

Factors Influencing the Success of Small and Medium Scale Manufacturing Enterprises

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Abstract

The aim of this study was to investigate the factors influencing the success and sustainable development of community base manufacturing enterprises in the Phitsanulok province, so as to provide fundamental information for the development of policies and guidelines governing the creation of community enterprises. Data was collected from 142 enterprise sample groups using questionnaires. Statistical analysis of the data revealed that capital ($r = 0.371$), accounting system ($r = 0.363$), external interaction ($r = 0.371$), information ($r = 0.298$) and production efficiency ($r = 0.235$) significantly ($p < 0.01$) affected the success of manufacturing enterprises. In addition, the correlation coefficient of capital and accounting system ($r = 0.596$), and marketing and production ($r = 0.647$) was highly significant ($p < 0.01$). The results demonstrated that the factors do not stand alone, they relate to each other. Therefore, the guidelines governing the development of community enterprise must strengthen the areas of (capital, accounting system, production efficiency and marketing), which relates to the core functions of the corporate business structure.

Keywords

Community Enterprise, Production Factors, Capital, Accounting System, Marketing

1. Introduction

Thailand is an agricultural country with a rural social structure. A majority of the population are involved in agriculture related occupations in rural areas with low income, making most of the population poor [1]. This weakens the economic foundation of the country and aggravates its associated problems. Interventions to these have always been dependent on government budget without

any attempt to develop the potentials in these communities. Usually, developmental projects in the province mainly focus on economic development and income generation, with less strategic efforts to reduce production expenditure. Government is therefore focused to find a solution to this situation in order to improve their quality of life and promote self-reliance. Community enterprising is one approach government uses to solve such problems, with the principle that if people can exploit the available resources in their community and add value, they will have stable careers and a source of incomes [2]. Reference [3] also mentioned that community enterprises are important to national development due to its impact on the economy, through jobs creation, careers and incomes. Local wisdom can be applied to effectively utilize available resources in the communities [4]. This will strengthen the society, eliminate poverty and raise the quality of life of villagers in the community.

The Phitsanulok province has a policy through the industrial development strategy to encourage the creation of enterprise networks and agro-industrial enterprises, SMEs and community enterprises [5]. Phitsanulok Provincial Agricultural Extension Office also revealed that an assessment report on the potential of all community enterprises (1269) in the province, grouped them into good level (429 groups), moderate level (465 groups) and poor (375 groups). From the report, it was noticed that most community enterprises in Phitsanulok still need to be developed for a sustainable production. Several previous studies have revealed many factors that affect the success of community enterprises [3] [6]. Reference [4] studied the strategic management of community enterprise in the Prachinburi province and reported that, four major factors: member benefits, product and service management, membership management and good operations affect the success of community enterprises. Also, reference [1] studied the guidelines for community enterprise operations development in Songkhla Lake area, and revealed that most community enterprises faced seven major problems namely, marketing, accounting, finance, manufacturing, information, technology usage and product design.

Again, the Office of the Secretary on the Committee's for Community Enterprise Promotion and the Department of Agriculture have set the criteria for assessing the success level and the operations of these enterprises on six factors: operation planning, leadership and administration, market management, knowledge and information management, membership management, product and service management [7]. However, for the operations of community enterprise groups to achieve success, there are other sub supporting and important detailed factors that need to be investigated about these major factors in order to evaluate the success of community enterprise. Moreover, the interaction between these factors has never been investigated. Therefore, in our study, other factors such as labor and external interactions were included and the study was designed to investigate in detail the relationship of these ten key factors: capital, accounting system, marketing, production efficiency, management, member participation, labor, membership management, external interaction and access to information

in the Phitsanulok province. This knowledge is important as it will serve as basic information and guideline for government agencies in the creation of policies to support the operations of community enterprises.

2. Research Methodology

2.1. Study Area

The investigation was conducted in Phitsanulok province of Thailand in 2018 (**Figure 1**). Phitsanulok is located on a latitude of (16°55'0"N and longitude of 100°30'0"E), at 1028 m above mean sea level. The province has 9 districts and a total human population of 865,368.

