Support and Operational Factors Affecting the Success of Community Enterprises

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Abstract

Community enterprises are a community economic development model that aims to raise income levels and the quality of life in communities. Their operations focus on strengthening communities, making them more economically self-reliant, using local wisdom and raw materials, and emphasizing cooperation more than competition. The research aimed to investigate the support and operational factors affecting the success of community enterprises by studying a sample of 257 community enterprises in the Upper Northern Region of Thailand. Information was collected using a questionnaire and analyzed using descriptive statistics and structural equation modeling analysis. The results showed that the proposed model and empirical data were coherent and appropriate. The effect of the variables in the proposed model was as follows: 1) community enterprises' support factors had a direct effect on their success, with a path coefficient of .51 and an indirect effect on their success, with a path coefficient of .29; 2) community enterprises' operational factors had a direct effect on their success, with a path coefficient of .40. These results may be used to clarify key factors that affect the success of community enterprises and provide guidelines for improving the success of community enterprises.

Introduction

Community enterprises are community businesses that create products and services that are made by a group of local people. They conduct business by managing the community's capital so as to effectively and sustainably generate income and improve the self-reliance of families and communities (Department of Agricultural Extension, 2005). Their products or services are created by using community assets (such as knowledge of traditional wisdom, skills, culture, and nature). Their activities emphasize cooperation more than competition. They are economic activities that emphasize local relationships, which provide a sustainable base for both personal and community economic development (Donkwa, 2012).

Information from The Secretariat of the House of Representatives (2018) showed that there are more than 80,000 registered community enterprises in Thailand. Of this number, nearly 60% or 50,000 entities are still in operation, but more than 30,000, or 40%, are in the process of registration revocation or cancellation (Department of Agricultural Extension, 2018). This indicates that they are not as successful as they should be, or encounter problems to the point of having to revoke their registration. If community enterprises are to succeed, it requires the cooperation and modern operational management of people in communities.

From the study of Tantrabundit (2008), the approach to successful community enterprise development must start from building a strong foundation in entrepreneurship for such businesses. They must establish a strong structure before creating other parts, adjust thinking processes and attitudes toward entrepreneurship, develop management processes with a focus on marketing and finance, and receive ongoing support from various agencies. Kenaphoom (2015) studied guidelines for the development of effective community enterprises, and found that certain operational aspects were necessary as follows: 1) develop production capacity and raise product quality standards to national and international levels, 2) expand channels for product distribution, 3) expand network development for promotion of product distribution, 4) strengthen management capacity, 5) provide financial and personnel support for community enterprises development, 6) establish integrated collaboration with

relevant agencies to systematically promote and support community enterprises, 7) develop a strong community enterprises network, and 8) create cooperation between the public and private sectors to help community enterprises become healthy and self-reliant.

The study of Sangayotin (2017) also found that success factors for community enterprise operations consist of the following aspects: 1) leadership of community leaders, 2) unity in group participation, 3) sound management systems, 4) community funding, 5) government support, 6) manufacturing skills and innovation, 7) external support that is consistent with community needs (network construction), 8) leaders with knowledge and abilities, 9) support for particular markets, 10) income-expense accounting with transparency, 11) sound communication systems, 12) product quality and attractiveness that meets consumer needs, 13) availability of equipment and tools, 14) use of local resources and wisdom, and 15) compliance with environmental rules and regulations.

Past studies have demonstrated various vital factors affecting the success of community enterprises. However, that knowledge cannot drive community enterprises to be as successful as they should be. Therefore, more knowledge must be discovered about key factors related to the successful development of community enterprises. Thus, this research investigated the support and operational factors affecting the success of community enterprises by studying with a sample of community enterprises in the Upper Northern Region of Thailand. The results not only clarified important factors that affect the success of community enterprises but also provide guidelines for improving sustainable economic development and construction of strong communities.

Literature Review
Success of Community Enterprises
The success of community enterprises can be gauged through the ability to allocate excess profits to support community activities. Community enterprises with good results and profits from which expenses have already been deducted may authorize their operating committee to divide some profits to support community activities without requiring repayment. Activities that are subsidized consist of activities in four areas were 1) imparting education, 2) imparting assistance, 3) building public utilities, and 4) saving natural resources (Danthanin, 1998; Donkwa, 2012). These were defined as observable variables so as to measure the success of community enterprises in this study as follows:

1. Imparting Education (IED)—educational support to youth in the school system by providing textbooks, lunch meals, sports equipment, and support for study visits and development of youth and villagers.

