

## Article

# Rural Villagers' Quality of Life Improvement by Economic Self-reliance Practices and Trust in the Philosophy of Sufficiency Economy

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**Abstract:** The concept of economic self-reliance, widely known by Thai people as the philosophy of sufficiency economy, has been widely promoted in rural Thai societies. By practicing this philosophy, it is expected that the citizens' quality of life and local environments could be sustainably improved. This study aims to explore the contribution of the community practices of the sufficiency economy philosophy to rural villagers' quality of life improvement, and to investigate potential factors that determine the trust of villagers in the philosophy. With the purpose to propose strategies which could enhance trust and promote villagers' practices of the philosophy, the study investigated influences of three relevant factors on trust towards the philosophy. Those factors included factors related to cognitive-based trust, factors related to emotional-based trust, and factors related to demographic characteristics. Questionnaire surveys and in-depth interviews with community leaders and local villagers were conducted in the Ban Jamrung community, in Thailand's Rayong province. The results of the statistical analysis revealed that the residents who applied the sufficiency economy philosophy in their daily lives experienced a relatively better quality of life. Additionally, it was found that trust in the philosophy could be predicted more by rational factors than by emotional factors. These findings could be utilized to develop strategies to maintain and enhance the trust of the people in the philosophy of sufficiency economy.

**Keywords:** community trust; social trust; the philosophy of sufficiency economy; local sustainability

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## 1. Introduction

Thanks largely to the third National Economic and Social Development Plan (1972-1976), the growth of the industrial sector in Thailand has expanded rapidly during the past three decades. For instance, an enormous number of Thai workers from the agricultural sector have increasingly changed to the industrial and the services sectors. Farmlands and farming skills that had been passed down from generation to generation for a long period of time, have been abandoned. Additionally, many farmlands have been sold to business investors and utilized for other types of economic activities. Consequently, during Thailand's financial crisis in 1997, many migrated workers in cities were suddenly unemployed [69], and could not return to the agricultural sector due to lack of farmlands. In the same time, many existing rural farmers also suffered with the falling prices of agricultural commodities. The situation finally gave rise to serious poverty problem in Thailand. King Bhumibol Adulyadej, with his visionary awareness of the instability of the fast-growing economy, proposed the philosophy of sufficiency economy to the people of Thailand [1]. This philosophy emphasizes an economic development based on self-reliance and awareness of unexpected adverse economic events [2]. In practicing the philosophy, people are encouraged to avoid extreme thoughts and actions related to their living, and also encouraged to minimize their

dependence on external resources [3]. Diminishing the probability of failure or probability of being impacts by external shock is also given importance. Individuals should have a moderate desire, and avoid excessive investments which might bring them to a risky circumstance. Similar to the philosophy of sufficiency economy, the concept of economic self-reliance [70] and the philosophy of life [71] also address significance of moderate development based on self-potentials. By following these principles, it is expected that individuals' quality of life would be improved, and people would have sufficient self-immunity to cope with external shocks such as global financial crisis.

Ban Jamrung, in Rayong's Klaeng district, is a community that has enthusiastically conducted various kinds of activities that follow the principles of sufficiency economy philosophy. Amidst the rapid industrial growth that has occurred in Rayong province, the external resources and labor market have been unable to exercise effective control over the production process to ensure the quality of life of the local workforce, who have in turn been greatly affected by adverse health conditions. Statistics from the local hospital, Rayong hospital, show that the number of patients who had cancer increased rapidly from 1,881 cases in 2004 to 4,654 cases in 2008 [4]. The lack of efficient control over industrial emissions has resulted in the local people being exposed to accumulated toxic substances over a long period of time.

The sufficiency lifestyle in Ban Jamrung community, which focuses on the use of local resources and knowledge-based career development, has been based on a modest potential. Local villagers have applied the principles of sufficiently economy to their daily lives in various aspects. Residents, for instance, have conducted integrated farming practices instead of the mono-cropping agricultural system that apparently deteriorates the environment [5-7] and has adverse impacts on human health [8]. By conducting integrated farming, though gaining not much income from sale of agricultural commodities, farmers have faced low possible risks of facing adverse events such as falling prices of agricultural commodities or plant disease epidemics. Conducting integrated farming has also contributed to the preservation of ecological systems, leading to environmental sustainability in rural villages. At the community level, to increase the community's self-immunity, the local residents have established a spirit of collaboration in order to cope with the consequences of unexpected events such as natural disasters, financial crises, crimes, and environmental pollutants.

To successfully implement the philosophy of sufficiency economy in Ban Jamrung community, the residents' trust in the philosophy has played a significant role. Trust is defined as an individual's confidence, an individual's expectation of achieving an expected outcome [9]. In other words, trust can be defined as an individual's confidence that the statement, message, or actions of another individual can be relied upon [10]. In the cases of community development and the improvement of individuals' quality of life, the residents' trust in the philosophy of sufficiency economy can be considered an important mechanism to encourage people to pay attention to the development under the existing capacity, and enable them to cope with unpredictable situations. The idea of the people sharing trust also generates more community learning and cooperative development in a systematic and sustainable way [9]. Moreover, social trust has the potential to contribute to a community's vision sharing and collaboration in social and economic development, environmental management, and organizational development [11]. In the Ban Jamrung community, residents have comprehensively applied the philosophy of sufficiency economy to their living both in the community and individual levels. Their careers and daily lifestyles have been enhanced in the spirit of moderation. In this way, most of the villagers still have a rural lifestyle while agriculture is the main occupation.

So as to maintain the trust of the people in the philosophy of sufficiency economy and to understand how this trust can be built, the factors that determine the people's trust in the philosophy of sufficiency economy are investigated in this study. The exploratory model for the investigation contains relevant factors that can potentially contribute to trust. Those factors include rational and emotional factors, and factors related to the residents' demographic characteristics. In addition, the paper also presents how the community's practice of sufficiency economy philosophy has contributed to local sustainability, which in turn represents improvements to the residents' quality of life.

