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Community Enterprise Flexibility Competency Affecting Firm Survival in the Product Manufacturing Sector in Northeast Thailand Via New Product Creation, Market Fulfillment Efficiency, and Product Advantage

Chattawat Limpsurapong[1], Worasit Wongadisai[1*] and Laddaporn Kunkeaw[2]

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Abstract

This study aimed to investigate the relationship between community enterprise flexibility competency and firm survival of the product manufacturing sector in northeast Thailand in terms of new product creation, market fulfillment efficiency, and product advantage. We postulated five dimensions of community enterprise flexibility competency (i.e., continuous process improvement, product research and development orientation, dynamic learning capability, intensive knowledge- based operation, and proactive operation mindset). The data were collected from 380 community enterprise CEO working in the product manufacturing sector in northeast Thailand using a self-reported questionnaire. Data were analyzed using multiple correlations and multiple regression analysis. The results showed that the community enterprise flexibility competency in the aspects of continuous process improvement, intensive knowledge-based operation, and proactive operation mindset were positively associated with new product creation and market fulfillment efficiency significance level test 0.01. New product creation and market fulfillment efficiency were positively associated with product advantage and firm survival significance level test 0.01. Product advantage was positively associated with firm survival significance level test 0.01. Firm experience above 5 years has positive relate to product advantage significance level test 0.01. Community enterprise flexibility competency in terms of product research and development orientation and dynamic learning capability demonstrated non-association with new product creation and market fulfillment efficiency. Firm reword has not relate

[1] Dr, Faculty of Liberal Arts and Management Science, Kasetsart University, Chalermphrakiat Sakon Nakhon Province Campus
[2] Assistant Professor Dr., Faculty of Liberal Arts and Management Science, Kasetsart University, Chalermphrakiat Sakon Nakhon Province Campus
* Corresponding author: E-mail address : worasit.w@ku.th

to new product creation, market fulfillment efficiency, product advantage, and firm survival.

Keywords: Organizational Flexibility Competency, Firm Survival, Community Enterprise

Introduction

A community enterprise is considered a significant policy for promoting a healthy economy. It is fundamental for community development to be promoted in terms of knowledge and local wisdom, income generation, helping each other, and management skills development. The development of a community enterprise model will strengthen its economic system (Sakolnakorn, 2013). Based on the social aspect, it is the combination of family relationships by allows families and communities to collaboratively think, take responsibility, and share both trouble and happiness together through community operation (Pongpit, 2013). Therefore, community enterprise is important for fundamental economic and social development by helping elevate the quality of life of people in communities, generating income, and solving poverty for local people who are the majority in the country (Keeariyo et al., 2016). The community enterprise shall be successful and strong in the long run when the business continuously provides products and income, good management, and appropriate adaptation to changing environment, and is able to cope with arising crises to achieve firm survival (Anusonphat & Poompurk, 2022), leading to organizational goal achievement and sustainable development (Sakolnakorn, 2013).

However, in the past 2-3 years, an emerging infectious disease "Covid-19" caused by coronavirus occurred and spread all over the world, including Thailand where there were more than 2 million cumulative infected people and more than 20,000 cumulative deaths across the country (Department of Disease Control of Thailand, 2021). It gives rise to various economic effects, i.e. effects on the tourism industry, manufacturing and exporting of small and medium-sized community enterprises, and household income in and outside the agricultural sector including community businesses or community enterprises. A severe decline in global economy and trade, a decrease in number and revenue from foreign tourists, drought problems and conditions, and restrictions caused by the pandemic of Covid-19 affected continuously from 2019 when the pandemic spread throughout 2020 and 2021. According to the Office of the National Economics and Social Development Council (2021), the overall Thai economy declined by 6.1% compared to the expansion of 2.3% in 2019. In terms of expenses, the export value dropped by 6.6%, consumption in the private sector decreased by 1.0% and total investment decreased by 4.8%. Government expenditure and investment expanded by 0.8% and 5.7% respectively. Agricultural manufacturing, and forestry and fishery decreased by 3.4%. The industrial sector dropped by 5.7%, accommodation and food services decreased by 36.6%, and the transportation and warehouse industry decreased

by 21.0%. In 2020, the gross domestic product (GDP) in Thailand was worth 15.7 trillion baht. GDP per capita was 225,913.8 baht per person per year. According to the analysis of the business situation during the spread of the 3rd wave of Covid-19 in June 2021 and based on survey results from Small and Medium Enterprises (SMEs) affected by the Covid-19 situation, conducted by the Office of Small and Medium Enterprise Promotion (2021) found that entrepreneurs from SMEs and community enterprises could partially run their businesses accounted for 60.23%, could run their businesses as usual accounted for 22.75%, needed to temporarily close their business due to the orders of the government sector accounted for 15.11%, and needed to permanently close down their businesses accounted for 1.91%. Small community enterprises were affected by declining revenue the most. Most affected manufacturing businesses were clothing and ornament manufacturing businesses, cosmetic business, medicine and herb manufacturing businesses respectively.