2.2. Research Procedure and Data Collected

A total of 220 community manufacturing enterprises exist in the Phitsanulok province. These total groups were from 9 districts namely; Phitsanulok, Wang Thong, Bang Rakam, Wat Bot, Bang Krathum, Nakhon Thai, Noen Maprang, Phrom Phiram and Chartrakan in the province (**Figure 1**). From this total population, a sample group of 142 enterprises were randomly selected for the study, according to the concept of Yamane [8]. From these groups, quantitative data were collected with a survey research model. Data collection was divided into three phases.

Part 1: the bio-information of the enterprises was gathered with Open-ended Questions. Such information included (year of establishment, initial number of members at setup, current number of members, educational level, reason behind establishment, source of funding and payable tax).

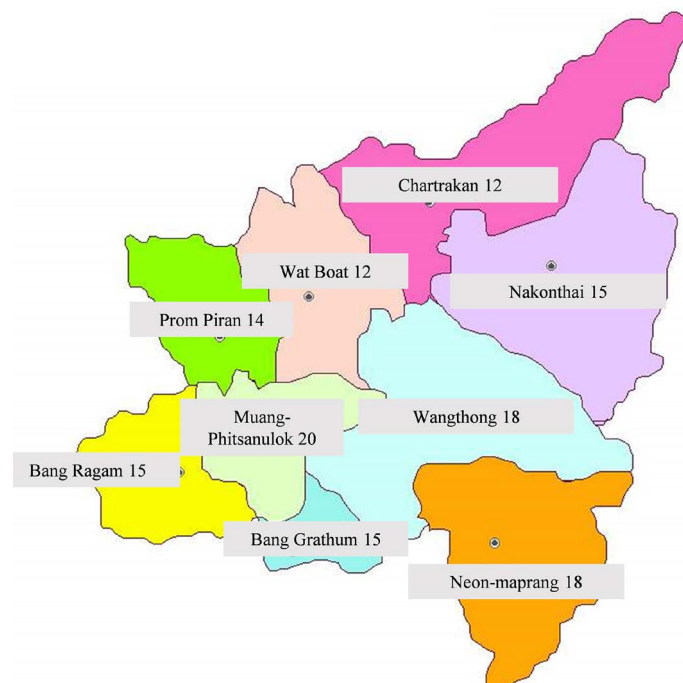


Figure 1. Map of Phitsanulok Province and number of sampling groups.

Part 2: closed ended questions with checklist were used to ascertain the significance of the 10 key factors (capital, accounting system, marketing, production efficiency, management, member participation, labor, membership management, external interaction and access to information) to the success of their enterprise. Base on reference [9] method, the descending and interpreting levels of the 142 sample groups about the 10 factors were given numerical rating. The numerical rating scale was divided into 5 levels;

- 4.21 - 5.00 = highest impact on operations;
- 3.41 - 4.20 = high impact on operations;
- 2.61 - 3.40 = moderate impact on operations;
- 1.81 - 2.60 = low impact on operations;
- 1.00 - 1.80 = minimal impact on operations.

Part 3: the personal opinions of the enterprise groups about factors that are important for the success of their operations were collected with open-ended Questions.

The tools (questionnaires) used in this research were reviewed for quality (content validity) by content experts. The tools were adjusted to adhere to the evaluation reports from the experts to ensure consistency between the questions and the research objectives. Prior to the investigation, the accuracy of the questionnaires were test on 30 enterprise groups from a non-sampled production communities in the Phitsanulok province. The confidence values (reliability) of the questionnaires were assessed by finding the coefficient alpha, following Cronbach's method [10] [11]. Using Cronbach's method, the confidence value was greater than 0.700 in all aspects of the questionnaires.