## 2. Theoretical Context

### 2.1. The Philosophy of Sufficiency Economy and Moderation Concepts

The philosophy of sufficiency economy, initially developed and proposed in 1997 by King Bhumibol Adulyadej, the king of Thailand and the world's longest reigning monarch, provides sustainable development guidance and education on the way of sustainably living for the Thai people [12]. Panthasein [13] states that the philosophy of sufficient economy is related to Buddhist economics, which emphasizes moderate development based on morality and knowledge. The main goal of this philosophy is to enable the Thai people to adapt to economic crises and to cope with critical challenges caused by rapid changes in the global economy [12, 14]. The philosophy contains three main interconnected principles [15]. The first principle is moderation, which means having moderate desires or fostering no insatiable needs. The second principle is reasonableness in decisions or due consideration. Namely, by practicing at an individual level, people must have an awareness of any future negative impacts caused by their own actions. The last principle is self-immunity or the capability to cope with adverse consequences caused by unpredicted events. This means that any kind of development should be carried out based on one's own capacity, and potential risks should be ultimately minimized. To apply these three principles in daily living, knowledge and morality is essential. Utilization of knowledge in all parts of working processes can enhance the effectiveness of decision making and yield impressive outcomes. At the same time, adhering to the principles of morality, such as honesty, patience and perseverance, can enhance self-immunity, and strengthen collaboration and mutual assistance. Similar to the philosophy of sufficiency economy, the concept of economic self-reliance also contains the same principles [70]. Both the philosophy of sufficiency economy and the concept of economic self-reliance emphasize on individuals' capability to fulfill their needs by avoiding external assistance, and both also highlights self-capacity to cope with external shock.

According to the philosophy of sufficiency economy, it could be addressed that moderation is the core principle of the philosophy of sufficiency economy. Similarly, the philosophy of life, initiated by Hamka [71], also addresses several aspects of moderation; including moderation in individuals' intention, mind, needs, happiness, wealth, fame and position [72]. Moderation in intention refers to individuals' good intention to do something. For instance, if the intention is to obtain a big amount of money or to receive promotion in a higher position without considering existing potentials, it is not considered as a moderate intention, but an excessive intention [72]. To achieve good intention, moderation in the mind plays a significant role in developing individuals' self-assessment and in controlling humans' excessive thoughts. For instance, when individuals feel proud of their success in life such as being promoted in a higher position, they could lose their moderate mind. They can easily forget their weakness, and thus it could bring them to a risky situation. For the moderation in needs, it deals with humans' diverse and excessive demands. When people have excessive demands, and have negative thoughts, they might commit negative behaviors such as corruption or being in debt. Hamka suggests that a balance between needs and individuals' existing capability to supply them should be taken into consideration.

Additionally, Hamka also addressed moderation in happiness. The way to achieve happiness is to understand what the true happiness is. Happiness is not always contributed by gaining much money or being wealthy. It is believed that real happiness comes from inner side such as having good friends and family or feeling proud when helping other persons. In case of moderation in seeking wealth, Hamka highlights that human should not sacrifice their dignity, nation, as well as religion for being wealthy. Moreover, human should also have moderation in reputation and position because having excessive demands of reputation and position potentially causes negative acts such as deception and corruption. Individuals should realize that permanent reputation and position will be acquired by only committing good behaviors [72].

It could be stated that the extent of moderation in the philosophy of sufficiency economy is same as some aspects of moderation in the philosophy of life, particularly, moderation in intention, mind, needs, and happiness; whereas, moderation in wealth, reputation and position are not a focus

in the philosophy of sufficiency economy. The philosophy of sufficiency economy mainly focuses on economic dimension and development of strategic ways to encourage people to meet their basic needs by their own existing potentials. However, both philosophies similarly conclude that having excessive intention, thoughts, and needs could constitute to negative behaviors and bring to a risky circumstance.

The principles of sufficiency economy philosophy can be applied in all levels, ranging from individual level to national level. [12]. By practicing this philosophy in an individual level, individuals would be expected to achieve a sustainably comfortable life together with sufficient self-immunity to cope with unpredicted events. Khunthongjan & Onsibutra [16] reveal that the application of sufficiency economy principles at an individual level could increase social values such as social trust and community relations. Chalapati [17] reveals that poverty has been reduced in Thailand by applying the sufficiency economy philosophy in governmental policies. This means that educational development has been enormously supported by the governments, and local development based on bottom-up approach has been widely implemented. Similarly, Pruetipibultham [18] states that the success of human resource development in Thailand was contributed by governmental policies related to the principles of sufficiency economy. Additionally, it was also found that the natural environment in communities where residents have enthusiastically practiced the sufficiency economy activities are in good condition [19]. This is because pesticides and chemical fertilizers are not utilized in any agricultural activities, and eco-friendly agricultural systems are implemented. By applying the philosophy to agricultural activities, a quantity of agricultural product is not targeted for sales or industrial supplies, but for household consumption.

## 2.2. Practices of Sufficiency Economy in Ban Jamrung community, Rayong province, Thailand

The philosophy has been comprehensively implemented by many Thais [18, 20]. Ban Jamrung community, located in Rayong province, is one of many communities that has eagerly taken the principles of sufficiency economy into consideration to enhance its development both in community level and individual level. At community level, the community began practicing these principles by gathering together and simultaneously learning to manage their lives. They gathered together to pool their financial resources and establish a "Community's Bank". In 1986, the community fund group was established, and a community shop, which is stocked by villagers and sells daily consumption goods, was also started. Of the profits gained from the investment, 30% was earmarked for community's activities. This movement corresponded with the government's policy to be "the center of market system learning". The policy was aimed at encouraging residents to learn how to manage their agricultural products. To manage the community bank as well as the village shop, several meetings were organized and the community management system was initiatively formed. In 1987, the community purposely established a fund for community development projects. Thus, a lot of development activities could be effectively operated. At an individual level, the villagers also changed the way they lived. Villagers stopped conducting a mono-agricultural system, and replaced it with integrated farming policies in which chemical pesticides and fertilizers were not used. Though they gained less financial profits, they were satisfied and happy with the outcomes. This is because they realized that a plentiful environment is more valuable.

