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## **Environmental Factor Analysis in Marketing Competition of Food Processing Community Enterprises in Chiang Mai Province**

Raphassorn Kongtanajaruanun<sup>1</sup>

### **Abstract**

The objectives of this study aimed to analyze environmental factor with the five forces model and to develop marketing capability with participatory approach. Samples were randomized and questionnaires were used to collect data with 30 samples under 3 food processing community enterprises, i.e., fresh longan producer group, strawberry processor group, and banana processor group. The groups were suggested by government officers in the Department of Agriculture and Community Development Department. It was found that approach strategy was used in the 3 community enterprise groups through product display in other occasions. For competitive factor, production competition was in high level among these community enterprises since consumer demand was also in high level. Moreover, developing marketing capability should cooperate with stakeholders such as community enterprise networks, government and private agencies, contributing to efficient competitive advantage. Furthermore, SWOT analysis was necessary to evaluate marketing competition and was in accord with management of community enterprise networks.

Keyword: Environmental Factor, Marketing Competition, Food Processing, Community Enterprise, SWOT analysis

### **Introduction**

As food processing in Thailand is the industry with production efficiency and availability of raw materials, Thailand is one of the major producers and exporters of processed food in the world (Small and Medium Enterprises Promotion Agency, 2010). At the present, the food industry changes rapidly corresponding to, especially, consumption behavior of people, affected by changes taking place worldwide. The consumer behavior consequently leads to the food processors' investment in producing ready-to-eat food and frozen food (Small and Medium Enterprises Promotion Agency, 2010). That is the reason why the food industry has grown and its new markets have been created, following the key strategy to constantly innovate and use technology to increase the efficiency in production, promotion and development of quality and safety of food processing. It also aims at develop marketing strategies for Thai processed food products (Bureau of Strategic Development and Special Policy Monitoring, 2010). In addition, the plan for the ASEAN Economic Community (AEC blueprint) includes four targets. Firstly, it targets uniting the AEC countries into the same market and production base, by focusing on the free movement of goods, services, investment,

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<sup>1</sup> Faculty of Economics Maejo University, Sansai, Chiangmai, Thailand 50290  
E-mail address: phassy77@gmail.com

capital and skilled labor, among the countries. Secondly, the region is aimed to hold capacity in competition with the implementation of competition policy, the infrastructure development, the protection of intellectual property, and the development of information technology and energy. Thirdly, with an emphasis on promoting participation and expansion of small and medium-sized enterprises, as well as on providing assistance to the members in order to narrow the development gap, the AEC countries in the region become equal in terms economic development. Lastly, the blueprint has its target on being the region with complete integration into the global economy, by forming the free trade area and the closer economic partnership with its dialogue partners. As a result, the ASEAN economic community members will have the same market and production base. They can freely move factors of production from one country to the others, and will cooperate with one another to facilitate, as well as to reduce barriers to, trade and investment. These factors will help strengthen the economy and increase the competitiveness of the ASEAN countries in the global market (Office of Policy and Planning, Ministry of Interior, n.d.). However, the opening of AEC inevitably affects Thailand's trade sector, particularly community enterprises or the small business group, in production industry and processing industry, doing various economic activities that generate income for the grassroots of the country.

According to the community enterprise registration and information department, 2008, in the year 2008, there were 70,304 community enterprises, classified into 33 types of business, with 1,199,332 members. And, the food processing was one of the tops to which the government gave initial priority. By considering the context of the community enterprises under the supervision of the Office of Agricultural and Development Region 6 which was responsible for 17 northern provinces, it was discovered that food processing industry was the most popular industry in which the business of the community enterprises in the area, not to mention Chiang Mai, was (Community Enterprise Registration and Information Department, 2008). Another factor affecting its population is because of the government's policy to push forward Thai food in the global market. Therefore, food processing in the northern region and Chiang Mai is regarded as a potential industry that should be primarily promoted and prepared for the AEC, particularly in the aspects of marketing capability and competitiveness, as the means for building competitive advantage among Thai community enterprises.

To analyze the marketing competitive environment of food processing community enterprises, in the first place, there is a great need to determine situation and identity of the community enterprises. Then, networking and collaboration for sustainable development among them will be explored. The community enterprises should build a network with the link to one another, as well as knowledge sharing and being a network of production resources, production, marketing, product quality enhancement, and management (Kamjai, 2007). For these reasons, the researcher is interested in studying the marketing environment of the food processing community enterprises in Chiang Mai, by shedding light on the marketing development. The study findings can be applied to enhance the competitiveness of fruit processing industry, to strengthen the network of the entrepreneurs, and to encourage sustainable self-reliance in the communities.