2.3. Data Analysis

Statistical analyses of the data collected were performed with statistical programs that correspond to the research objectives, using descriptive and inferential statistics. In Part 3.1 and 3.3, basic statistics such as frequency, mean, percentage were computed to find the difference between the data of the samples group. In Part 3.2 also, frequency, mean, percentage, standard deviation (SD) and statistical tests of association (Correlation Coefficient) were worked out to explain the factors that affect the success of manufacturing enterprise.

3. Results

3.1. Bio-Information of the Enterprises

The analysis of the basic data of manufacturing community enterprises in Phitsanulok province (**Table 1**) revealed that, most of the enterprises 37.0 (26.06%) were set up in 2005 with a high initial founding member range of 11 - 20 people. Also the highest initial founding members (40.14%) were realized in 2005. From the results, at present (2018) about 51.01 (35.92%) enterprises had 11 founding members, with an age range of 41 - 50 years (42.96%). The establishment of 61.10 (43.66%) of these enterprises were based on the need to solve member

problems and about 87.57 (61.67%) of their operational fund were raised by members. The average educational level was primary school grade 4, representing (59.15%) of the enterprise. On average, the annual income per group was 100,000 baht, representing 60.12 enterprises. The data also showed that 132.0 (92.96%) of enterprise groups in the province do not tax in a year.

3.2. Factors Affecting the Success of Enterprise Operations by Checklist Questionnaire

Statistical analysis of the data from the checklist questionnaire shown in (**Table 2**) revealed that, the groups gave the highest priority to member participation which recorded the highest mean (3.74) at a high level of impacting enterprise operations. This was followed by management (3.59), labor (3.53) and production efficiency (3.55) at high impact levels respectively. Also, capital (3.31), membership management (3.21), marketing (3.08) and accounting system (2.95) were at moderate impact levels respectively. According to the results, the lowest factors were external interaction (2.54) and information (2.20). They had low impact on enterprise operations.

After studying the relationship between factors (**Table 3**), the coefficient correlation between marketing and production efficiency ($r = 0.647$) was the most positive. Accounting system and marketing ($r = 0.645$), member participation and labor ($r = 0.591$) followed closely. The other factors followed in the pattern; production efficiency and management ($r = 0.584$) > capital and accounting system ($r = 0.569$) > management and member participation ($r = 0.532$) > external interaction and membership management ($r = 0.417$) > labor and membership management ($r = 0.372$) > membership and information ($r = 0.188$). The results showed a positive pattern of relationship between the factors.

In **Table 4** shows the influence of the factors on enterprise success. Statistical analysis indicated factors effect in the order; capital ($r = 0.371$), accounting system ($r = 0.363$), external interaction ($r = 0.310$), information ($r = 0.298$) and production efficiency ($r = 0.235$) at a highly significance level ($p < 0.01$). It was also observed that marketing ($r = 0.210$), management ($r = 0.208$) and labor ($r = 0.170$) were significant at ($p < 0.05$) level. However, membership management and member participation did not significantly influence enterprise success (**Table 4**).

3.3. Opinions of the Manufacturing Enterprise Groups

The data in (**Table 5**) are the opinions of the sampled enterprise group about factors they think can improve their enterprise operations. In the table, the highest number of enterprise (77.35) thought that cooperation among the members was the most important to improve operations. About 25.03 (17.63%) of the enterprise thought capital was the most significant. Material quality (16.71) and the number of products (10.03) were also prioritized. Other factors mentioned included marketing (6.65) and labor (6.23), which represented 4.68% and 4.39% of the enterprise groups.

Table 1. Average background information of manufacturing community enterprises.

Background information	Item	Number of enterprise	Percentage (%)
Year of most establishment	2005	37.00	26.06
Founding members at 2005	11 - 20 people	56.99	40.14
Founding members at 2018	11 people	51.01	35.92
Age	41 - 50 years	61.00	42.96
Reason behind establishment	Solve personal problem	61.10	43.66
Education	Grade 4	83.10	59.15
Source of funding	Member fund raising	87.57	61.67
Annual Income	100,000 baht	60.12	42.34
Tax	Do not pay	132.00	92.96

Table 2. Factors that affects manufacturing enterprise operations.

