



Risk Likelihood and Impact on the Operation of Food Processing Community Enterprises in the Bangkok Metropolitan Region

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Abstract

The objectives of this research aimed to study the following points: 1. administration of food processing community enterprises in the Bangkok metropolitan region; 2. opinion in risk likelihood and impact from risk factors on the operation of food processing community enterprises in the Bangkok metropolitan region; and 3. comparison of the opinion in risk likelihood and impact from risk factors on food processing community enterprises categorized by the administration of community enterprises. Samples of this study was 142 food processing community enterprises. Data collection was conducted by interviewing group leaders or members of the community enterprises. Descriptive statistic to analyze data included frequency, percentage, arithmetic mean, and standard deviation. Hypothesis was tested by using t-test and F-test. The Least Significant Difference was specified at 0.05.

The study revealed the results of 3 major aspects. Firstly, the majority of food processing community enterprises appointed their group leader. There was no performance assessment on group leader. Neither membership fee nor specific membership conditions were required. Members had no involvement in determining a direction of their group. Most of community enterprises properly recorded their accounting transactions. The detail of their accounting records was available to all group members. The majority of the community enterprises clearly allocated responsibilities among group members. Raw materials were selected and bought locally. Most community enterprises focused on consumers within a community. Neither advertisement nor promotion was done. Secondly, group leader and members viewed that community enterprises had low risk likelihood ($\bar{X} = 2.41$) and impact ($\bar{X} = 2.39$). Thirdly, the comparison showed that appointing a group leader and recording accounting transactions which were done differently caused the different risk likelihood on the operation of community enterprises at the level of significance at 0.05. Responsibility allocation and having competitors in a market resulted in the different risk impact at the level of significance at 0.05.

Keywords: Administration, Risk, Likelihood, Impact, Community Enterprise

Introduction

In the recent globalization, business competitions grow rapidly. Any businesses with high available capitals and resources are considered to have a strong advantage in the market. On contrary, small family and/or community businesses significantly affected by a fierce competition in the market are forced to close down (Acs and Preston, 1997; Nuipinit, Kreiksakul, and Promsaka, 2014; Malhotra and Temponi, 2010).

Community enterprise ("CE") is a group of small-scale businesses that is smaller than Small and Medium Enterprises known as SMEs. Even though the objectives of a CE do not gravitate toward maximum profits, the CE operation would face some potential risks such as

competitors, high prices of raw materials, lack of clear operational targets, lack of cash flows, no proper records of accounting transactions and governmental policies such as changing rules and regulations in group operation. Group administration is the very first thing to be considered. Different administration styles lead to different external and internal risks which have direct impact on successes and failures of community enterprises (Atipanan et al., 2007; Vaedo, 2014; Altman, Sabato and Wilson, 2010). Food processing community enterprises were also affected by this situation. Based on their record from the Community Enterprise Promotion Division, the number of community enterprises was 17,013 in 2008. However, in the



year 2011, the number of community enterprises was drastically dropped to 8,535. Due to a decrease in the number of community enterprises from the year 2008 to 2011, it is important to understand how to improve the situation by identifying some possible solutions. In addition, food processing community enterprises are one of the highest numbers of community enterprises in Thailand.

Therefore, it is necessary to fully understand risk likelihood and impact on the operation of community enterprises which are varied by group such as administration of group and members, marketing, promotion, production and finance (Sumeteeprasit, Pipitnaowarat and Kongsawatkiert, 2014) . The objectives of this research aimed to study the following points: 1. administration of food processing community enterprises in the Bangkok metropolitan region; 2. opinion in risk likelihood and impact from risk factors on the operation of food processing community enterprises in the Bangkok metropolitan region; and 3. comparison of the opinion in risk likelihood and impact from risk factors on food processing community enterprises categorized by the administration of community enterprises. Hypotheses of the study were that the different administration style would result in the different opinion in risk likelihood and impact from risk factors. Findings the administration risk factors will be adapted to try out with other community enterprises by agricultural scholars and extensionists.