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## Objectives

1. To analyze the marketing competitive environment of the food processing community enterprises
2. To give guidance to the food processing community enterprises on how to escalate their marketing capability and competitiveness caused by engagement

## Methodology

### Variables Used in the Study

#### Independent Variables Include

- 1) General information: capital, operating period and number of workers
- 2) Environmental factors: factors of production, competitive context and business strategies, demand, supportive industries, and government policies

#### The Dependent Variable

The dependent variable is the business's competitiveness which covers technology and innovation, food quality and safety, and marketing strategies

### Population and Sample

#### Population:

2,943 community enterprises in Chiang Mai (Chiang Mai Provincial Agricultural Extension Office, 2011), classified into 2 groups which are the group of 2,935 community enterprises and the group of 8 community enterprise networks. The total number of members is 44,763, as 44,579 people are the community enterprise members, and 184 people are the community enterprise network.

#### Sample:

the 400 samples derived from the random sampling adopting the calculation formula of Taro Yamane (Yamane, 1967) with 0.5 standard deviation and 95 percent confidence level, and 3 groups of community enterprises (10 members per each) in Chiang Mai participating in the project to enhance marketing capacity and competitiveness of food processing community enterprises on the advice of Chiang Mai Provincial Agricultural Extension Office and Chiang Mai Community Development Office. The groups include the group of longan producers, the group of processed strawberry product entrepreneurs and the group of processed banana

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product entrepreneurs, with the potential in production and marketing field. The second sample is derived from employing the purposive sampling.

## **Research Tools**

In this study, data was collected with the use of questionnaires. A questionnaire was divided into three parts as follows:

Part 1: general information, operating period and number of workers

Part 2: environmental factors including factors of production, competitive context and business strategies, demand, supportive industries, and government policies

Part 3: competitiveness of food processing business in terms of technology and innovation, food quality and safety, and marketing strategies

## **Data Collection**

Data collection was conducted with 400 questionnaires given to the community enterprise members and to the entrepreneurs.

## **Data Analysis and Statistics Used**

1. The analysis of the community enterprises' current competitive situation was based on the data collected from reports of relevant agencies, from websites and from interviews with people involved, concerning the demand, and its trends, for processed products of both domestic and foreign community enterprises. To complete the analysis, the macroeconomic environmental factors, including factors of production, competitive context, demand for the product, supportive industries, government policies and marketing strategies, were considered. In the meantime, the microeconomic environment, covering capital, operating period, and number of workers, was also analyzed by employing the Diamond model of Porter (1990, 1998). Additionally, the analysis was done by considering environmental factors including the factors of production, the competitive context and the business strategies, the demand for the product, the supportive industries and the government policies which were the factors affecting the dependent variable or the business' competitiveness constituted by the business technology and innovation, the food quality and safety, and the marketing strategies. Moreover, the tools used in study were the deep content analysis and the Diamond model. Furthermore, this study also provided the analysis of competitiveness of the business by adopting the five forces model which was constituted of 2.1) intensity level of competition among existing businesses, 2.2) barriers to competition caused by newcomers, 2.3) bargaining power of suppliers, 2.4) bargaining power of buyers, and 2.5) threat of substitute products or services. The deep content analysis was used, here, to analyze the five competitive forces. The entrepreneurs would have to assess their competitiveness by focusing on the factors or indicators, both macroeconomic and microeconomic, as well as considering the five forces as in the model. They were required

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to rate their competitive capability using the scales from 1 to 5, which meant the least to the most, respectively. Last but not least, the statistical means used to analyze the data were percentage, mean, standard deviation, t-test, and multiple regression analysis.

2. Descriptive statistics were used to determine guidelines for escalating the community enterprises' marketing capability and competitiveness, by analyzing strengths, weaknesses, threats and opportunities (SWOT Analysis) of the businesses. The data obtained based on the first objective was synthesized into information supporting the decision-making of the entrepreneurs on how the marketing capability and competitiveness can be improved.