2. Imparting Assistance (IAS)—impart assistance to young women and men who leave after completing their compulsory education and need funds to start their careers. For the elderly, contribute aid in the form of grants for medical care, as well as assist the disabled in the form of activities support that is appropriate for them.

3. Building Public Utilities (BPU)—build public utilities without using the national budget, but use budgets provided by the Village Development Fund and community enterprises, such as to build village plumbing infrastructure and small concrete roads, and to dredge ponds.

4. Natural Resources Conservation (NRC)—furnish some funding to the community, schools, and outside agencies so as to encourage people in the community to participate in activities that help them appreciate the value of natural resources.

Support Factors of Community Enterprises
Community enterprise support factors are critical factors that allow local community enterprises to initiate and implement sustainable community economic activity (Tantrabundit, 2008). In a previous study, it was found that support factors had a direct effect on the success of community enterprises. These support factors were: 1) human resource development, 2) community organization development, 3) economic infrastructure development, and 4) physical infrastructure development (Kamonthornthai, 2018; Kenapoom, 2015). These four factors were assigned as observable variables for the measurement of support for community enterprises in this study. The variables are:

1. Human Resource Development (HRD)—developing three groups of people, namely: 1) community leaders in the area of knowledge in analyzing the necessity of production, processing, and trade; and ability to contact with external parties; mobilizing people, capital, and administration; and managing production, privatization, and using capital effectively. 2) villagers to be interested in community enterprise activities by developing villagers to have knowledge and ability in the production and processing techniques. 3) relevant officials to have in-depth knowledge of ideology and techniques to stimulate and integrate community enterprises.

2. Community Organization Development (COD)—creating groups and activities that operate with leaders, villagers, and related people working together. Working together in this way is the heart of community enterprises and in line with Thai culture and economic constraints. Rural people support each other, even though they have relatively little capital and equipment.

3. Economic Infrastructure Development (EID)—fundraising from villagers who are interested in production and processing. These funds will be used reasonably, securely, and not fraudulently, which is different from the careless use of government and private funds because villagers do not consider it their own money. Funds may be obtained from savings activities, fundraising, establishing village banks, and providing venture capital for community enterprises.

4. Physical Infrastructure Development (PID)—developing and improving community infrastructure to facilitate operation of community enterprise activities, such as developing electricity and road systems in the community. This includes managing water resources and water supply systems for consumption and production. During the dry season or when there is insufficient rainfall, many villagers find it difficult to obtain adequate water for consumption. Young people in the community who are physically strong will migrate to find work outside the area, which affects the villagers and leads to discontinuous economic activities.

Operational Factors of Community Enterprises
The operational factors that occur in community enterprises include 1) production, 2) consumption, 3) product processing, and 4) sales activities. When the support factors are furnished, these processes can proceed concretely and effectively. Four features were assigned as observable variables so as to measure community enterprises' operational factors in this study as follows (Sangayotin, 2017; Techavanit, 2018):

1. Production (PDC)—managing production costs by using technology or innovation in production, production grouping, and joint learning for production management in terms of product quantity and quality control.

2. Consumption (CSP)—managing group members' consumption expenditures so that they don't exceed the revenue available. This is done by retaining some products for consumption, and some to spend on purchasing additional products for consumption as necessary. Therefore, they must control expenses so that consumption costs do not exceed their existing income.

3. Product Processing (PRP)—grouping product processing using non-complex methods with support from government officials.

4. Sales (SAL)—retail and wholesale product distribution through distributors, and products at a sales price that is aligned with the market price, or having the power to determine the price.

Research Methodology
Conceptual Research Model
The proposed model was derived from a previous study on the conditions facilitating success in Small and Medium Enterprises and Community Enterprises within Thailand, namely: 1) a study of community economies by Donkwa (2012) in northeastern Thailand. The results showed that two key factors that contributed to successful community economies were their push factors and their processes. 2) A study by Techavanit (2018), who examined the antecedents of community enterprises' achievements in Thailand by using a mixed-method approach. The results showed that community enterprise achievements consisted of three key factors: sufficiency economy management,

competitive advantage, and servant leadership. Combining these previous studies (Donkwa, 2012; Techavanit, 2018) with a review of the relevant literature (such as Kenapoom, 2015; Sangayotin, 2017; Tantrabundit, 2008), three latent variables and three hypotheses were identified in the following conceptual research model (Figure 1):

1. Support Factors of Community Enterprises (SFCE) is a latent variable that consists of four observable variables, namely, 1) human resource development (HRD), 2) community organization development (COD), 3) economic infrastructure development (EID), and 4) physical infrastructure development (PID).