In 2006, the community received a trophy from Her Royal Highness Princess Maha Chakri Sirindhorn in recognition for being a best practice community where the sufficiency economy philosophy was practically applied for the development of the people's well-being. The outcomes of the community practices were widely recognized as an effective model for rural community development. Thus, the community was promoted as a learning center for the practices of sufficiency economy principles. After achieving success and public notoriety, the villagers continue to run their sufficiency economy activities.

Today, the community comprises 44 working groups with members from the whole district. A representative of each group is assigned to participate in monthly meetings in order to share and discuss issues related to progressive outcomes as well as constraints in the development. Currently, the issue of human resources for the future development of the community is much emphasized,

due to concerns about future development. Though realizing that community income and household income might not be increasing as rapidly, and life might be less comfortable, villagers gain plenty of happiness and satisfaction from the current conditions (based on the results of the interviews; Chartchai, September 2015)

### 2.3. Trust Concepts

The concept of trust has been applied in many research fields such as information technology management [21], business management [21, 22] as well as social sciences and humanities [23–25]. However, scholars in several fields define the concept of trust in the same way; namely, trust usually occurs in situations where individuals or groups are in a situation of uncertainty, and share similar risks [9, 26–29]. Rousseau et al [30] defines trust as individuals' intention to accept vulnerability and risks based on positive expectations of actions or behaviors of another. More simply, Rotter [10] defines trust as an individual's confidence that a statement, message, or actions of another individual can be relied upon. Some other scholars also explain the meaning of trust in another way. For instance, trust is created based on individuals' perception of ability, loyalty, and sincerity. Abdul-Rahman & Hailes [31] divide trust into four levels: no trust at all, no trust, trust, and more trust. At the highest level, people who want to create trust do not have to prove any action since past outcomes clearly show that such a person deserves trust.

Trust is an important factor that influences residents' decision to perform sufficiency economy activities that have the potential to bring about improvements in people's quality of life. As stated in many previous studies, trust in someone or something enables people to change their attitude, behavior, and act in ways that can enable them to achieve their goals [32–34]. Moreover, the presence of trust can minimize contradiction and risk, and strengthen relationships between trustors and trustees. In other words, many researchers address the fact that trust can be defined as a social capital than can potentially contribute to cooperation between individuals [35–37]. In the field of construction management, high-quality communication and effective performance can be achieved by building trust [35, 36].

### 2.4. Factors Contributing to Community Trust

Community trust is diversely affected by many factors: cognitional, relational, emotional, time, spatial, intelligential, and experiential [34]. More simply, Lewis & Weigert [38] state that trust in daily life is a combination of both emotionality and rationality. Similarly, McAllister [39] also categorize trust into two types: cognitive-based trust and affective-based trust. According to literature reviews, factors that potentially influence trust among people in the philosophy of sufficiency economy can be classified as follows;

Factors related to emotional-based trust: emotional-based trust, sometimes called alternative-based trust or relational trust, is confidence in an individual, group, or something based on emotionality contributed by the level of empathy, care, and honesty [40]. Trust based on emotional perspective is naturally subjective and can be solely generated based on feelings and emotions [41]. This type of trust can be enhanced or destroyed based on the level of social interactions as well as experience [42]. As stated in previous studies, the degree of relationships among people who want to gain trust or who want to create people's trust in a particular notion takes a significant role [41, 43]. Similarly, Yaojun, Pickles, & Savage [44] address the fact that people who have greater neighborly relations have a relatively greater amount of social trust. In this study, individuals' relationship with community leaders as well as neighbors might probably influence residents' trust in the philosophy of sufficiency economy since both community leaders and neighbors put a lot of effort into establishing community collaboration to conduct sufficiency economy activities.

Factors related to cognitive-based trust: Cognitive-based trust, sometimes called system trust or knowledge-based trust [45], is naturally created based on reasoning about knowledge and evidence. It implies a willingness by individuals to rely on the capabilities and competence of others [46]. In the case of building and strengthening public trust in objects and notions, such as trust in science

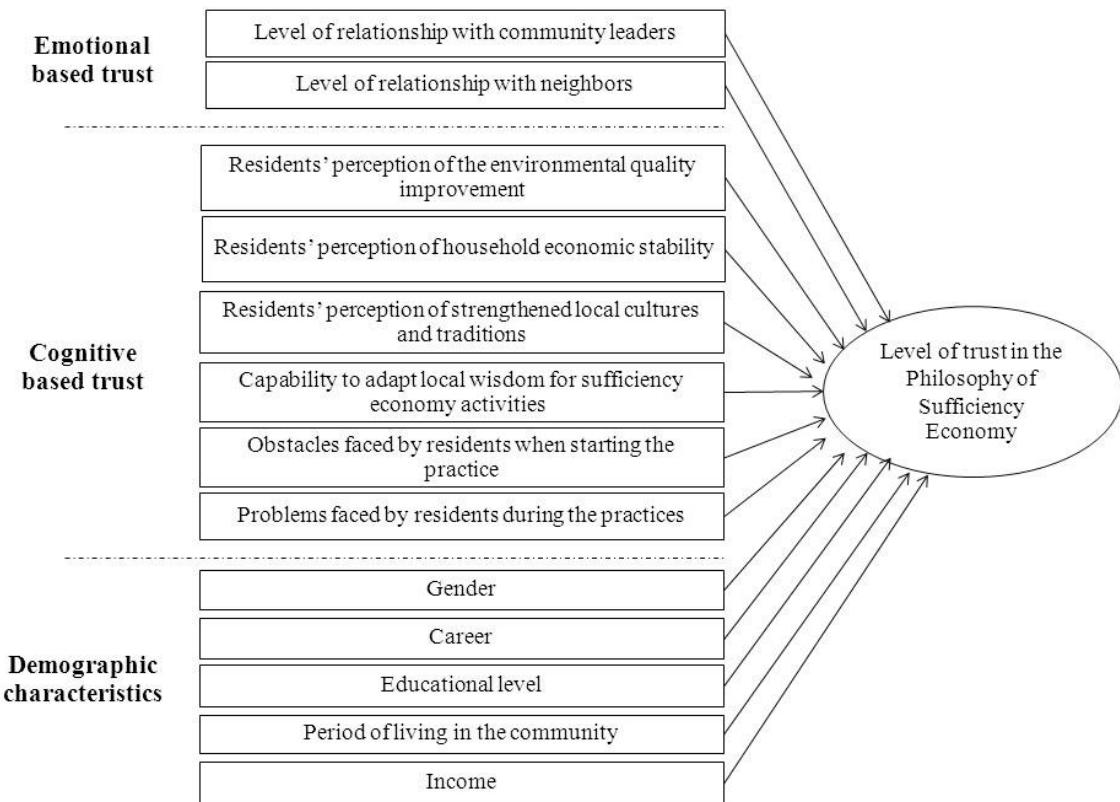
and technology, trust in regulation, and trust in information sharing systems, many previous researches revealed that factors related to cognitive-based trust were significant [26, 47, 48]. Those factors include prior experience [49, 50], perceived benefit from trusting and accepting a notion or system [26, 47], privacy concerns [48], and risk taking [9, 47]. For instance, it was found that public perception of the ability of the public service system to fulfill the needs of the public positively influenced public trust [26]. In addition, the study conducted by Platt & Kardia [48] reveals that individual's privacy concerns had a reverse correlation with public trust in the information sharing system.