The occurrence of economic recession gives an impact on the business system concerning the product manufacturing and service sector. Many businesses need to adjust their workability to be able to survive in the arising situation, i.e., reducing expenses and committing to creating skills to respond to the demands of customers, including adjusting a business model, etc. (Danneel, 2002). Therefore, the occurrence of an economic crisis enables businesses to give importance to customer satisfaction, technological competition, and organizational survival which guarantee that they can survive under ongoing situations. Businesses need to have adaptation strategies for firm survival and operational success in the future. Sundbo (1997) stated that business operations skills are associated with analyzing situations and determining business direction through the process of seeking customer demands, market demands, and business competitors by using the process of creation, improvement, and development of new operations. Business success depends on the ability in adapting their own operations in response to changing environment. Businesses must ensure that their operations are continuously developed to produce new products in response to customer demands. Therefore, business operation skills depend on retention, searching, and evaluation from previous operational performance (Armbruster et al., 2008).

Based on the aforementioned notion above, this study aimed to investigate the effect of community enterprise flexibility competency on firm survival of the product manufacturing sector in northeast Thailand in terms of new product creation, market fulfillment efficiency, and product advantage under the economic recession due to the pandemic of "Covid-19" caused by a coronavirus. The benefits from this research will contribute to community enterprises that they shall adopt practical guidelines or preparedness to enter into flexibility competency for creating business advantages and being aware of firm survival in the future.

Objective

1. To investigate the relationship between community enterprise flexibility competency, i.e., continuous process improvement, product research and development orientation, dynamic learning capability, intensive knowledge-based operation, proactive operation mindset with new product creation.

2. To investigate the relationship between community enterprise flexibility competency, i.e., continuous process improvement, product research and development orientation, dynamic learning capability, intensive knowledge-based operation, proactive operation mindset with market fulfillment efficiency.

3. To investigate new product creation affecting product advantage and firm survival.

4. To investigate market fulfillment efficiency affecting product advantage and firm survival.

5. To investigate product advantage affecting firm survival.

Literature review

This study focuses on the conceptual relationship between the community enterprise flexibility competency with new product creation, market fulfillment efficiency, product advantage, and firm survival. The community enterprise competency encircles environments. The conceptual model in figure 1 summarizes the literature review and utilizes theory to explain research phenomena including the dynamic capabilities approach. This theory is used to describe the relationship among variables in the conceptual framework and the proposing hypotheses. The dynamic capabilities approach explains the advantages and survival of the firm. It must be able to adjust the mix of the firm to comply with environmental change. The concept of dynamic capability has been extended to consider the unique competency of firms in order to integrate, build, and reconfigure internal and external competencies in a rapidly changing environment (Teece, Pisano & Shuen, 1997). Wang and Ahmed (2007) defined dynamic capabilities as the behavior of the firm continued to integrate, reset, renew and create resources and their abilities, most importantly, enhance and restore core capabilities in response to environmental change in order to achieve and maintain competitive advantage. Thus, dynamic capabilities are mentioned in an organization's modes of reaction in a rapidly changing environment. In summary, firms must include both dynamic capabilities and resources that generate competitive advantage (Ray, Barney & Muhanna, 2004). In this research, the dynamic capability is applied to explain the ability of firms that adapt to the changing environment.

1. Organizational Flexibility Competency – organizational flexibility competency is referred to the preparedness to accept and support changes or new things beneficial to organizations, being able to adapt themselves and apply methods to be consistent

with changing situations and having flexibility at work to adapt to duties at work appropriate to situations. Certo and Peter (1991) mentions that organizational flexibility competency is the process with characteristics of continuous improvement and review to ensure that organizations can survive consistently in changing environment. It is the ability to apply resources quickly and efficiently in response to the changing markets (Srinivasan & Swink, 2017). Pun and White (2005) added that ability of entrepreneurs to cope with rapid changes in today's business is an adaptation to something different. They have an idea to create products, are able to seek something useful for their organizations, and are able to predict future situations for developing a plan to cope with something that will make organizations survive. Dubey, Gunasekaran and Childe (2018) stated that it is how to cope with problems or changes that might occur to ensure that organizations have the flexibility and change their process promptly through the process of work method improvement, job learning that should be carried out continuously to be the fundamental of operations, and being able to build organizational capacity to achieve the set goals. All of these can help organizations be able to determine their strategies and methods appropriately.

1.1 Continuous Process Improvement – continuous process improvement is the development or adjustment of processes in a regular and even manner to meet situations for achieving efficiency in services, products, employee proficiency, problem reduction, and quick problem-solving. Bhuiyan and Baghel (2005) defined continuous process improvement more generally as a culture of sustainable improvement targeting the elimination of waste in all systems and processes of an organization. It occurs when everyone is working together to make improvements without necessarily making huge capital investments. CPI could exist through an evolutionary improvement, in which the case improvements are incremental whereas the radical changes manifest as a result of an innovative idea or new technology. Imai (1986) mentioned that it is the development of the work process continuously and sustainably to achieve organizational goals and respond to customer demands. Oliver, Delbridge and Barton (2002) mentioned that it is the creation and development to always achieve learning, enabling organizations to have a development of continuous work process. Hambacha, Müllera and Metternicha (2017) stated it is a variety of improvement by focusing on the development of personnel capability for improving the process. Blaga (2020) mentioned that it is the improvement of activities in all basic processes to achieve business goals. Therefore, the hypotheses are proposed as below:

Hypothesis 1a: Continuous process improvement is positively related to new product creation.