2. Operational Factors of Community Enterprises (OFCE) is a latent variable that consists of four observable variables, namely, 1) production (PDC), 2) consumption (CSP), 3) product processing (PRP), and 4) sales (SAL).

3. The Success of Community Enterprises (SUCE) is a latent variable that consists of four observable variables, namely, 1) imparting education (IDE), 2) imparting assistance (IAS), 3) building public utilities (BPU), and 4) natural resources conservation (NRC).
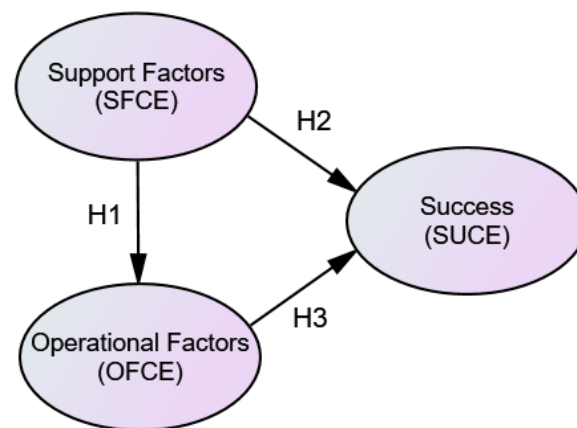

Figure 1. The Conceptual Research Model

Hypothesis 1: The support factors of community enterprises had a direct influence on the success of community enterprises.
Hypothesis 2: The support factors of community enterprises had a direct influence on the operational factors of community enterprises.
Hypothesis 3: The operational factors of community enterprises had a direct influence on the success of community enterprises.

Population and Sample Selection
The study used a quantitative methodology with the unit of analysis being the community enterprise. The population was 16,823 community enterprises in the Upper Northern Region of Thailand that are registered with The Community Enterprise Promotion Division, Department of Agricultural Extension (Department of Agricultural Extension, 2017). The sample size was determined based on Stevens' (1986) criteria, which indicates the sample size for linear structural relationship analysis. There should be at least twenty units per one observed variable ∙ Twelve observed variables were involved, so a sample size of 240 or more was the recommended minimum (N ≥ 240). The samples were selected from 8 provinces (Chiang Rai, Chiang Mai, Mae Hong Son, Lamphun, Lampang, Phayao, Phrae, and Nan) by a stratified sampling method, with samples in each province determined by population proportion, and selected by a simple sampling method.

Instrument and Data Collection Procedure

The instrument used in the study was a researcher-developed questionnaire, the content validity of which was examined by five experts. The index of item-objective congruence (IOC) for all questions in the questionnaire was higher than .60 (Hambleton, 1984). Then, the questionnaire was tested with thirty respondents who were not part of the sample to determine its reliability using Cronbach's alpha coefficient method (Cronbach, 1951). The reliability of the questionnaire was .85, and the reliability of the support factors, operational factors, and the success of community enterprises were .85, .87, and .90, respectively. Questionnaires were sent via mail to 400 informants who were managers or heads of community enterprises. The respondents were asked to place the completed questionnaires in sealed envelopes, which were then collected in person by the researchers. At the end of the collection period, 257 completed surveys were obtained for analysis, for a final response rate of 64.3%.

Statistical Analysis

The data were analyzed by frequency, percentage, and Pearson's product-moment correlation using IBM SPSS 23. AMOS 23 software was used for structural equation modeling analysis (SEM) to determine the consistency of the proposed model with the empirical data. The goodness of model fit to the data was assessed using Chi-square (χ^2) statistics and fit indices as suggested by Kline (2005), with a Chi-square probability level (p-value) of more than 0.05. The value of the relative Chi-square (χ^2/df) is considered satisfactory when it is < 3 in large samples ($N > 200$), < 2.5 in medium-sized samples ($100 < N < 200$), and < 2 in small samples ($N < 100$) (Arbuckle & Wothke, 1999; Byrne, 2001). The value of the goodness of fit index (*GFI*), like multiple r-squared, theoretically ranges from 0 (poor fit) to 1 (perfect fit), and is considered satisfactory when > .90 (Kline, 2005; Schumacker & Lomax, 2004). A value for the root mean square error of approximation (RMSEA) of less than .05 would indicate a "close fit", and a value of .08 or less would indicate a "reasonable fit" (Brown & Cudek, 1992; Kline, 2005).