Factors related to demographics characteristics: besides factors related to emotional-based and cognitive-based trust, much of the literature also reveals factors related to demographic characteristics possibly affecting public trust. Ben-Ner & Halldorsson [51], for instance, address the fact that the environment in which the person lives might influence trust of people. In addition, Riedl & Javor [52] reveal that trust of people can be explained only by biological factors such as genetics, hormones, and characteristics of persons. A study carried out on public trust in gene technology reveals that female respondents exhibited lower trust and perceived less benefit than male respondents [47].

### 3. Study Framework

The study framework of this study was constructed in keeping with the findings from the literature review. The study is divided into two parts. First, the study aims to explore the contribution of the community practices of the sufficiency economy philosophy to rural villagers' quality of life improvement. Quality of life in this study refers to individuals' satisfactions with their socio-economic conditions as well as satisfaction with their living environment. The change in rural villagers' quality of life after the community practices of the sufficiency economy philosophy will be explored.

Second, the study aims to investigate determinants of trust in the philosophy of sufficiency economy. According to the literature reviews, a study framework for this investigation was created (see Figure 1). It presents relevant factors that potentially influence trust of people in the philosophy of sufficiency economy. Those factors are divided into three groups: emotional-based trust, cognitive-based trust, and demographics characteristics. For factors related to emotional-based trust, the study investigates whether a higher level of individual relationship with community leaders and neighbors would contribute to higher trust of people in the philosophy of sufficiency economy. This is because community leaders as well as some community members enthusiastically support a wide range of sufficiency economy practices. Regarding our examination of factors related to cognitive-based trust, six potential factors were selected: residents' perception of environmental quality improvement; perception of household economic stability contributed by practices of the philosophy of sufficiency economy; perception of strengthened local cultures and traditions; capability to adapt local wisdom for sufficiency economy activities; obstacles faced by residents when starting sufficiency economy practices; and problems faced by residents during sufficiency economy practices. It is assumed that when people have good experiences in following sufficiency economy principles, trust can easily be maintained and enhanced. In contrast, when facing obstacles in the course of conducting sufficiency economy activities, people may have lower trust, or have no trust at all. Additionally, the relationship between residents' demographics characteristics and level of trust were also examined. Those factors are gender, career, educational level, periods of living in the community, and level of income. Differences in demographic characteristics might possibly cause a different level of trust in the sufficiency economy philosophy.



**Figure 1.** Study Framework

#### 4. Data and Methods

##### 4.1. Development of Variables and Measurement

To explore the contribution of the community practices of the sufficiency economy philosophy to rural villagers' quality of life improvement, the study employed both questionnaire surveys and in-depth interviews. For measuring quality of life improvement, the study developed five indicators; including individual's perception on environmental quality improvement, enhancement of community relations, enhancement of relationship in family, enhancement of local cultures, and satisfaction with adequate incomes for daily expenditures. By using the questionnaire surveys, the authors developed a 4-point Likert-scale question ranging from 0 (worse than before practicing the philosophy) to 3 (significantly better than before practicing the philosophy). In addition, in-depth interviews with community leaders and villagers were also conducted. The sampling groups were asked how issues related to the quality of life have been changed since the practices of sufficiency economy philosophy.

To evaluate determinants of trust in the philosophy of sufficiency economy, two types of variables are used: dependent and independent variables. And questionnaire sheets are used as a tool for data collection. The types of factors, variables, and questions could be present in Table 1. The dependent variable is level of trust in the philosophy of sufficiency economy. As stated by Earle et al. [9], trust is an individual expectation of beneficial outcomes. In this study, community trust refers to the level of individual expectations of outcomes generated from sufficiency economy practices. These expectations are divided into three aspects: quality of life improvement, environmental quality improvement, and improved social conditions. Based on the literature reviews [53, 54], and in-depth-interviews with local residents, the authors developed a 5-point Likert-scale question to measure the level of trust. The 5- point rating scale ranged from 0 (no trust /no expectation at all) to 4 (high trust/very high expectation). The data obtained from the questions will be added together and calculated as a mean score representing a level of trust.