Literature Review

Community enterprise

Community enterprise is a form of, at least, 7 people in the community aiming to innovatively manage community resources for self-reliance, family and community sufficiency. The practice of community enterprises involved in producing goods and services from available resources, knowledge, and local intelligence (Board of Community Enterprise Promotion, 2005; Pongpit and Janhong, 2006). The form of people in a

community is to create a market and income which starts within a community and expands to an outside (Invarng, Invarng and Wannapera, 2011)

Risk

Risk is an unintended event that brings damage to an operation of any units or organizations which creates a negative impact as well as loss in a business operation (Sumeteeprasit, Pipitnaowarat and Kongsawatkiert, 2014). There are 2 factors of risk: external and internal. External risk factors include a change in consumers' attitudes and behaviors; competitive circumstances of similar products in the market; rules and regulations; rapid technology development; related governmental agencies' policies; economical and financial crisis; and natural disasters (Leopoulos, Kirytopoulos and Malandrakis, 2006; Wawire and Nafukho, 2010; Mihai Yiannaki, 2012; Bank of Thailand, 2003). Internal factors included a weak leader; lack of cash flows; lack of product development; and no clear operational targets (Pimonjinda, 2013; Kupi, Keränen, Mikkola and Uusitalo, 2009; Stam, 2009).

To perceive a risk from the aforementioned factors, it is important to have a risk assessment to analyze the effect on a success of the organization's missions. There are 2 criteria that should be considered: likelihood and impact. Likelihood is a possibility in any aspects such as how often a risk would occur. Impact is a result of any circumstances which would affect an operation as well as success of the organization's objectives. Risk assessment can be presented from less to high risks (Sumeteeprasit, Pipitnaowarat and Kongsawatkiert, 2014).

Methods and Materials

Population and Sample

Population of this study was 220 food processing community enterprises in the Bangkok metropolitan region which included Bangkok, Nonthaburi, Patum Thani, Nakhon Pathom, Samut Prakan and Samut Songkhram (Department of Agricultural Extension,



2012). The sample group was calculated by using the Yamane Formula (Niyamangkoon, 2013). The result was equivalent to 142 community enterprises. A group representative who was a main person in managing community enterprises was selected or proposed by the group members. Simple Random Sampling was selected by drawing the name of community enterprises from a list of active community enterprises in 2013.

Instrument of the study

A structure interview using closed and open-ended questions was administered to a sample group. Validity of the structured interview was tested by 3 experts. Reliability via the Cronbach's alpha method was tested by a try-out within 30 community enterprises which were not the sample group. The results showed that the reliability of risk likelihood was at 0.83 and risk impact on the operation of food processing community enterprise was at 0.91.

The opinion in risk likelihood and impact on the operation of food processing community enterprises was scaled from 5 (highest) to 1 (lowest). It was classified into 3 class intervals by average, frequency and interpretation of the opinion level as follows (Niyamangkoon, 2013):

Sore scales of the average of the opinion Level of opinion

- 3.67-5.00 High risk likelihood and high risk impact
- 2.34-3.66 Medium risk likelihood and medium risk impact
- 1.00-2.33 Low risk likelihood and low risk impact

Data collection

Primary data was collected from interviewing group leaders or members of each food processing community enterprise. Secondary data was obtained by studying administration of community enterprises and risk likelihood and impact.

Analysis of the data

The obtained data were analyzed by using a statistical package including frequency, percentage, weight mean score and standard deviation. The t-test,

and F-test and Least Significant Difference (LSD) were applied to determine level of significance at 0.05.

Results

1. Administration of food processing community enterprises in the Bangkok metropolitan region

1.1 Administration of group and members

The study revealed that the majority (68.3%) of food processing community enterprise leaders were appointed. Eighty six point six percent of community enterprises had no performance assessment of their group leaders. The average of sixty seven point six percent had no conditions for membership. Eighty one percent had no membership fee. Most of community enterprise members (78.2%) had no involvement in determining a direction of the community enterprise. The average number of members was 17.68 persons. Based on the findings, appointing a group leader had higher risk likelihood on the operation of community enterprises than voting for a group leader.