Hypothesis 1b: Continuous process improvement is positively related to market fulfillment efficiency.

1.2 Product Research and Development Orientation – product research and development orientation is the ability of businesses to search for knowledge regarding people, culture, and society then transforming the knowledge from searching to develop new techniques or methods for problem - solving (OECD, 2008). Research and development (R & D) includes creative work conducted systematically to increase the stock of knowledge including culture and society, and the stock of this knowledge to design new programs. Ericson and Pakes (1995) mentioned that it is an important factor affecting entrepreneurial survival, allowing entrepreneurs to improve work efficiency, bring the knowledge from pure research to develop techniques or methods for problem-solving and testing to get satisfactory results before publicizing widely to improve work to gain more efficiency. Dosi, Nelson and Winter (2000) found that research and development would lead to innovation making. These factors play a crucial part in promoting the improvement of manufacturing efficiency, contributing to the continuous development of products and services, and are important to entrepreneurs for gaining more opportunities for survival. Thomke (2003) explained that the greater firm's research and development intensity the more innovative product or service. Based on this review, this research formulates the hypotheses as below:

Hypothesis 2a: Product research and development orientation is positively related to new product creation.

Hypothesis 2b: Product research and development orientation is positively related to market fulfillment efficiency.

1.3 Dynamic Learning Capability – dynamic learning capability referred to the ability to practice, seek knowledge, and develop new skills for everyone in the organization at all times. It is the organizational ability to develop and build capacity for conducting business in order to be consistent with the business environment and drive organizations in the same direction. Marquardt (1996) provided the meaning of continuous learning or dynamic learning as the learning process of personnel in organizations that have been carried out and passed on to individuals, teams, or organizations, which promotes learning in individuals at each level. It is an increase in skills and abilities at work by learning new things at all times, enabling people to have perspective, attitude, and methods for problem-solving. Giniuniene and Jurksiene (2015) stated that it is a learning through the process of creating new knowledge inside and outside organizations. It is a vital process that enhances efficiency, competitive advantages, and innovation in organizations. Teece and Leih (2016) viewed it as an organizational ability to connect, reduce, and create resources or products to produce new things consistent with changing environment, create and adjust the business environment to suit the changes. Therefore, hypotheses are posited below:

Hypothesis 3a: Dynamic learning capability is positively related to new product creation.

Hypothesis 3b: Dynamic learning capability is positively related to market fulfillment efficiency.

1.4 Intensive Knowledge-based Operation – intensive knowledge-based operation referred to the application of everyone's knowledge in transferring and sharing with others in organizations or the collaboration of individuals in utilizing knowledge, expertise, and culture to make plans and work efficiently and effectively. Mckeen and Smith (1993) provided the meaning of intensive knowledge-based operation as the management of a systematic process for knowledge creation by storing and sharing knowledge including identifying the current situation, determining demands, and correcting and improving the process that would affect better knowledge management. Davenport and Prusak (1998) stated that it is a method for knowledge transfer by using information technology infrastructure to increase employees' capabilities. Therefore, the structure of the body of knowledge is a major component of organizations with a successful business. Tzortzaki and Mihiotis (2014) stated that it is the process of knowledge creation that relies on knowledge searching, access determination, and knowledge sharing appropriately. It applies the existing knowledge to operations and problem-solving based on collaboration. Each part brings its knowledge to apply to work in a useful way and disseminate to the public, knowledge transfer, advising to increase efficiency and impress service receivers. Therefore, hypotheses are posited below:

Hypothesis 4a: Intensive knowledge-based operation is positively related to new product creation.

Hypothesis 4b: Intensive knowledge-based operation is positively related to market fulfillment efficiency.

1.5 Proactive Operation Mindset – proactive operation mindset referred to a concept development or instilling employees' work behavior. It focuses on the process of developing and improving their work to achieve the highest quality and be able to work with other people, which will help increase the opportunity for businesses to have a new way in terms of work or innovation. Grant and Ashford, (2008) described that a systematic approach at work is the process of relevant knowledge searching and utilizing that knowledge to expect or generate desired outcomes, making a plan for preventing problems and following that plan, planning for a future to ensure successful work, and seeking new opportunities to add more value to products and generate competitive opportunities in response to demands. Morrison and Phelps (1999) mentioned that it is the idea that when an individual attempts to change the work process to achieve successful work. Office of the Civil Service Commission (2018) stated it is utilizing an opportunity that arises quickly or seeing an opportunity that will arise in the future and preparing things in advance for using benefits obtained from the arising opportunity immediately. Proactive work behavior is crucial in assisting organizations to discover both crisis and opportunity, and prepare things in advance, which will lessen

damage or exploitation from changing situations. Therefore, hypotheses are posited below:

Hypothesis 5a: Proactive operation mindset is positively related to new product creation.