Research Results

Table 1. Descriptive Statistics of Respondents' General Data

General Data of Respondents	Descriptive Statistics
Gender	Male: 114 (44.4%)
	Female: 143 (55.6%)
Age	Less than 30 years: 2 (0.8%)
	30−35 years: 4 (1.6%)
	36−40 years: 10 (3.9%)
	41−45 years: 51 (19.8%)
	46−50 years: 134 (52.1%)
	More than 50 years: 56 (21.8%)
Educational Level	Below Bachelor degree: 143 (55.6%)
	Bachelor degree: 102 (39.7%)
	Master degree: 12 (4.7%)
Job Position	Manager of community enterprise: 56 (21.8%)
	Head of community enterprise: 189 (73.5%)
	Not-specified: 12 (4.7%)
Work Experience	Less than 5 years: 23 (8.9%)
	5−10 years: 189 (73.5%)
	11−15 years: 40 (15.6%)
	More than 15 years: 4 (1.6%)
	Not specified: 1 (0.4%)

* $N = 257$

An analysis of respondents' general data showed that most of them are female (55.6%), aged between 46–50 years (52.1%), with education below a bachelor's degree (55.6%), job positions as

heads of community enterprises (73.5%), and work experience of 5-10 years (73.5%). More detailed descriptive statistics regarding respondents' general data are reported in Table 1.

The general data analysis of community enterprises participants showed that the largest number of community enterprises was located in Chiang Mai (24.3%), their type of business was manufacturing (88.0%), their registered capital was less than 500,000 baht (59.9%), and their period of operation was 5-10 years (56.4%). Descriptive statistics regarding the general data of the community enterprises are reported in Table 2

Table 2. Descriptive Statistics of Community Enterprises' General Data

General Data of the Community Enterprises	Descriptive Statistics
Province	Chiang Rai: 48 (18.8%)
	Chiang Mai: 63 (24.3%)
	Mae Hong Son: 11 (0.0%)
	Lamphun: 18 (12.8%)
	Lampang: 33 (7.1%)
	Phayao: 26 (10.1.0%)
	Phrae: 29 (11.4%)
	Nan: 29 (11.2.0%)
Type of Business	Manufacturing: 226 (88.0%)
	Services: 31 (12.0%)
Registered Capital	Less than 500,000 Baht: 154 (59.9%)
	500,000−1,000,000 Baht: 65 (25.3%)
	More than 1,000,000 Baht: 38 (14.8%)
Period of Operation	Less than 5 years: 89 (34.6%)
	5−10 years: 145 (56.4%)
	10−15 years: 23 (8.9%)

* $N = 257$

The support and operational factors of community enterprises were correlated with the success of community enterprises at a statistically significant level of .01. The correlation coefficients were as follows：support factors of community enterprises ($r = .641$(and operational factors of community enterprises ($r = .488$), as shown in Table 3.

Table 3. Relationship Analysis between Support Factors of Community Enterprises (SFCE), Operational Factors of Community Enterprises (OFCE), and Success of Community Enterprises (SUCE)

Variables	M	SD	OFCE	SUCE
Support Factors of Community Enterprises (SFCE)	3.96	0.48	.77**	.64**
Operational Factors of Community Enterprises (OFCE)	3.72	0.78	-	.49**
Success of Community Enterprises (SUCE)	4.01	0.46		-

**$p < .01$

Structural equation analysis conducted to examine the hypothesis model's fit with the empirical data showed that the proposed model was consistent with the empirical data after the model was adjusted with the fit statistics as shown in Figure 2 and Table 4. The Chi-square was significant ($\chi^2 = 17.807$, $df = 10$, $p = .058$); the relative Chi-square (χ^2/df) was 1.78. The goodness of fit index (GFI) and the adjusted goodness of fit index were .993 and .949, respectively. The root mean square error of approximation (RMSEA) = .043.
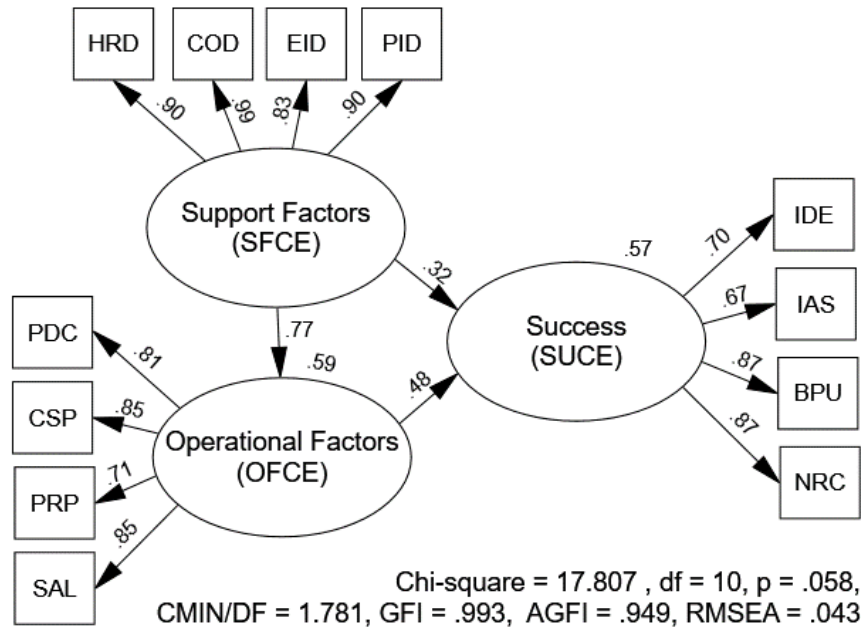
Figure 2. Fit of the Proposed Model to the Empirical Data