1.2 Production Administration

It showed that 36.6 percent of food processing community enterprises acquired production knowledge from local descendants or scholars. As high as ninety six point five percent, job responsibilities were allocated among group members. The average of ninety three percent of raw materials was bought locally. Seventy eight point two percent of the community enterprises produced products all year round. Most of community enterprises (94%) did not receive any awards for their group products. Ninety seven point two had no production standards. Over half or precisely fifty five point six percent conducted quality control. Seventy nine point six percent did stocking. On average, half (50.7%) of community enterprises had product designs. Fifty two point one had a product form. As high as eighty eight percent members attended training in order to obtain knowledge to use in actual operations. The average of seventy point four successfully completed their production on time. Seventy two point five had



no new design development. The findings revealed that community enterprises without in-group responsibility allocation had higher risk impact on the operation than those with clear responsibility.

1.3 Marketing

The results showed that eighty seven point three percent of food processing community enterprises determined their target customers who were predominantly consumers within a community. Nearly thirty percent had competitors in the market. On average, forty point eight of community enterprises had not modernized a look of their products. Fifty seven percent had a brand for their products. In comparison with other brands in the market, the majority of CE product pricing (76.1%) were in the same price range. Most of community enterprise (93.7%) did not offer any marketing promotions. Eighty five point nine percent did not approach any new customers. Research findings indicated that the higher risk impacts would happen if these confronted with competitors in the market than those without competitors.

1.4 Financial administration

It showed that eighty point three percent of food processing community enterprises properly recorded their accounting transactions. Eighty point three percent of accounting records of community enterprises were accessible by members of the group. The average capital was at THB 40,571.42. The findings showed that community enterprise without clear accounting records had higher risk likelihood than with proper accounting records.

2. Opinion in risk likelihood and impact from risk factors on the operation of food processing community enterprises in the Bangkok metropolitan region

The overall opinion of the group leader regarding the operational aspect, they saw that the operation of

food processing community enterprises had medium risk ($\bar{x} = 2.41$). Considering by items, the first 3 highest ranked risks were: no. 1 lack of strong leaders ($\bar{x} = 2.94$); no. 2 natural disasters ($\bar{x} = 2.82$); and no. 3 increase of competitors in the market ($\bar{x} = 2.81$). Regarding risk impact, they saw that food processing community enterprise had medium risk impact ($\bar{x} = 2.39$). Considering by items, the first 3 highest ranked risks were: no. 1 change in consumers' behaviors ($\bar{x} = 3.07$); no. 2 natural disasters ($\bar{x} = 3.02$); and no. 3 no strong group leader ($\bar{x} = 2.93$).

3. Comparison of the opinion in risk likelihood and impact on the operation of food processing community enterprise categorized by the administration

The results of risk likelihood showed that the different group leader selection process of food processing community enterprises resulted in the different opinion in risk likelihood at the 0.05 level of significance. In terms of financial administration, the different recording of accounting transactions led to the different opinion in risk likelihood at the 0.05 level of significance. Regarding production and marketing, the different administration of production and marketing resulted in the indifferent opinion in risk likelihood at the 0.05 level of significant. The results were detailed in Table 1.

In terms of risk impact, the results revealed that the different group and member administration as well as financial aspect resulted in the indifferent risk impact at the 0.05 level of significance. Regarding production, the different responsibility allocation in the production resulted in the different opinion in risk impact at the 0.05 level of significance. Regarding marketing, the different competitors resulted in the different opinion in risk impact at the 0.05 level of significance. The results were detailed in Table 1.