## Results

In the aspect of the situation and competitive environment of the community enterprises in Chiang Mai, the analysis results were divided into parts: the analysis of current situation analysis, the analysis of competitive situation and environmental factors using the Diamond model, and the analysis of competitiveness under five forces adopting the five forces model. To begin with the first part, currently, community enterprises were operated with the integration of the communities. Not being commercially registered, organizations were established by groups of people, with government agencies' provision of assistance such as budget or financial support from local authorities, and management support from the Ministry of Agriculture, and Cooperatives, the Department of Community Development and the Ministry of Industry and management, as supported. In addition, in terms of managing the groups and people, the markets and customers, and the production and products, the community enterprises today must be managed corresponding with the community enterprise management standard of Thai Industrial Standards Institute, Ministry of Industry. They were also supported in production that covered accounting and financial management, and guidelines for improvement. Particularly, this research's primary target was on marketing development, or on escalating the marketing capability and competitiveness of the community enterprises. As the top three popular food processing businesses in Chiang Mai, the 3 groups of food processing community enterprises investigated were the longan processing business, the strawberry processing business, and the banana processing business. Additionally, the important goal of this study is to promote competitiveness of the businesses, self-reliance of the communities, fully-covered networks with efficiency and sustainability.

Looking at the environmental factors that affected competitiveness of the three food processing business groups, it was found that, there were three factors involved: the demand, the capital, the competitive context and marketing strategies. Firstly, in terms of the demand for the products, as needs of consumers always changed over time and were in various kinds, the producers would need have to compete with one another and try to improve their products' quality or invent new products in order to meet consumer needs both existing and in the future. This was in consistent with the Diamond Model theory which was also related to the theory of building competitiveness of Porter (Porter, 2002). Moreover, the fact, that demands or complex needs of consumers for higher quality products would catalyze the producer's need to better



the quality of their goods and services while continuously trying to innovate new products in order to satisfy their customers and to best compete in the market, was in line with the Dynamic Productivity and Competitiveness Linkages concept of Shurchuloo (Shurchuloo, 2002). That is, to mention the capability to manage assets and processes of an organization, the competitive assets include infrastructure, finance, technology and human resources. And, the process performance covered quality, speed, response to customers' specific demand for goods and services. In other words, if an organization could well manage their assets and processes, they would be able to provide their customers with quality products and excellent services. Plus, it would also help lower the cost of labor per unit, and the business would have higher productivity which affected higher competitiveness and contributed to a competitive advantage. Secondly, the capital, as another key factor affecting the competitiveness of the food processing community enterprises, was discussed here. One of the reasons was that more capital in the businesses resulted in liquidity and the business activities could be done more easily than those of the entrepreneurs with less capital. The more capital also meant that advanced technology for production would be afforded. Moreover, the businesses with good financial status could hire highly-skilled workers and create an innovation throughout the production chain, making it possible to produce good quality products which met the needs of consumers. The fact that these entrepreneurs would have to pay for low production costs was consistent with Shurchuloo's concept of Dynamic Productivity and Competitiveness Linkages (Shurchuloo, 2002). As mentioned earlier, the capability to manage assets and processes contribute to economic prosperity. Simultaneously, this was also consistent with the concept of a country's competitiveness of Porter (Office of the National Economic and Social Development Board, 2004). Furthermore, another key factor that determined the business's competitiveness was productivity or efficiency in production, which was measured by using the added value of goods and services produced compared with the inputs, such as human resource, capital, natural resources, and the others, used for one unit. A country's productivity, thus, depended on prices of goods and services to be sold and on the efficient use of inputs. This was also consistent with the research of Rapeeporn Rungsrihong (2004), which studied the behavior of investment in innovation and economic performance of the businesses in the processed fruit and vegetable industry of Thailand. The study revealed that the information technology innovation and the packaging innovation, for reducing costs while increasing production efficiency, were found in small and medium-sized enterprises which had a large amount of capital.

Concerning the competitiveness of the three groups of processed food community enterprises, the study results evidenced that, these three groups had competed with one another to be the best at innovation and technology, food quality and safety, and marketing strategies. Therefore, to be competitive in the market, they needed to improve the processes and develop the innovation, as greatly as to adjust their strategies to produce quality products with low costs. In addition, due to many factors namely globalization, freedom and rapid changes in technology, particularly in information technology, entrepreneurs sought to create competitiveness to meet the customer's satisfaction and for the survival of businesses in each

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product segment. Apart from enhancing the quality and standardizing their products, they created a selling point and promote the products so that they could build a market opportunity and be competitive. Plus, the ability to manage critical assets and processes, not to mention an effective marketing plan, was also the support for the survival of the business.

The results of the analysis, of the five competitive pressures (Five Forces Model) faced by the three group of community enterprises focused, are shown in Table 1.