Hypothesis 5b: Proactive operation mindset is positively related to market fulfillment efficiency.

2. New Product Creation – new product creation is the development or modification of products including creating a new one with high capacity but with a lower cost of production, making product differentiation or outstanding features, and adding more value to products which be able to compete with competitors and respond to consumers demands. Nakata and Sivakuma (1996) described that new product creation is the process of thinking and creating new products for markets and enabling businesses to achieve the set goals. Krishnan and Ulrich (2001) explained it is the process of changing an idea for a new product. Thus, the product will be differentiated and added more increasing customer satisfaction, which will be able to present to consumer markets for boosting sales to the company in a short period. Cooper (2016) indicated that new product creation is about generating a competitive advantage to new products where its differentiation is difficult for imitation. Perreault and McCarthy (2002) stated that includes product development with new idea or changes made to existing one. Such changes will enable consumers to be more satisfied with products. Constant new product development is the most important to the expansion and operations of businesses. The hypotheses are offered as follows:

Hypothesis 6a: New product creation is positively related to product advantage.

Hypothesis 6b: New product creation is positively related to firm survival.

3. Market Fulfillment Efficiency – market fulfillment efficiency is the way that businesses use their inner ability to respond to consumer demands or competitor demands. Therefore, it enables businesses to generate competitive advantages or ensure firm survival (Langerak, Hultink & Robben, 2004). Fulfillment refers to a firm's operational transfer activities including physical features of service and perceptions of reliability, and the capability to achieve the promised service reliable and correctly (Stank et al., 2003). Market fulfillment is defined as perceived by the producer or retailer to be a critical component driving producer, retailer, and customer satisfaction (Lee & Billington,1992). Day (1994) explained that a fulfillment service is a mechanism when a firm understands the external change in the market and customers' needs with the internal process, and activities wanted to be fulfilled to ensure superior customer value or high customer satisfaction. Chuwiruch, Jhundra-indra and Boonlua (2016) explained that presenting new products that increase customer satisfaction and speedily fulfill customer needs shall generate product and competitive advantages from product differentiation, and give

identity to products and businesses but it should be based on customer needs and acceptance. The hypotheses are offered as follows:

Hypothesis 7a: Market fulfillment efficiency is positively related to product advantage.

Hypothesis 7b: Market fulfillment efficiency is positively related to firm survival.

4. Product Advantage – product advantage is the products with outstanding features, value, and identity that are difficult to imitate and are able to fulfill consumer needs better than products from competitors. Nakata et al., (2006) provided the meaning of product advantage as the way businesses attempt to create new products that are accepted by consumers. Thus, product advantage can describe the better operational performance of businesses. Bastic (2004) described that it is the new products that consumers accept and need, which are different from competitors' products. Gatignon and Xuereb (1997) explained that it referred to the kind of products that are better than competitors' ones in the market. Cooper and Kleinschmidt (1993) described that product advantage is when the products are full of quality, value, and identity which seem difficult to imitate and able to fulfill consumer needs better than competitors' products, which an organization can do better or implement while others cannot. Aaker (2001) described that those advantages may occur from some assets or resources that one organization has but another organization does not have. Competitive advantage is a concept that every organization should be aware that they should be generated in a sustainable manner. Thus, the study adopted four product advantage indicators: 1) uniqueness; 2) quality; 3) efficiency; 4) value. The hypothesis is posited as follows:

Hypothesis 8: Product advantage is positively related to firm survival.

5. Firm Survival – firm survival is how businesses are able to fight against obstacles efficiently with an explicit process or plan showing the long-term success that enables businesses to survive in the economic, business, and competitive environment in every situation while businesses need to have adaptation, knowledge, and understanding that can be adapted to the operations efficiently. Esteve-Pérez and Mañez-Castillejo (2008) proposed that firm survival is the ability in developing and enhancing distinct products. It is the ability in adapting to the changing competitive environment and improves its survival prospects. Suarez and Utterback (1995) defined firm survival as the probability that a company shall operate its business instead of leaving the industry while the business is able to achieve the purposes or goals from the business operations planning, showing long-term success in terms of long-term profitability, business operations that reflect long-term outcomes, ability to stay in trade competition sustainably, considered from profitability, competitive advantage, and business productivity. All of these are major components influencing businesses to survive (Rummler & Brache, 1995). In this regard, businesses that can survive tend to present their potential and ability of business

activities that exist continuously through their present and future business operations (Li, Shang & Slaughter, 2010).

Conceptual Framework

From the reviews of related concepts, theories and studies, a conceptual framework was developed. The independent variable is community enterprise flexibility competency. Its dimensions included continuous process improvement, product research and development orientation, dynamic learning capability, intensive knowledge-based operation, and a proactive operation mindset. Dependent variables consisted of New Product Creation, Market Fulfillment Efficiency, product advantage, and Firm Survival.