**Table 1.** Data collection.

| Factors                                  | Variables  | Questions/alternatives   |
|--|--|--|
| Level of trust                           | Residents' expectation of beneficial outcomes contributed by practices of the sufficiency economy philosophy   | Would your quality of life be enhanced when conducting sufficiency economy activities?<br>Would your community environment be sustainably improved when conducting sufficiency economy activities?<br>Would society become more livable when conducting sufficiency economy activities?  |
| Factors related to emotional based trust | Level of relationship with community leaders<br>Level of relationship with neighbors   | How frequently do you meet and have conversations with the leader?<br>How many neighbors do you have?  |
| Factors related to cognitive based trust | Residents' perception of the environmental quality improvement contributed by the practices of sufficiency economy philosophy<br>Residents' perception of household economic stability gained from the practices of sufficiency economy philosophy<br>Residents' perception of strengthened local cultures and traditions contributed by the practices of sufficiency economy philosophy.<br>Capability to adapt local wisdom for sufficiency economy activities.<br>Obstacles faced by residents when starting the practice such as insufficiency of budgets, lack of water resources, and poor quality of soil<br>Problems faced by residents during the practices such as plant disease or low quality and quantity of products | Do you think that having applied the sufficiency economy concept in daily life has yielded environmental improvement in the community?<br>Do you think that when conducting sufficiency economy activities, you have earned adequate income for future use in case you face unsecured events such illness, joblessness?<br>Do you think that having applied sufficiency economy concept in daily life has contributed to adequate income for daily expenditure?<br>Do you think that having applied the sufficiency economy concept in daily life has supported local culture and traditions and how?<br>Could you utilize local knowledge or local wisdom to operate sufficiency economy activities?<br>Did you face any obstacles when you changed your lifestyles in accordance with self-sufficiency economy principles?<br>Do you think that applying sufficiency economy concepts in daily life could cause you some problems such as agricultural farm epidemics, or lack of market for agricultural goods? |
| Characteristics of residents             | Gender<br>Career<br>Educational level<br>Periods of living in the community<br>Income  | Please indicate your gender<br>What is your career? Open-ended question<br>What is your educational level?<br>Open-ended question<br>How long have you lived in the community?<br>open-ended question<br>How much is your average income per month?  |

For independent variables, there are three types of variables such as variables relevant to emotional-based trust, cognitive based trust, and demographic characteristics. Factors related to emotional-based trust: relationship with community leaders and relationship with neighbors were the two variables examined. To measure the level of relationship between residents and community leaders, the frequency of communication between these two groups is investigated. As shown in many previous research [55, 56], the frequency of communication can reflect the level of relationship, and it was found that communication impairment significantly caused poor relationships [57]. Respondents were asked to identify how frequently they had conversations with community leaders. The rating scale of communication frequency ranged from 0 "never have conversation with" to 4 "often have conversation with". For the measurement of residents' relationship with their neighbors, the number of neighbors with whom they always have conversations was examined. According to the review of previous studies [58, 59], it was found that the number of friends is a part of social capital, and is associated with social relationship. To measure the level of relationship with neighbors, respondents were asked to indicate an average number of friends, with whom they feel close. The rating scale ranged from 1 "less friends" to 5 "so many friends".

Factors related to cognitive-based trust: six variables were examined for the residents' relationship with community trust (see Table 1). The authors developed questions for selected variable measurement based on the results of interviews. To measure the residents' perception of environmental quality improvement, the respondents were asked their opinion on community environment improvement. A 3-point Likert scale answer choice was derived. The rating scale ranged from 1 "no improvement" to 3 "significant improvement". In the case of residents' perception of household economic stability, residents were asked whether their incomes were sufficient for daily expenditure and for the future demand. The rating scale answer choices ranged from 1 "worse than before" to 4 "significantly better than before". To measure residents' perception of social environment improvements in the community, respondents were asked to indicate the current condition of community social environment. The answer choices were 1 "no change", 2 "change".

Besides perceptions of social, environmental, and householder economic improvement, the capability of the residents to use local wisdom and resources for sufficiency economy practices, obstacles to begin the practices, and problems surfacing during the practices were also investigated. Authors also developed questions to measure these variables based on the result of primary field surveys and interviews. To measure the capability of the respondents to utilize local wisdom and resources for the practice, the respondents were asked to rate their degree of capability ranging from 1 "no capability" to 4 "high capability". To measure the respondents' potential obstacles when starting the practice, the respondents were asked to indicate the quantity of the obstacles they faced. The rating scale of quantity ranged from 1 "many obstacles" to 3 "fewer obstacles". Additionally, the respondents were also asked to indicate whether they faced any problems during the practice of sufficiency economy philosophy, and the answer choices were 1 "possible" and 2 "not possible".

Factors related to demographic characteristics: five demographic characteristic variables were selected to study. Those variables were gender, career, educational level, period of living in the community, and income level. To measure these variables, respondents were directly asked questions related to variables.

#### 4.2. Data Collection and Analysis

For the data collection, in-depth interviews with two community leaders and five community members were conducted between September - December 2015. Ban Jamrung Community is located in Thailand's Rayong province. Currently, its total population is about 550 people or 134 households (based on the results of the interview with the community leader; Chartchai, Jan 2015). The majority of villagers are agriculturalist, planting rubber trees, fruits, and local vegetable. Some villagers participate in service sectors such as homestay services for tourists. For the questionnaire surveys, 124 community members who have participated in sufficiency economy activities were asked to answer a questionnaire sheet. All data collected were deliberatively inspected before the analysis.

A regression analysis is one of the various tools widely utilized to create a model to predict the influences of independent variables on a dependent variable. Many recent studies also performed regression analyses to create models predicting social trust [60-62]. In this study, to examine the relationship between potential predictive factors and community trust, a multiple regression analysis was performed by using a statistical package for the social sciences (spss-19). Finally, the discussion on effective communication for trust enhancement in the philosophy of sufficiency economy is presented.

### 5. Findings and Discussions

#### 5.1. Characteristics of Respondents and the Practices of Sufficiency Economy philosophy in Ban Jamrung Community

From a sample of 124 residents who were involved in sufficiency economy practices in Ban Jamrung community, in Thailand's Rayong province, the number of male respondents was higher than that of the female respondents, at 60.50% and 39.50%, respectively. Half of the respondents

worked as gardeners who owned land, while 16% of the respondents were merchants who sold daily consumption goods as well as food. The results of the questionnaire surveys also revealed that the majority of the respondents finished only primary school, and 14.5% of the respondents received bachelor degrees. Regarding rural communities in Thailand, the number of people who have gained undergraduate degrees or higher degrees is relatively small. Similar to other developing countries, most people with university degrees are involved in job in a city where greater income can be gained [63]. In the Ban Jamrung community, it is possible that young adults who hold university degrees tended to return to their home communities, and have their own career plan. In American rural communities, people with university degrees often decide to return to rural communities because they can seek careers in which their knowledge and experience can be applied [64]. This phenomenon might be similar to what has happened in the Ban Jamrung community. Additionally, the results of the survey also showed that most of respondents have lived in the community for more than 40 years, or it can be stated that most of them are local residents. The average income of the respondents was 12,739 baht, or approximately US\$356. This amount could be considered as a medium income class, compared to Thailand's minimum monthly wage of 15,000 baht, or US\$ 419 [65].

