ➔ Control over Operation	0.910	0.160	5.695	***	0.620
Adaptation ➔ Customer Database	1.028	0.168	6.112	***	0.688
Firm Performance ➔ Return on Investment	1.000				0.875
Firm Performance ➔ Sale/Revenue Growth	1.017	0.079	12.886	***	0.884
Firm Performance ➔ Net Profit	1.026	0.077	13.261	***	0.889
Firm Performance ➔ Autonomy	0.652	0.089	7.344	***	0.612
Firm Performance ➔ Job Satisfaction	0.681	0.093	7.310	***	0.611

Note: *** $p < 0.001$

5. CONCLUSION

5.1 Conclusions and Managerial Contributions

The obtained findings strengthen the significant role of adaptability in success of local business. The successful business owner appreciates and recognizes the realities about the importance of an ongoing adaptation for business. With 120 respondents in Rayong, the relationships between external factor, business adaptation and firm performance were empirically examined. The results show the support to all hypotheses where the key variables explaining firm performance are the external factor and business adaptation. First, the external factor has a positive impact on business adaptation as well as business adaptation also affects the firm performance which can improve the latter. The finding further supports Quinn (1978) theory of “organization change” and Wang & Chugh (2014) theory of “organization learning”, confirming and enriching the importance of which in Rayong social context. Second, the results point out that the significant mediating effect of business adaptation on the relationship between external factor and firm performance. Previous studies mostly discussed the relationship between business adaptation and firm performance from the perspective of internal organization change mechanism and less explored the mediating effect of it from the perspective of external organization change (Stoica & Schindehutte, 1999). Therefore, the conclusions of this study have improved and enriched on the indirectly influence of external factors on firm performance.

In respect of external factor characteristic, there are technology, economic condition, government policy and consumer that are found to be a factor in business adaptation. This finding suggests that government policy may likely be focused in this research. As the external factors affecting business organizations (Hartman & DesJardins, 2011), government policy has become significant perspective for businesses which need to be fully informed and participate in addressing. As properly managed, government policy may become external factors that increase the potential of business to expand and grow.

Furthermore, a critical finding shows that business adaption has an implication in firm performance. The tendency to adapt over time is positively associated with both financial performance and non-financial performance. As in (Gray, 2002), the business owners seem usual to set non-financial goals for their business. They do not tend to regard profit maximization as important (Greenbank, 2001). According to this study, the most important success measure is to balance family and work. As a conclusion, the results suggest that non-financial meters of success that are affected by the business owners’ goals and motivations. Although, financial performance is important to the business owners, enhancement beyond that is not seen as important.

5.2 Managerial Implications

Under the background of Thai government active policy "Eastern Economic Corridor", the conclusion brings some implications for both related government department and local businesses.

First, government departments should not conduct the policy that only benefit a large private companies or investors, both domestic and international, but also need to pay more attention for the policy or regulation that can assist the local business to survive and grow. In addition, government departments should encourage local business to establish a wide range of cooperation between research institutions, financing institutions and relevant government department in terms of innovation and technology, internal knowledge management and financing access.

Second, local businesses should dedicate themselves to focus on business adaptation. If they want to survive under the change of government policy, they should make strong network, both, downstream and upstream along with supply chain (customers and suppliers) and even the competitors. The local business should participate in formal and informal activities that frequently promote effective flow of technology and resource within network and reaching high performance of collaborative knowledge. Furthermore, the local business should raise the building of business adaptation strategy to set up internal management system and information sharing activities (i.e. information sharing, brainstorming, etc.), so that the innovation ability of developing new product/service can be enhanced. Thus, this point is crucial and prominent for the local business to drive their business under the challenge from government policy.

5.3 Limitations and Suggestion

Although with the significant theoretical contribution, this study also has some limitations for ongoing research. First, the external factor is considered to find out the relationship between business adaption and firm performance. However, it is likely that internal factor also has a positive impact on business adaptation as well (i.e. procedures, internal structure, controls). Thus, more attention should be focused on the concept of internal factor which might have a potential relationship between business adaptation and firm performance.

Second, this research has considered the business adaptation based on the business characteristics regarding what is adapted, for what reasons, and against what obstacles. Nevertheless, there is additional perspective that is also needed into the ways the executive levels in local business actually manage with adaption. Regarding to the relevant studies, the scope of adaptation is more proactive, strategic, planned, intentional or is more defensive, reactive and limited to what must be done.

Third, this study has not considered the effect of each business' industry in the relationship between business adaptation and firm performance. In respect of various industries, there may exist great difference in business adaptation on firm performance. For example, real estate business may have different strategic adaptation from agriculture business in order to have better firm performance. Adding this factor into the model may get more insightful conclusion for the future research.

Lastly, while the findings of this study are based on the local business owner's perspective, additional research is to examine the role of various stakeholders in considering the business adaptation. Stakeholders in the local business, except the business owners, include suppliers, financiers, employees, distributors and other stakeholders. It is likely that various stakeholders play different roles in the business which cause different results from the findings in this research.

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