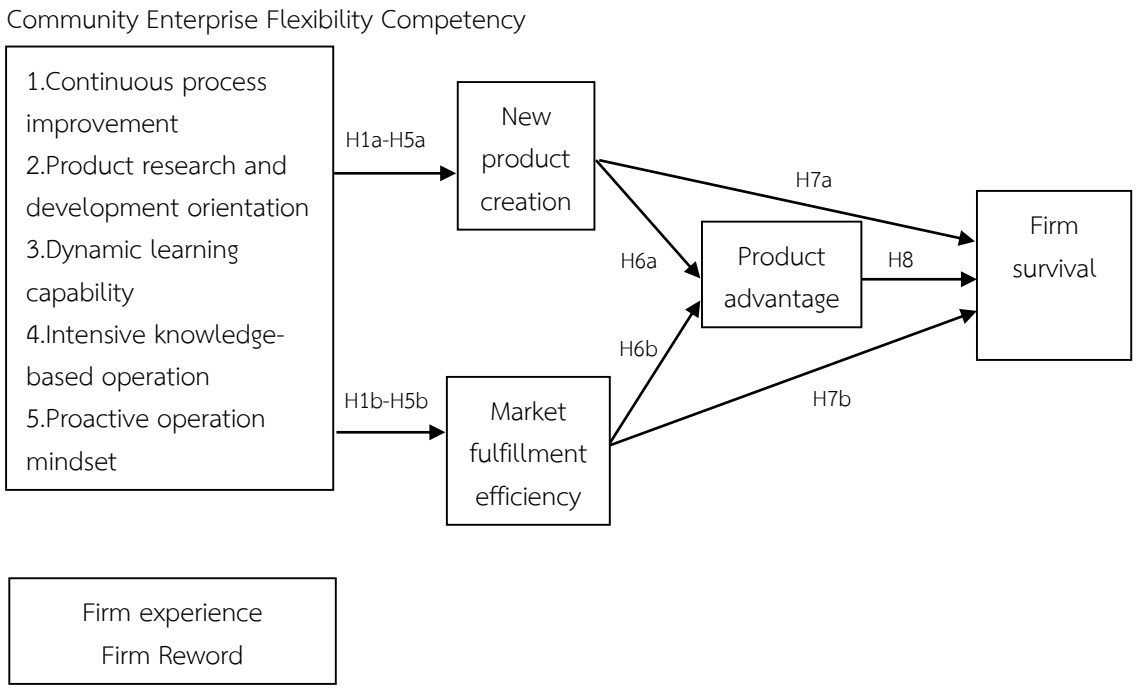

Figure 1 Conceptual Framework

Methodology

Participants and Data Collection

The sample size was calculated using the adjustment formula from Krejcie and Morgan (1970) which the level of confidence was set to 95%. Data from the Community Enterprise Promotion Division (2020) indicated that in northeast Thailand, there are 11,061 community enterprises in the product manufacturing sector. An estimate of the appropriate sample size was 371 Community enterprises. The researchers plan to collect sample data more than that. The researchers consulted government officials in the northeastern regions regarding the Community Enterprise Promotion Division to obtain access and contact information. Participants were the chief executive officer (CEO) of each community enterprise who has known the policy of the firm. An e-mail survey was

used for data collection through a self-reported questionnaire on 25th August 2021. After 10 weeks, 408 responses was received whereas 380 completed the whole survey.

Method

The ordinary least square regression analysis was used to assess all hypotheses in this study. In the first step, the factor analysis was used for checking construct validity; in the second step, Cronbach alpha was used for checking the reliability of measurement. In the last step, a non-response bias test was conducted to examine possible bias. Factor analyses managed were done separately on each set of items reporting specific scale because of the limited of observation. Using principle component analysis, the varimax rotation, the orthogonal rotation, and the result were showed as nine-factor solutions. In respect to confirmatory factor analysis, this analysis has a high ability to expand the component loadings. Thus, a cut-off .40 was adopted (Nunnally & Bernstein, 1994). All factor loadings were higher than .40 as shown in Table 1.

The reliability of measurement in this study was assessed by Cronbach's alpha. The reliability of the scale was investigated using Cronbach's alpha value which should be higher than 0.70 (Nunnally & Bernstein, 1994). All Cronbach's alpha values of each construct were higher than 0.70 as shown in Table 1. Table 1 shows factor loadings values and Cronbach's alpha of all constructs in this current study. For the last, non-response bias was tested in two samples by independent. A comparison of the first group and second group data is suggested by Rogelberg and Stanton (2007). The variables test revealed that statistics for firm characteristics (i.e., firm type and firm employees) were not significant between on first group and second group data. Thus, the non-response bias did not violate the analysis.