The results of the questionnaire surveys also revealed sufficiency economy activities mostly conducted by the respondents (see Table 2). Almost 60% of respondents have conducted integrated farming by planting various kinds of crops on their land. Those crops, such as rice, local vegetables, and local fruits, were purposely planted for household consumption rather than to sell and supply to industrial sectors. By practicing integrated farming, the environment could be potentially preserved and become less polluted due to the decision of the residents not to use fertilizers or chemical pesticides. Furthermore, the respondents' lifestyles were also based on the use of local resources rather than dependence on external resources. Almost 40% of the respondents also applied the principle of sufficiency economy to their economic activities. They, for instance, decreased their consumption of luxury goods, and tried to balance their expenditure and incomes.

**Table 2.** Sufficiency economy activities conducted by villagers in Ban Jamrung community.

| Sufficiency economy activities                     | Having conducted |      | Haven't conducted |      |
|--|------------------|------|-------------------|------|
|  | N                | %    | N                 | %    |
| Doing integrated farming                           | 74               | 59.7 | 50                | 40.3 |
| Decreasing consumption of luxury goods             | 50               | 40.3 | 74                | 59.7 |
| Balancing expenditures and incomes                 | 48               | 38.6 | 76                | 61.3 |
| Decreasing environmental degradation               | 31               | 25.0 | 93                | 75.0 |
| Using local resources as a major source for living | 62               | 50.0 | 62                | 50.0 |

N = 124.

## 5.2. Contribution of Sufficiency Economy Practices to Sustainability in a Rural Community

Considering the quality of life brought about by sufficiency economy in the dimensions of economic, social, and environment, five indicators were developed by the authors and used to examine sustainability in rural development (see Table 3). According to the results of the questionnaire survey, the respondents, generally, reported a better quality of life. However, the scores given in each indicator were different. A total of 56.45% of respondents, for instance, perceived that their income and expenditure balance was slightly better than before, while 29.03% reported a significant improvement in income and expenditure balance. According to the result of in-depth interviews, a community leader stated "by doing integrated farming, we could not make a lot of financial profits; however, we have not suffered with plant disease epidemics like we occasionally suffered before. Some years, we face a natural disaster like drought. Consequently, we cannot produce plenty of fruits, but we are still able to gain income from sale of rubber. I could say that we gain quite a stable amount of income in each year". Similarly, a villager stated "I could not make a lot of savings; however, I have never been in debt" Regarding community relations and relationship among family members, the result of questionnaire surveys showed that both types of

relationships had significantly and positively changed during this period of time. Apparently, most of the respondents (75.81%) reported a significant change in community relations, which became better than before. This significant change might be have resulted from changes in the respondents' way of thinking and living. People tend to work more cooperatively with their neighbors. As stated by a villager, "Having more times with family, I am very much happy. Previously, I was an officer in Bangkok city where is far away from here. Last three years, I decided to return here, and started conducting farming. Though gaining less income, I have no problem at all. This is because living costs here are not as high as living costs in Bangkok city, and I am able to reduce consumption of luxury goods". Regarding villager's perception on enhancement of community relation, a community leader stated "We have had a frequent communication among each other since we stated working together with sufficiency economy projects in our community. Our community tried to be economic self-reliant and thus, we have to collaboratively work together". Similarly, a villager stated "Since, I participated in community projects; I have spent more times with neighbors. Thus, we have a frequent communication, and become closer". This could be evidenced by the establishment of 40 community projects in which many community members have become involved. Those projects include the production of fish sauce, community-based waste management, soft-shelled turtle raising group, cooperatives community store, etc. The results also reveal that the practices of the sufficiency economy philosophy also contributed to more sustainability of community environments. Almost 60% of the respondents considered that the environmental circumstances, such as soil quality, water, air and ecosystems, of the community had significantly improved. One of elderly villagers stated "Last 20 years; our community faced deterioration of soil quality due to excessive conduction of the mono-cropping agricultural system. We had difficulty cropping local vegetables. Now, our community is well known as plentiful environments for agricultural activities, and our local vegetables could attract many visitors". Regarding the role of sufficiency economy practices in promoting local cultures and traditions, half of the respondents indicated that conducting sufficiency economy activates significantly enhanced local cultures and traditions, while 22.58% reported that no change was contributed by the sufficiency economy practices. A community leader stated "we realized that happiness is not achieved by gaining much money. Many people in this community, especially elderly people, really value traditions and cultures of the community. We, therefore, established Thai traditional folk music group, and many elderly have participated in this group".

**Table 3.** Individuals' perception of economic, social, and environmental improvements.

| Issues related to Sustainability        | Degree of Change (n/%) |              |             |                   |
|---|------------------------|--------------|-------------|-------------------|
|   | Significantly better   | Better       | Same        | Worse than before |
| Improvement of Environmental Quality    | 74 (59.68%)            | 36 (29.03 %) | 10 (8.06%)  | 4 (3.23%)         |
| Enhancement of Community Relations      | 94 (75.81%)            | 18 (14.52%)  | 10 (8.06%)  | 2 (1.61%)         |
| Enhancement of Relationship in Family   | 73 (58.87%)            | 40 (32.26%)  | 11 (8.87%)  | 0 (0.00%)         |
| Enhancement of Local Cultures           | 65 (52.42%)            | 28 (22.58%)  | 28 (22.58%) | 3 (2.42%)         |
| Adequate Incomes for Daily Expenditures | 36 (29.03%)            | 70 (56.45%)  | 18 (14.52%) | 0 (0.00%)         |

*N* = 124

In sum, even though the incomes of the residents have not increased very much compared to other aspects of local sustainability, most of them are satisfied with the social and environmental improvements, particularly the enhancement of community relations that has resulted in their participation in sustainable community development.