Table 4. Consistency Analysis of Proposed Model Compared to the Criteria

Evaluating the Data-Model Fit	Criteria	Statistical Results
1) Chi-square probability level :p	$p > .05$	.058
2) Relative Chi-square: χ^2/df	< 2	1.781
3) Goodness of Fit Index :GFI	$> .90$	.993
4) Root Mean Square Error of Approximation :RMSEA	$< .08$	.043

Figure 2 shows that the support factors (SFCE) and the operational factors of community enterprises (OFCE) had a direct effect on their success (SUCE). Path coefficients of .32 and .48, respectively, were obtained. The standardized factor loadings of the twelve observed variables that were components of the latent variables were as follows:

1. The support factors of community enterprises (SFCE) were composed of four observed variables that were HRD, COD, EID, and PID. They showed standardized loadings of .90, .99, .83, and .90, respectively.

2. The operational factors of community enterprises (OFCE) were composed of four observed variables that were PDC, CSP, PRP, and SAL. They showed standardized loadings of .81, .85, .71, and .85, respectively.

3. The success of community enterprises (SUCE) was composed of four observed variables that were IDE, IAS, BPU, and NRC. They showed standardized loadings of .70, .67, .87, and .87, respectively.

Data in Figure 2 indicates that the effect exerted by latent variables in the proposed model could be summarized as follows:

1. SFCE had a direct effect on OFCE, with a path coefficient of .77, and could predict 59% of OFCE (Squared Multiple Correlations: $R^2 = .59$)

2. SFCE had a direct effect on SUCE, with a path coefficient of .32 and had an indirect effect on SUCE through OFCE with a path coefficient of .37 (.77 x .48). Therefore, the total coefficient effect on SUCE was .69 (.32 + .37).

3. OFCE had a direct influence on SUCE with a path coefficient of .48.

The standardized factor loadings of the twelve observed variables were statistically significant at the .01 level, as shown in Table 5

Table 5. Standardized Factor Loadings of Twelve Observed Variables

Variables	Standardized Loadings	SE	t-value
Support Factors of Community Enterprises (SFCE)			
(1) Human resource development (HRD)	.90**	0.03	27.98
(2) Community organization development (COD)	.99**	0.02	37.05
(3) Economic infrastructure development (EID)	.83**	0.02	26.28
(4) Physical infrastructure development (PID)	.90**	scaling	
Operational Factors of Community Enterprises (OFCE)			
(1) Production (PDC)	.81**	0.06	12.68
(2) Consumption (CSP)	.85**	0.05	19.38
(3) Product processing (PRP)	.71**	0.03	26.24
(4) Sales (SAL)	.85**	scaling	
The Success of Community Enterprises (SUCE)			
(1) Imparting the education (IDE)	.70**	0.05	14.72
(2) Imparting the assistance (IAS)	.67**	0.04	12.01
(3) Building the public utilities (BPU)	.87**	0.05	15.47
(4) Natural resources conservation (NRC).	.87**	scaling	

**p < .01

Figure 2 data also showed that the predictive coefficient (Squared Multiple Correlations: R^2) of the success of community enterprises (SUCE) was .57. Therefore, it was concluded that the support factors of community enterprises (SFCE) and the operational factors of community enterprises (OFCE) could together predict 57% of the success of community enterprises (SUCE), with a statistically significant level of .01.