Table 1 shows the results of the analysis of the five competitive pressures with which the three processed-product community enterprises were faced.

Factors or Indicators	Situation Assessment (Level)	Current Competitive Situation
<b>Longan Product Community Enterprises</b>		
Competition among existing firms	Most influential	Not selling at the same time as the others do, the entrepreneurs could sell their products at a higher price
Threats of newcomers	Most influential	Offseason longan production in off-season cost a lot of money, and much more care for the trees than the in-season production. Plus, they required proper area and weather.
Bargaining power of suppliers	Least influential	No bargaining power
Bargaining power of buyers	Much influential	Participation in pricing
Threat of substitute products and services	Not much influential	In-season longan products were in demand.
<b>Processed strawberry product community enterprises</b>		
Competition among existing firms	Much influential	Being new in its business filed, the product was greatly wanted by consumers.
Threats of new comers	Most influential	There were a large number of newcomers constantly entering to the business.
Bargaining power of suppliers	Much influential	They negotiated usually over the issues concerning the packaging ordered from private companies.
Bargaining power of buyers	Most influential	Due to the distribution of the products to many areas, the buyers subsequently had much bargaining power.
Threats of substitute products and services	Much influential	Having sufficient raw materials to produce the products that met the demand, the business was less affected by the substitute products and services.
<b>Processed banana product community enterprises</b>		
Competition among existing firms	Not much influential	This business was not significantly different from the exiting business types.
Threats of newcomers	Most influential	There were more competitors.
Bargaining power of suppliers	Much influential	Usually, they negotiated over the issues concerning the packaging ordered from private companies.
Bargaining power of buyers	Most influential	Due to the distribution of the products to many areas, the buyers subsequently had much bargaining power.
Threats of substitute products and services	Much influential	Having sufficient raw materials to produce the products that met the demand, the business was less affected by the substitute products and services.

Source: the analysis





According to the analysis of strengths, weaknesses, opportunities and threats (SWOT Analysis) to find ways to improve the marketability and competitiveness of the three types of community enterprises producing processed fruits, the results demonstrated some facts.

Concerning the longan processing business, there were many strong points and weaknesses discovered. To begin with, supported by the GAP certificate, the offseason longan was produced with quality in size, color and taste. However, as one of the weaknesses, it needed high costs and special care much more than that needed for the in-season production. Besides, as fresh longan could not be stored for a long time, the harvest depended on its season. Worse than that, the fruit had not been pushed forward as the product that added value to the group. Neither, the development of longan production was promoted by any agencies, not to mention the government agencies' support such as provision of education and training on quality longan production or that following the GAP.

As a result, there was no incentive to develop longan products with added value. When considering prices of the fruit, it was found that longan farmers would propose prices to middlemen. Offseason longan was sold in higher price than that in season. And, the offering price must be accepted by both sides. Despite the high price of the offseason longan, one of the weaknesses was that the price would rely on the fruit produced which could not be expected. Also, as a threat, if there was a problem with oversupply, the price of longan would be lowered by middlemen. Nonetheless, as the opportunity for pricing of the business, government agencies helped buy the product in cases there rose a price slump. In addition, the analysis investigated selling channels of the business. Its strength involved a great demand for the offseason longan. Therefore, the farmers could use various selling channels such as sale in bulk sale, sale in bunch and sale in heap. But, the farmers could not negotiate over the price with the middlemen or the wholesaler. Also, as the farmers also had to transport their fruit to the wholesaler by themselves, those who did not own a truck would face difficulty in transportation. Last but not least, in the aspect of marketing promotion, it was found that the farmers did not know about marketing promotion and there was no agency's support on this issue.

The SWOT analysis of the strawberry processing community enterprises gave the results about strengths and weaknesses of the business. One of the strong points was the availability of the strawberry variety 80 in the area and the neighborhoods to supply to the production. Meanwhile, the weak point was that the variety 80 had not been developed. Moreover, considered as the opportunity of the business, the variety 80 was the most well-known goods of Samoeng District. However, it was currently faced with the threat of newcomers. Additionally, the price could be its strength because the fruit was sold in a cheaper price than other products of the same type in the market, due to the low cost of raw materials. Furthermore, there were strength and weakness of the selling channels. Namely, strawberry was one of the top famous goods of Chiang Mai which was distributed throughout the province and sold online. On the contrary, the entrepreneurs did not have much knowledge and expertise in promotion. Last but not least, as the opportunity, government agencies and a private sector

gave them support for example holding an exhibition or setting up booths to display community products.