### 5.3. Determinants of Trust towards the Philosophy of Sufficiency Economy

Table 4 shows the average trust scores reported by 124 respondents who have practiced sufficiency economy activities, and presents descriptive statistics of potential predictors. Not surprisingly, respondents reported high trust in the philosophy of sufficiency economy. Most of

them also exhibited close relationships with community leaders and good relationships with their neighbors. It was also found that most of the respondents reported facing problems during the practices of sufficiency economy activities, and 45.20% of respondents reported experiencing moderate obstacles when setting out to conduct sufficiency economy. Regarding the capability of respondents to adapt to local wisdom when practicing sufficiency economy activities, the score was also high.

**Table 4.** Average trust scores and descriptive statistics of potential predictors.

| Variables                     |   | Mean ± SD | N (%)        | Correlation with CT |
|-------------------------------|---|-----------|--------------|---------------------|
| Community Trust (CT)          | Community Trust (CT)  | 3.69±0.49 | -            | 1.00                |
| Emotional-based trust factors | Relationship with community leaders                                 | 3.26±0.82 | -            | 0.25                |
|                               | Relationship with neighbors   | 4.89±0.31 | -            | 0.17                |
|                               | Perception of the environmental quality improvement                 |           |              |                     |
|                               | No improvement  | -         | 8 (6.45%)    |                     |
|                               | Partially improved  | -         | 34 (28.33%)  | 0.21                |
|                               | Significantly improved  | -         | 82 (66.13%)  |                     |
|                               | Perception of household' financial security                         | 2.96±0.73 | -            | 0.60                |
|                               | Perception of balance between incomes and expenditure               | 3.19±0.65 | -            | 0.21                |
|                               | Perception of enhanced local cultures and traditions                |           |              |                     |
| Cognitive-based trust factors | No enhancement  | -         | 29 (23.40%)  | 0.37                |
|                               | Enhancement   | -         | 95 (76.60%)  |                     |
|                               | Capability to adapt local wisdom for sufficiency economy activities | 3.28±0.76 | -            | 0.33                |
|                               | Obstacles faced by residents when starting the practices            |           |              |                     |
|                               | Many  | -         | 4 (3.20%)    |                     |
|                               | Moderate  | -         | 56 (45.20%)  | 0.22                |
|                               | Less  | -         | 64 (51.60%)  |                     |
|                               | Problems faced by residents during the practices                    |           |              |                     |
|                               | Have  | -         | 28 (22.60%)  | 0.44                |
|                               | Not have  | -         | 96 (77.40%)  |                     |
|                               | Gender  |           |              |                     |
|                               | Male  | -         | 75 (60.50%)  | 0.13                |
|                               | Female  | -         | 49 (39.50%)  |                     |
|                               | Career  |           |              |                     |
|                               | Gardener  | -         | 66 (53.20%)  |                     |
|                               | Merchant  | -         | 20 (16.10%)  | -0.19               |
|                               | Teacher   | -         | 6 (4.80%)    |                     |
|                               | Labor   | -         | 25 (20.20%)  |                     |
|                               | Officer   | -         | 7 (5.60%)    |                     |
| Demographic characteristics   | Educational level   |           |              |                     |
|                               | Primary School  | -         | 65(52.40%)   |                     |
|                               | Junior High School  | -         | 28(22.60%)   | 0.18                |
|                               | Senior High School  | -         | 13(10.50%)   |                     |
|                               | Bachelor Degree   | -         | 18(14.50%)   |                     |
|                               | Period of time in the community                                     |           |              |                     |
|                               | 10-20 years   | -         | 15 (12.10%)  |                     |
|                               | 21-30 years   | -         | 17 (13.70%)  | 0.41                |
|                               | 31-40 years   | -         | 19 (15.30%)  |                     |
|                               | more than 40 years  | -         | 73 (58.90%)  |                     |
|                               | Income  | -         | 12,739±9,121 | 0.11                |

N = 124

Table 5 shows the results of the multiple regression analysis of individuals' trust in the philosophy of sufficiency economy. The predictors were the eleventh indices, while the criterion variable was the level of individuals' trust in the philosophy of sufficiency economy. The result indicated that the relationship of individuals with community leaders, perceptions of household financial security, the capability of individuals to adapt to local wisdom for sufficiency economy

activities, problems faced by residents during the practices of sufficiency economy, and periods of time in the community, were positively correlated with a degree of trust. They were also statistically significant, accounting for 67% of variance in predicting the trust of people in the philosophy of sufficiency economy ( $p < 0.001$ ,  $F(14,109) = 15.841$ ). Respondents who exhibited higher scores using these variables tended to have a higher degree of trust in the philosophy of sufficiency economy.

**Table 5.** Summary of regression analysis for variables predicting community trust.

| Variables                     |   | Liner Regression Test |        |         |         |       |
|-------------------------------|---|-----------------------|--------|---------|---------|-------|
|                               |   | B                     | SE B   | $\beta$ | t       | VIF   |
| Emotional based trust factors | Relationship with community leaders                                 | .094                  | .045   | .165    | 2.388*  | 2.065 |
|                               | Relationship with neighbors   | .122                  | .160   | .075    | .761    | 3.484 |
| Cognitive based trust factors | Perception of the environmental quality improvement                 | -.120                 | .111   | -.093   | -1.085  | 2.420 |
|                               | Perception of household financial security                          | .257                  | .057   | .376    | 4.495** | 2.448 |
|                               | Perception of balance between incomes and expenditure               | -.108                 | .051   | -.143   | -1.765  | 2.532 |
|                               | Perception of enhanced local cultures and traditions                | -.079                 | .083   | .068    | -.950   | 1.638 |
|                               | Capability to adapt local wisdom for sufficiency economy activities | .101                  | .036   | .276    | 2.793** | 1.334 |
|                               | Obstacles faced by residents when starting the practice             | .127                  | .057   | .144    | .906    | 1.408 |
|                               | Problems faced by residents during the practices                    | .518                  | .080   | .438    | 6.513** | 1.496 |
|                               |   |                       |        |         |         |       |
| Demographic characteristics   | Gender  | -.220                 | .094   | -.217   | -2.344* | 2.843 |
|                               | Career  | .029                  | .028   | .081    | 1.034   | 2.048 |
|                               | Educational level   | .050                  | .032   | .133    | 1.894   | 1.625 |
|                               | Period of time in the community                                     | .230                  | .040   | .502    | 5.774** | 2.505 |
|                               | Income  | 8.090E-006            | .000   | .141    | 1.777   | 2.073 |
| $R^2$                         |   |                       | .670   |         |         |       |
| Adjust $R^2$                  |   |                       | .62.80 |         |         |       |
| F                             |   |                       | 15.841 |         |         |       |