Table 1 Results of Measure Validation

Items	Factor loadings	Cronbach's Alpha	Number of Item
Continuous process improvement (CPI)	0.882-0.909	0.912	4
Product research and development orientation (PRD)	0.785-0.886	0.867	4
Dynamic learning capability (DLC)	0.798-0.899	0.877	4
Intensive knowledge-based operation (IKB)	0.810-0.894	0.875	4
Proactive operation mindset (POM)	0.829-0.892	0.888	4
New product creation (NP)	0.796-0.860	0.849	4
Market fulfillment efficiency (ME)	0.798-0.873	0.862	4
Product advantage (PA)	0.790-0.889	0.859	4
Firm survival (FS)	0.871-0.947	0.931	4

Questionnaire Development and Measurement Variable

The variables of this study were measured using a five-point scale ranging from 1 = "strongly disagree" to 5 = "strongly agree." We developed a questionnaire to evaluate the dimensions of community enterprise flexibility competency, new product creation, market fulfillment efficiency, product advantage, and control variables. Firm survival is a dependent variable. Firm survival is measured by the increasing high income from operating, obtaining a high profit from an investment, having high progress from good service sales, being able to maintain market share, etc. This construct was developed as a new scale from its definition and literature including 4 item scales (Li, Shang & Slaughter, 2010). The dimensions of community enterprise flexibility competency which was the independent variables included continuous process improvement, product research and development orientation, dynamic learning capability, intensive knowledge-based operation, and proactive operation mindset, and were measured by four items. Dimensions of community enterprise flexibility competency developed as a new scale from the related literature and its definitions. Mediator variables included new product creation, market fulfillment efficiency, and product advantage measured by four items. Product advantage was measured by a product's perceived superiority relative to competitive products. This variable was developed from Nakata et al. (2006). On the other hand, new product creation and market fulfillment efficiency are developed on a new scale. There were two control variables in this study namely, firm experience, and reword. Previous research has shown that all control variables will affect the ability of a firm in business operation (Ussahawanitchakit, 2005).

The study used OLS regression analysis to test hypotheses. In this study, the equation models of relationships are as follows.

Equation 1: $NP = \beta_{01} + \beta_1 CPI + \beta_2 PRD + \beta_3 DLC + \beta_4 IKB + \beta_5 POM + \beta_6(FEx) + \beta_7(FR) + \varepsilon_1$

Equation 2: $ME = \beta_{02} + \beta_8 CPI + \beta_9 PRD + \beta_{10} DLC + \beta_{11} IKB + \beta_{12} POM + \beta_{13}(FEx) + \beta_{14}(FR) + \varepsilon_2$

Equation 3: $PA = \beta_{03} + \beta_{15} NP + \beta_{16} ME + \beta_{17}(FEx) + \beta_{18}(FR) + \varepsilon_3$

Equation 4: $FS = \beta_{04} + \beta_{19} NP + \beta_{20} ME + \beta_{21} PA + \beta_{22}(FEx) + \beta_{23}(FR) + \varepsilon_4$

Where:

CPI is continuous process improvement; PRD is product research and development orientation; DLC is dynamic learning capability; IKB is intensive knowledge-based operation; POM is proactive operation mindset; NP is new product creation; ME is market fulfillment efficiency; PA is product advantage; FS is firm survival; FEx is firm experience; FR is firm reword

Results and Discussion

For this research, most of respondents are female (67.6%) which the span of ages is more than 50 years old (52.1%) and married (55.3%). Their education levels are secondary school (48.2%). 38.9% of respondents have working experiences between 5 to 10 years. Receive the average monthly income under 15,000 (66.1%). Which the span of product is costume (51.3%). Average community enterprise revenue per year is between 10,000-15,000 (48.7%). Finally, no reword (63.9%)

In summary, the mean standard deviation and correlation matrix for all variables are shown in Table 2. Multicollinearity testing focuses on the result of variance inflation factors (VIF) ranging from 1.03 to 5.106. Mason and Perreault (1991) suggested that when the VIF values are above the cut-off of 10, multicollinearity has occurred. Thus, in this study shows no multicollinearity problem.

Table 2 Descriptive Statistics and Correlation Matrix

Variables	CPI	PRD	DLC	IKB	POM	NP	ME	PA	FS	FEx	FR
Mean	3.61	3.87	3.91	3.81	3.86	3.67	3.58	3.67	3.68	2.07	1.63
Standard deviation	1.00	0.82	0.82	0.79	0.84	0.85	0.89	0.88	0.91	1.05	0.48
CPI											
PRD	.802**										
DLC	.698**	.717**									
IKB	.643**	.663**	.641**								
POM	.686**	.668**	.775**	.851**							
NP	.657**	.612**	.610**	.787**	.781**						
ME	.606**	.545**	.497**	.655**	.657**	.853**					
PA	.675**	.583**	.588**	.618**	.647**	.749**	.816**				
FS	.611**	.565**	.432**	.518**	.547**	.702**	.691**	.713**			
FEx	.156**	.096	.056	.111*	.091	.077	.053	.196**	.103*		
FR	.015	.032	.101*	.074	.000	.050	.076	.009	.029	.002	