Table 1 Comparison of the opinion in risk likelihood and impact on food processing community enterprises categorized by the administration

(n = 142)

Administration of Food Processing Community Enterprises	Risk Likelihood p-value	Risk Impact p-value
1. Administration of group and members		
1.1 number of members	0.79 ^{ns}	0.76 ^{ns}
1.2 Group leader selection process	-1.98 [*]	-1.87 ^{ns}
1.3 Conditions for membership	-1.45 ^{ns}	-0.71 ^{ns}
1.4 Membership fee	-0.583 ^{ns}	-0.674 ^{ns}
1.5 Benefits	0.739 ^{ns}	1.317 ^{ns}
1.6 Involvement of members in determining a direction of the group	-0.813 ^{ns}	-0.115 ^{ns}
1.7 Performance assessment for a group leader	-0.871 ^{ns}	-0.666 ^{ns}
2. Production administration		
2.1 Knowledge of production administration	0.403 ^{ns}	0.417 ^{ns}
2.2 In-group responsibility allocation	-1.962 ^{ns}	-2.756 [*]
2.3 Product form	-0.444 ^{ns}	-0.906 ^{ns}
2.4 Purchase of equipment	0.310 ^{ns}	-4.67 ^{ns}
2.5 Production duration	0.134 ^{ns}	-0.645 ^{ns}
2.6 Awards for group products	1.136 ^{ns}	0.669 ^{ns}
2.7 Selection of quality raw materials	1.501 ^{ns}	1.548 ^{ns}
2.8 High standard production	-0.699 ^{ns}	-0.082 ^{ns}
2.9 Quality control	0.005 ^{ns}	-0.003 ^{ns}
2.10 Stocking	0.087 ^{ns}	0.895 ^{ns}
2.11 Product designs	0.822 ^{ns}	0.798 ^{ns}
2.12 Training	-0.547 ^{ns}	0.065 ^{ns}
2.13 On-time production	0.610 ^{ns}	0.864 ^{ns}
2.14 Product development	2.561 ^{ns}	1.668 ^{ns}
3. Marketing administration		
3.1 Identifying target customers	-2.43 ^{ns}	-1.046 ^{ns}
3.2 Competitors	1.422 ^{ns}	3.639 [*]
3.3 Product forms	-0.293 ^{ns}	0.004 ^{ns}
3.4 Brand	-0.822 ^{ns}	-0.333 ^{ns}
3.5 Requests for any standardized certifications for group products	-0.008 ^{ns}	0.324 ^{ns}
3.6 Product pricings compared to those of other groups	0.958 ^{ns}	2.352 ^{ns}
3.7 Packaging development	-1.022 ^{ns}	-0.617 ^{ns}
3.8 Advertisings	-0.481 ^{ns}	-0.466 ^{ns}
3.9 Promotions	-0.576 ^{ns}	-0.576 ^{ns}
3.10 Searching for new customers	-0.363 ^{ns}	0.366 ^{ns}
4. Financial administration		
4.1 Recording accounting transactions	-2.294 [*]	-1.524 ^{ns}
4.2 Disclosure of financial information	-1.765 ^{ns}	-1.801 ^{ns}
4.3 Capitals	1.590 ^{ns}	0.965 ^{ns}

^{ns} stands for an average of the indifferent opinion in the level of significance at 0.05

^{*} stands for the average of the different opinion in the level of significance at 0.05



Discussion

Risk likelihood of food processing community enterprises

Food processing community enterprises with an appointed group leader has higher risk likelihood than those with a voting. A group leader plays an important role in managing a community enterprise. It is necessary that a group leader is accepted by group members. An elected group leader receiving an acceptance from voters would result in a possible lower risk. This idea is in line with the study by Wongpoot (1992); Chongcharoen (1992). The group or community leader trusted by group members is capable of motivating the majority of community members in developing a community. Engaging members in group or community activities depends highly on an ability of a group leader. In addition, the study by Prayukvong (2005); Tempel and Beukeboom (2007) showed that voting offered everyone a chance to vote for a person who could represent him/her. Voting was a suitable selection process for a group leader. It could reduce a conflict as well as offer the operational transparency.