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$

Based on the findings, both factors related to emotional-based trust and cognitive-based trust could be used to predict individuals' trust in the philosophy of sufficiency economy. This finding is related to the findings of Lewis & Weight [38], McAllister [39], and Taylor-Gooby [66]. However, according to the results of multiple regression analysis, it was found that rational factors, such as perception of household financial security, capability to adapt local wisdom for sufficiency economy activities, and problems faced by residents during the practices, were more influential. Similar to the findings presented by Taylor-Gooby [66], the results of this study imply that trust of people in the philosophy is based much more on rational deliberation or evidence-based judgement. Experiences and problems faced by people took a significant role in predicting the degree of trust. People who experienced better household financial security faced fewer problems during the practices of sufficiency economy activities. They also had a higher capability to adapt local wisdom to the practices, and they tended to exhibit higher trust.

A factor related to affective-based trust, however, also shows its significance to trust. As stated by Nicholson et al. [43] and Zur, Leckie, & Webster [41], factors related to affective-based trust also play a crucial role in generating and maintaining trust, particularly in uncertainty situations in which individuals are facing high risks. This study revealed that individuals' relationship with community leaders was significantly related to degrees of trust. Namely, people who had stronger relationships with community leaders, tended to have relatively higher trust towards the philosophy of sufficiency economy. This finding corresponds to the study carried out by Pixley [67] and Yaojun, Pickles, & Savage [44], who addressed the relationship between social relations and trust. In this study, though the variable related to social relations had less significance than other predictors, it is essential to consider when creating strategies to maintain and enhance trust. As

proposed by Lahno [68], trusting attitudes should be developed based on both cognitive and affective judgments; thus, the experiences of people in their interests as well as shared values between parties should be taken into considerations.

Besides factors related to cognitive-based trust and emotional-based trust, this study also revealed that male respondents relatively exhibited higher trust than did female. It could be explained that according to the Thai local society, most of male population usually have a full responsibility to take care of the family. Male populations, therefore, hold much power to make decisions on family matters. In this way, male populations might be more interested to understand the principles of sufficiency economy, and try to seek advantages of the sufficiency economy practices to the family. In addition, it was also found that people who spent a longer period of time living in the community exhibited relatively higher trust in the philosophy. It could be explained that people who spent longer periods of time in the community might possess a better understanding of local wisdom that could be used to perform sufficiency economy activities. In addition, they might also feel connected with their surrounding environments, and have concerns with the existence of local environments. By practicing sufficiency economy activities, it is believed that local environments could be sustainably conserved. In this way, people who spent longer periods in the community possibly had more trust in the philosophy of sufficiency economy than people who spent shorter periods.

#### *5.4. Implications for Development of Strategies to Maintain and Enhance Trust of People in the Philosophy of Sufficiency Economy*

According to the results of this study, strategies to maintain and enhance trust in the philosophy of sufficiency economy can be proposed. The results revealed that the existence of trust in the philosophy of sufficiency economy is due to people's experiences with better quality of life as well as local the capability to adapt local wisdom to performing sufficiency economy activities. In this way, to generate and maintain the trust of people, it could be suggested that promoting a better understanding of local wisdom and integration of that wisdom in practices of the philosophy of sufficiency economy potentially enhance trust, and encourage community practices. That local wisdom incorporates such knowledge as ways to conduct integrated farming, bio-fertilizer production, and agricultural product processing. In addition, the results of this study also show that trust contributed to people's relationship with community leaders who enthusiastically promoted the practices of sufficiency economy philosophy. In this way, the role of community leaders is significant, and building and strengthening relationship between community leaders and residents can also generate and enhance trust of people. In addition, this study identified the factor that might lessen trust of people. That factor is people's experiences with problems that surface during the practices of sufficiency economy activities. Those problems include plant disease or low quality and quantity of agricultural products. To prevent the occurrence of these problems and their adverse consequences, relevant knowledge and preventative measures should be established to ensure that once these problems occur, their negative impacts can be effectively eliminated. This can maintain and enhance trust of people in the philosophy.

## 6. Conclusion

This study explored how community practices of the philosophy of sufficiency economy contributed to local sustainability presented as improvements to household financial security, social situations, and environmental conditions from the perception of the residents. The result of the survey revealed that people have experienced improvements in all aspects of their lives. Though, compared to other aspects related to local sustainability, significant improvements to household financial balance between income and expenditure were reported less by the respondents, social and environmental conditions were significantly improved. In addition, the examination of factors that determine trust of people in the philosophy of sufficiency economy revealed that rational factors were more powerful than emotional factors, and people who had spent longer periods of time in the community also exhibited higher trust. These findings contributed to the development of strategies

to maintain and enhance trust of people in the philosophy of sufficiency economy. Public communication of local wisdoms and their adaptation to sufficiency economy activities should be established. The role of community leaders and their relationship with residents is also important to maintain trust. Thus, communication strategies to strengthen the relationship between community leaders and residents should be emphasized. Finally, the study suggests that potential risks emerging from community practices of the sufficiency economy philosophy should be identified and eliminated through the establishment of mitigation measures. This is because it was found that trust between individuals could be lessened depending on their experiences with problems that surface during the practices of sufficiency economy activities.

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