Factors	Mean and Standard deviation
Finance and investment	3.31 ± 0.91
Accounting system	2.95 ± 0.92
Marketing	3.08 ± 0.75
Production efficiency	3.51 ± 0.86
Management	3.59 ± 0.97
Member participation	3.74 ± 0.91
Labor	3.53 ± 0.86
External interaction	2.54 ± 0.94
Membership	3.21 ± 1.22
Information	2.20 ± 0.89

Table 3. Correlation coefficient of factors that are important for enterprise success.

	Capital	Accounting system	Marketing	Production efficiency	Management	Member Participation	Labor	External Interaction	Membership management	Information
Capital	1									
Accounting system	0.569**	1								
Marketing	0.447**	0.645**	1							
Production efficiency	0.476**	0.436**	0.647**	1						
Management	0.462**	0.579**	0.610**	0.584**	1					
Member Participation	0.461**	0.554**	0.610**	0.530**	0.532**	1				
Labor	0.390**	0.394**	0.497**	0.550**	0.435**	0.591**	1			
External Interaction	0.317**	0.384**	0.394**	0.290**	0.364**	0.340**	0.278**	1		
Membership management	0.357**	0.314**	0.456**	0.386**	0.476**	0.390**	0.372**	0.417**	1	
Information	0.261**	0.471**	0.393**	0.276**	0.306**	0.322**	0.336**	0.244**	0.188*	1

Table 4. Relationship between factors and enterprise success.

	Capital	Accounting System	Marketing	Production efficiency	Management	Member Participation	Labor	Internal Interaction	Membership management	Information
Success of community enterprise	0.371**	0.363**	0.210*	0.235**	0.208*	0.118	0.170*	0.310**	0.068	0.298**
Ranking	1	2	6	5	7	9	8	3	10	4

Note: 1 = most impact, 10 = least impact.

Table 5. General opinions of enterprise groups about factors that can influence enterprise success.

Factors	Number of enterprise	Percentage (%)
Capital	25.03	17.63
Member cooperation	77.35	54.47
Marketing	6.65	4.68
Material quality	16.71	11.77
Labor	6.23	4.39
Variety of products	10.03	7.06

4. Discussion

From the research results in **Table 2**, it can be seen that the community enterprise groups selected member participation (3.74) at a high level as the first factor that affects enterprise operations. The participation of members in the sharing of benefits and administration are essential to boost member cooperation. The higher levels observer for member participation, management (3.59), labor (3.53) and production efficiency (3.51) are in line with earlier reports of [12] and [13] that, the participation of members is important to the operations of community enterprise groups. In addition, the work of [14] indicated that the factors that made the Ban Chong Ko Rung Rueng Mushroom Community Enterprise Group successful were; 1) group management (thus the group had leader leadership and members were harmonious) and 2) production was in accordance with GAP standards and product quality was excellent.

From our findings, capital (3.31), membership management (3.21), marketing (3.08) and accounting system (2.95) had moderate impact on enterprise operational success. The initial capital investment and operational income used for the daily running of the enterprise significantly influence enterprise success [12]. Proper management of member/employees is very necessary for the success of operational plans. Market availability and product price assurance are very crucial elements of the marketing factor [14]. Reference [14] stated that a transparent and verifiable group income account builds confidence among the group members and leads to production efficiency. Our finding are also in accordance with the results of [15], who revealed that the problems affecting the success of community enterprises in Kalasin included marketing; thus a lack of marketing plans, lack of modern products and pricing impacted their operations negatively.

Moreover, finance and accounting problems such as lack of working capital, poor accounting system and a lack of understanding in financial management hindered their progress. A similar scenario or situation can be said about the manufacturing enterprises in the Phitsanulok Province.