In terms of financial administration, food processing community enterprises with the different records of accounting transactions resulted in the different risk likelihood. The community enterprises with records of accounting transactions had a lower risk due to the fact it enabled group members to be well aware of payables and receivables as well as gains and losses. It helped stabilize the CE operation. This is in line with the study by Sukkapab (2013); Jierakul (2014). It showed that the community enterprises would analyze the available accounting information to prepare a financial plan and recognize the group's payables and receivables. It is a good practice to build an effective group planning.

Risk Impact of food processing community enterprises

In terms of production, food processing community enterprises with a clear responsibility allocation among group members are likely to have lower risk impact than those without the clear one. The responsibility

allocation helps identify a group member who takes a full responsibility in certain functions. In case of any difficulties, it is easier to find a responsible person and quickly solve problems. In addition, from the interview, a group leader is able to do a production planning in advance which is in line with the study by Petprasert (2007); Phoging and Saisopon (2012). Their studies revealed that a clear responsibility allocation makes a community enterprise likely to be successful as it creates a feeling of involvement to all group members. It provides an opportunity to all group members to work cooperatively toward a success of the group.

In terms of marketing, it revealed that food processing community enterprises with competitors in the market resulted in the different opinion in risk impact. The groups with competitors tend to take more risk in the operation than the ones without competitors. Having competitors pushes community enterprises to create a continuous planning, estimate production capacity in each production cycle as well as calculate a suitable price range by comparing with that of their competitors. Furthermore, selected raw materials used in the production must be sufficient and in a good quality to be able to compete with other groups or competitors in the market. Kotler and Armstrong (2010); Seubsuttoo, Seedee and Suriyasarn (2011); Timee, Somsobhon and Na Rot (2015) have conducted some studies regarding the above idea. When there are potential competitors producing similar products in the market, it definitely creates a risk impact on existing entrepreneurs. It would force the existing entrepreneurs to adjust themselves in pricing, presentation of new products, product differentiation, change in production costs and market shares.

Conclusion

This research aimed to study risk likelihood and impact on food processing community enterprises in the Bangkok metropolitan region. It revealed that the different selection process of a group leader and properly records of accounting transactions resulted in



the different opinion in risk likelihood on the operation of food processing community enterprises at the level of significance at 0.05. The different responsibility allocation and competitors in a same market resulted in different risk impact at the level of significance at 0.05.

Suggestions

1. Those who are operating or interested in setting up food processing community enterprises should focus on a selection process of a group leader by considering a person with a full understanding in managing a group as well as decision making to solve a problem on time. Voting for a group leader is recommended. It is important to make all group members to be well aware of their responsibilities and increase their understanding of the production steps aiming to create job circulation and responsibility allocation. On the financial management aspect, community enterprises should record all accounting transactions which include the payables and receivables, gains and losses for making decision and marketing plans in food processing.

2. Members of processing community enterprises should study consumers' behaviors by focusing on customers who are interested in group product(s) in order to improve their product(s) and be able to respond to customers' needs and compete with other community enterprises as well as expand markets and increase sale volumes and market shares.

3. Members of food processing community enterprises should have sufficient internal communications regarding risk likelihood and impact such as regular group meetings to communicate with all group members regarding risk likelihood and impact and how to cautiously operate a group as well as cooperatively find a solution when facing with difficulties.

4. Related parties involving in the operation of community enterprises should pay more attention in arranging additional activities such as training, workshops, conferences and/ or meetings to educate and enable

members of community enterprises to have a better understanding in risk likelihood and impact. In addition, a manual used as a guideline for CE members to complete self-assessment would also be recommended. A study of potential disadvantages affecting group operations should be conducted. There should be supports or promotion for community enterprises to conduct the risk impact study on the operation which would relate to the likelihood of community enterprises members and their family. Lastly, consistent communications among group members should regularly be maintained.

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