** Correlation is significant at the 0.05*

*** Correlation is significant at the 0.01*

The result of the OLS regression analysis of the relationship between community enterprise flexibility competency, new product creation, and market fulfillment efficiency is shown in Table 3. Continuous process improvement had a significant and positive effect on new product creation ($b1 = 0.214$, $p < 0.01$). Continuous process improvement also had a significant and positive effect on market fulfillment efficiency ($b8 = 0.311$, $p < 0.01$). Thus, it suggested that firms with a higher range of continuous process improvement emerge to have a greater market fulfillment efficiency than new

product creation. This result according to prior studies suggests that continuous process improvement is the creation and development to always achieve learning, enabling organizations to have a development of continuous work process (Oliver, Delbridge & Barton, 2002). Blaga (2020) mentioned that it is the improvement of activities in all basic processes to achieve business goals. Thus, hypotheses 1a and 1b are supported. Product research and development orientation was not significant to new product creation and market fulfillment efficiency. Thus, hypotheses 2a and 2b are not supported. Dynamic learning capability was not significant to new product creation and market fulfillment efficiency. Thus, hypotheses 3a and 3b are not supported. This may be due to the fact that most community enterprises continue to use the traditional method of production, which mostly relies on human labor. This traditional method results not only in limited production capacity and developing original products which require knowledge and learning as the basis for product invention but also in a lack of product research and development, and marketing knowledge planning and marketing. According to Sakolnakorn and Naipinit (2013), the community enterprise is built from the gathering of many villagers in the community using product mechanism that they are skilled at to drive the market. When the production is finished, they come to think of who and where to sell it, which is deviated from the principles of marketing management. Chiarakul (2014) shared a similar notion. The author stated that most community enterprises lack technology development or the use of modern technical knowledge to assist in production. They also lack product development and identity and are not focused on product development knowledge, e.g., creating new product innovations, and creating marketing strategies, e.g., finding new markets. Therefore, community enterprises should focus and seriously improve their production efficiency by bringing in modern production technology with low cost to help in production and continually learning and acquiring relevant knowledge.

Intensive knowledge-based operation had a significant and positive effect on new product creation ($b4 = 0.406$, $p < 0.01$). Intensive knowledge-based operation also had a significant and positive effect on market fulfillment efficiency ($b11 = 0.274$, $p < 0.01$). Thus, it suggested that firms with a higher range of Intensive knowledge-based operations emerge to have a greater new product creation than market fulfillment efficiency. The result is similar to Tzortzaki and Mihiotis (2014) stated that it is the process of knowledge creation that relies on knowledge searching, access determination, and knowledge sharing appropriately. It applies the existing knowledge to operations and problem-solving based on collaboration. Each part brings its knowledge to apply to work in a useful way and disseminate to the public, knowledge transfer, advising to increase efficiency and impress service receivers. Thus, hypotheses 4a and 4b are supported. Proactive operation mindset had a significant and positive effect on new product creation ($b5 = 0.330$, $p < 0.01$). Proactive operation mindset also had a significant and positive

effect on market fulfillment efficiency (b12 = 0.307, p < 0.01). Thus, it suggested that firms with the higher range of proactive operation mindset emerge to have a greater new product creation than market fulfillment efficiency. The result is similar to Office of the Civil Service Commission (2018) stated it is utilizing an opportunity that arises quickly or seeing an opportunity that will arise in the future and preparing things in advance for using benefits obtained from the arising opportunity immediately. Thus, hypotheses 5a and 5b are supported.

Table 3 Results of Regression Analysis 1

Dependent Variables	NP	NP	ME	ME	PA	PA
Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CPI		.214**		.311**		
		(.053)		(.066)		
PRD		.028		.001		
		(.054)		(.067)		
DLC		.027		.121		
		(.051)		(.064)		
IKB		.406**		.274**		
		(.058)		(.072)		
POM		.330**		.307**		
		(.056)		(.082)		
NP						.173**
						(.054)
ME						666**
						(.054)
PA						
FEx	.077	.027	.053	.046	.196**	.147**
	(.115)	(.066)	(.115)	(.082)	(.113)	(.063)
FR	.050	.015	.076	.038	.008	.006
	(.107)	(.062)	(.107)	(.078)	(.105)	(.059)
Adjust R-square	.003	.678	.003	.500	.033	.699
VIF		5.106		5.106		3.693

*Beta coefficient with standard errors in parenthesis, ** p < .01*

( ) *with standard errors*

The results of the relationship between new product creation, market fulfillment efficiency, and product advantage are shown in Table 3. New product creation was significant and had a positive effect on product advantage (b15 = 0.173, p < 0.01). The results explained that a higher new product creation achieves a greater product advantage. This result according to prior studies suggests that new product creation is about generating a competitive advantage to new products where its differentiation is

difficult for imitation (Cooper, 2016). Perreault and McCarthy (2002) stated that includes product development with new idea or changes made to existing one. Thus, hypothesis 6a is supported. Market fulfillment efficiency was significant and had a positive effect on product advantage (b16 = .666, p < 0.01). The results demonstrated that greater market fulfillment efficiency achieves greater product advantage. This result according to prior studies suggests that fulfillment refers to a firm's operational transfer activities including physical features of service and perceptions of reliability, and the capability to achieve the promised service reliable and correctly (Stank et al., 2003). Therefore, it enables businesses to generate competitive advantages or ensure firm survival (Langerak, Hultink & Robben, 2004). Furthermore, firm experience was significant and had a positive effect on product advantage (b17 = 0.147, p < 0.01). The results explained that firms with longer experience achieve greater product advantage. On the other hand, firm experience had no impact on new product creation, market fulfillment efficiency, and firm survival. All models showed that firm rewords had no impact on dependent variables.