Table 6. Hypothesis Testing Results

Hypotheses	β	SE	t-value	Summarized
H1: SFCE → OFCE	.77**	0.07	15.05	Supported
H2: SFCE → SUCE	.32**	0.09	4.46	Supported
H3: OFCE → SUCE	.48**	0.07	5.34	Supported

**p < .01

Table 6 showed that the hypothesis testing results were as follows:

Hypothesis 1 (*H1*): The support factors of community enterprises (SFCE) affected the operational factors of community enterprises (OFCE), with a path coefficient of .77 at a statistically significant level of .01, which supported Hypothesis 1.

Hypothesis 2 (*H2*): The support factors of community enterprises (SFCE) affected the success of community enterprises (SUCE), with a path coefficient of .32 at a statistically significant level of .01, which supported Hypothesis 2.

Hypothesis 3 (*H3*): The operational factors of community enterprises (OFCE) affected the success of community enterprises (SUCE), with a path coefficient of .48 at a statistically significant level of .01, which supported Hypothesis 3.

Discussion

The proposed model was consistent with the empirical data, which indicated that the community enterprises' support factors and their operational factors affected their success, both directly and indirectly. This is because:

1. The four support factors are important elements that contribute to the development and smooth operation of community enterprises. As well as improving the operations, 1) human resource development allows people in the community to develop knowledge and ability regularly, which results in the determination to benefit the organization, commit to work, and dedicate their ability

and effort to accomplish the work willingly (Kamonthornthai, 2018); 2) community organization development allows people in the community to have a close relationship with the community organization, have confidence, and accept the goals and values of the organization. It is a link between ideas and cooperation between people to solve problems together within the community (Suresh, 2014; Yodsurang, 2017); 3) economic infrastructure development allows communities to have a self-reliant system of capital and financial management (Naulchuen, 2017); 4) physical infrastructure development allows communities to obtain important infrastructure for the operation and management of community enterprises (Donkwa, 2012).

2. The four operational factors (production, consumption, product processing, sales) are community business activities that must start with a community that is ready and has potential. Because initiative must come from the community itself, the parties are just the stimulus and supporters (Danthanin, 1998; Donkwa, 2012). Therefore, the activities of community enterprises, in production, consumption, product processing, and product distribution, must allow people in the community to participate in solving their basic economic problems by themselves.

These consist of 3 problems that are as follows: 1) What will be produced? (What)—is to let the people of the community think together about what products and how much should be produced. This problem is caused by the limited production resources of the community; therefore, they must choose to produce only the necessary products first. In addition, they must consider the number of products suitable for consumption and the exchange of community products, so that the rest of the resources can be used for other essential uses. 2) How will it be produced? (How)—is to let the people of the community consider together how to produce products, and what kind of production to use. It considers what kind of production technique and what production factors should be used, and in what proportions, so as to obtain the highest productivity or the lowest cost. This problem arises because, for each type of product, there are many production methods. Therefore, they must choose the most effective method. 3) Will it be produced for whom? (For Whom)—is to let the people of the community benefit by deciding together for whom the product should be produced and how much should be produced. The community must consider that once the products are produced, how will they be distributed? Should they determine who would benefit from that product and service? (Target Group) and how much will be appropriate (Sangayothin, 2017; Loiwatthanakul et al., 2016)

Conclusion and Suggestions

The results show that support and operational factors affected the success of community enterprises. If community enterprises aim to improve their success, they should develop support and operational factors that are consistent with the findings reported in this article as follows:

1. Develop personnel in three groups who are related to the operations of community enterprises, which are community leaders, villagers, and staff to have the knowledge and ability to analyze and techniques necessary for the operation of community enterprises–namely, production, consumption, product processing, and sales.

2. Develop community groups/organizations to organize group activities by having leaders, villagers, and related persons work together. This is the heart of how community enterprises may operate in a way that is consistent with residents' cultural and economic constraints.

3. Develop economic infrastructure, especially funding, that may be obtained from villagers interested in community enterprises, savings activities, village banks, or from external funding.

4. Develop physical infrastructure, especially infrastructure that is a factor in consumption and production, such as water, electricity, and roads in the community.

5. Develop the operations of community enterprises in terms of production, consumption, processing, and sales, such as 1) improving the quality of products and services that meet the needs of consumers, 2) developing production skills and capabilities, 3) using local resources and wisdom to achieve low production costs and to maximize the use of community resources, 4) creating a network of cooperation with business communities or external organizations, and 5) creating financial accounts that are transparent and verifiable.

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