The research results demonstrates that external interaction (thus trainings and skills exchange), and access to information are important for enterprise operation but had a low level of impact. Contrary to the recommendation of [3], an efficient communication system was at a higher level to improve the success of the operations of community herbal products in the Nakornchai Burin province of Thailand. It was observed from the correlation coefficient of the factors in (Table 3) that, the factors under study interrelate in the effects. The highest correlation ($r = 0.647$) noted between marketing and production efficiency showed a strong positive relationship between these factors and were very highly significant ($p < 0.01$). This implies that, for an enterprise to be successful, the rate of production must correspond to product marketing as well. The relationships between all the factors were highly significant except information which correlated at a probability of ($p < 0.05$) to all other factors (Table 3). However, after we correlated the various factors to enterprise success statistically (Table 4), it was found that capital ($r = 0.371$), accounting system ($r = 0.363$), external interaction ($r = 0.31$) and information (0.298) affected enterprise success the most.

It can be said that our 10 selected factors in (Table 2) do directly or indirectly affects the operations of small and middle scale manufacturing enterprises. In agreement to our results, reference [15] outlined that capital, accounting system, external interaction, production efficiency, marketing, information and labor management affected enterprise success in the Kalasin province. Again, reference [16] stated that having the proper funds is also an important factor in the operation of the Talok weaving fabric group, indigo dye, 4 star products, and recommended that the Phrae Province should therefore receive sufficient government support. Additionally, reference [17] considered accounting system as one of the major obstacles in the development of community enterprises in Sakon Nakhon province, because most community enterprise accountants lacks knowledge in account management and also, a majority of them uses manual accounting method based on personal understanding instead of the generally accepted computerized system of keeping account records. Reference [17] emphasized that the main problem realized in the accounting of book keeping community enterprises was the lack of basic knowledge skills in accounting and lack of unity (cooperation) among all sectors involved. Thus, the dissemination of various accounting formats, in accordance to the aptitude of unit jobs often do not correspond to the basis and needs of the users. In addition, there was a lack of rules and regulations and the person responsible for monitoring the financial report of the project causes confusion and errors, and does not give importance to accounting work.

Earlier investigation reference [6] indicated that, the efficiency of community

business management in a sufficient economy is directly influenced by marketing, leadership and interaction with external agencies. Reference [3] also found that the overall success of community enterprise groups were dependent on a range of factors namely; capital management, procurement/product marketing, sales/accounting, trainings/exchange learning, communication system and group cooperation. Division of labor and placing emphasis on skills training for members, enhance the human resource capacity the enterprise [16]. With skilled and sufficient labor, under appropriate fund management, production efficiency will be obtained. External interaction to exchange skills, knowledge and support from other agencies can make the operations of community enterprises successful. As suggested by [1] community enterprise operations in the Songkhla Lake Basin will require government support in the areas of skill trainings within the organization. Some general factors mentioned by the enterprises as their own idea (Table 5) related to the 10 factors we selected for our study, showing the association of the 10 factors to the general views of the manufacturing enterprises in Phitsanulok Province.

5. Conclusion and Recommendation

In conclusion, it can be said from our results that 26.06% of the manufacturing enterprises in Phitsanulok were set up in 2005 based on the need to solve common member problems. 61.67% of the enterprises' operational income is raised by members. Also, 59.15% of the enterprise members obtained only primary grade 4 education. On average, the annual income per group is 100,000 baht and most enterprises do not pay tax (Table 1). The major factors affecting the success of manufacturing enterprises in the province are capital, accounting system, external interactions and information. There is a stronger correlation coefficient between marketing and production efficiency. Therefore, to achieve a successful enterprise growth in Phitsanulok, the manufacturing enterprises in the province must strengthen the areas of capital, accounting system, marketing, production efficiency, management, member participation, labor, membership management, external interaction and access to information. Also government agencies and other developmental organizations must strongly consider the above factors in their guidelines for enterprises establishment. Finally, governments must establish a support center to provide accounting consultancy services in the Phitsanulok province.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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