Table 4 Results of Regression Analysis 2

Dependent Variables	FS	FS	FS	FS
Independent Variables	**Model 7**	**Model 8**	**Model 9**	**Model 10**
NP		405**		
		(.068)		
ME		.345**		
		(.068)		
PA				.723**
				(.034)
FEx	.103*	.053	.103*	.003
	(.114)	(.080)	(.114)	(.075)
FR	.029	.017	.029	.035
	(.107)	(.074)	(.107)	(.069)
Adjust R-square	.006	.522	.006	.511
VIF		3.693		

[a] *Beta coefficient with standard errors in parenthesis, * p < .05, ** p < .01*

( ) *with standard errors*

The results of the relationship between new product creation, market fulfillment efficiency, and firm survival are shown in Table 4. New product creation was significant and had a positive effect on firm survival (b19 = 0.405, p < 0.01). The results explained that a higher new product creation achieves greater firm survival. The result is similar to Nakata and Sivakuma (1996) described that new product creation is the process of thinking and creating new products for markets and enabling businesses to achieve the set goals. Thus, hypothesis 7a is supported. Market fulfillment efficiency was significant

and had a positive effect on firm survival (b20 = .345, p < 0.01). The results demonstrated that greater market fulfillment efficiency achieves greater firm survival. This result according to prior studies suggests that market fulfillment efficiency is the way that businesses use their inner ability to respond to consumer demands or competitor demands. Therefore, it enables businesses to generate competitive advantages or ensure firm survival (Langerak, Hultink & Robben, 2004). Thus, hypothesis 7b is supported. Model 10 showed the relationship between product advantage and firm survival. Product advantage was significant and had a positive effect on firm survival (b21 = .723, p < 0.01). The results explained that firms with greater product advantage achieve greater firm survival. This result according to prior studies suggests that the meaning of product advantage as the way businesses attempt to create new products that are accepted by consumers. Thus, product advantage can describe the better operational performance of businesses Nakata et al., (2006). Thus, hypothesis 8 is supported.

Implication

The results in this study addressed how community enterprise competency affects firm survival. It elaborated on how new product creation, market fulfillment efficiency, and product advantage mediate the relationship between community enterprise flexibility competency and firm survival. The current study provided pivotal theoretical contributions and adjustments to prior knowledge. We explored the key dimensions of community enterprise flexibility competency. It included continuous process improvement, product research and development orientation, dynamic learning capability, intensive knowledge-based operation, and proactive operation mindset and leading to new product creation, market fulfillment efficiency, and product advantage on firm survival. The results also provided other contributions.

First, CEO focus on new product creation and market fulfillment efficiency because both new product creation and market fulfillment efficiency are greater and have a positive effect on product advantage and firm survival. Product advantage has a stronger and positive effect on firm survival. Thus, CEO should focus on community enterprise flexibility competency as continuous process improvement, intensive knowledge-based operation, and a proactive operation mindset. Second, CEO focus on market fulfillment efficiency rather than new product creation. Surprisingly, product research and development orientation and dynamic learning capability have no effect on both new product creation and market fulfillment efficiency because the economic crisis is worldwide and there is environmental uncertainty in Thailand. Thus, future research should use environmental uncertainty or turbulence as a moderator. On the contrary, if there is no economic crisis, the concept variables of BCG and SDGs may be chosen as a new business model that enterprises must adhere to as a moderator.

Furthermore, CEO will not invest in the acquisition of new knowledge but focus on changing the work concept of the employee. Therefore, businesses can save costs.

Surprisingly, product research and development orientation and dynamic learning capability have no effect on both new product creation and market fulfillment efficiency because the economic crisis is worldwide and there is environmental uncertainty in Thailand. Furthermore, CEO will not invest in the acquisition of new knowledge but focus on changing the work concept of the employee. Therefore, businesses can save costs. Future research should use environmental uncertainty or turbulence as a moderator.

Conclusion

The results of ordinary least square regression analysis revealed the impact of community enterprise flexibility competency on firm survival in terms of new product creation, market fulfillment efficiency, and product advantage. The community enterprises in the product manufacturing sector in northeast Thailand were selected for conducting a questionnaire survey in this current study. The overall results showed a partial relationship between community enterprise flexibility competency (i. e. , continuous process improvement, product research and development orientation, dynamic learning capability, intensive knowledge- based operation, and proactive operation mindset) with firm survival in terms of new product creation, market fulfillment efficiency, and product advantage.

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