Exploring strengths, weaknesses, opportunities, and threats with which the third group of fruit processing community enterprises was faced, the analysis contributed to some interesting findings. Firstly, the strong point and the weak point concerning the raw materials were, respectively, the availability and the lack of constant development which caused the product to be easily imitated by the competitors. In terms of pricing, since the raw materials were produced by the banana farmers themselves, the production costs were relatively lowered. Subsequently, the price could be set cheaper than that of the products of the same type in the market, which was regarded as a threat. Nevertheless, considered the weakness of the entrepreneurs, without calculating their costs, they offered the same price as the same products'. Another weakness of the business, in the aspect of selling channels, the trucks to deliver goods to retailers in 14 areas throughout the province were not enough. Despite the support provided by the government sector and the private sector creating events and holding exhibitions to promote the products and increase selling channels via phone calls and emails, one of the major barriers to their business resulted from the lack of skills and expertise of the entrepreneurs in promotion.

In accordance with the SWOT analysis upon the adoption of the marketing mix concept, the results contributed to the guidelines for enhancing the marketing capability and competitiveness of the community enterprises, with collaboration with the government sector and the private sector involved. It was evident that a big problem of the food processing groups was to deal with marketing due to the lack of marketing expertise and knowledge. Either, government sector and private sector had rarely provided them education on the marketing management because only put emphasis on the products. As a consequence, they entrepreneurs usually had a problem with the oversupply. Likewise, there were similar products sold in the same market. Thus, they will need to put marketing as the first priority, rather than focusing only on the production. That is, the entrepreneurs should study if the product to be produced is in demand or determine the target group of customers by considering ages and sexes. Plus, they need to know the style of the products in demand, not to mention the market and the types of product distribution. Moreover, the government agencies for example the Provincial Agricultural Extension Offices and the District Agriculture Offices, should play a role in educating people about marketing, through collaboration with local authorities namely the Provincial Administrative Organizations and the Sub-district Administrative Organizations. These government agencies should help provide places for selling and permanent venues for the product display in each district in Chiang Mai. It can be a monthly community product display held at a certain place to where consumers can easily access for example a department store, or a town hall, or Chiang Mai Convention Center.

## **Conclusion**

With regard to the analysis of the marketing environment affecting the competitiveness of the three groups of Chiang Mai community enterprises producing processed foods, the results revealed that manufacturers had their own marketing ways to compete with the competitors. Firstly, employing the proactive distribution, to improve the marketing, the business had been supported by and collaborated with the government agencies and the private sector which provided a place and a platform for product displays at the district level and at the provincial level, as well as at the national level. Besides, the business was very competitive in production, probably due to the fact that the three fruits as the economic crops of Chiang Mai could be planted in the same area. The study also found that, due to the great demand for these products, there arose a great need for the entrepreneurs to escalate their marketing and competitive ability, and especially to put marketing as the first priority in operation rather than focusing merely on production. For instance, to prevent the oversupply of each type of products while increasing the production efficiency and the marketing management of the groups, the entrepreneurs could provide their customers channels for pre-ordering. Plus, the cooperation with government agencies and private sector should help enhance such ability. Additionally, apart from to efficiently develop the community enterprises, in order to find ways for improving the marketing management and the competitiveness of the community enterprises, the analysis of the business's environmental factors, namely strengths, weaknesses, opportunities and threats, were required to be examined.

## **Recommendations**

### **Recommendations for Application**

1.1 Each group of community enterprises should develop quality and features of the products with which consumers will be most satisfied. Also, the production should be done following the demand for the products and the products themselves can deliver value to the customers.

1.2 The government sector is recommended to stimulate the consumer's demand for the goods, as well as to determine new prospects and increase the number of distribution channels. It also needs to encourage the community enterprises to develop new products that enable the business to grow steadily and sustainably.

1.3 The government sector can help facilitate financing and seek for sources of capital that offer low interest rate so that the entrepreneurs are enabled to competitive in the market and to operate their business with low cost of production and operation. Moreover, apart from with the government sector, the community enterprises should cooperate with the private sector to share knowledge and strategies to obtain opportunities for increasing production value. Such cooperation, simultaneously, can help support the development of innovative technology, research, in order to allow operators to compete in the long run.

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## Recommendations for Further Studies

2.1 Further studies can involve food processing community enterprises throughout the northern region.

2.2 Likewise, marketing strategies and marketing management to increase the competitiveness of the food processing community enterprises in the North are to be explored.

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