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# STRUCTURAL EQUATION MODELING OF CAUSAL RELATIONSHIPS OF FACTORS AFFECTING THE SUSTAINABLE SUCCESS OF HANDICRAFT COMMUNITY ENTERPRISES IN THE CENTRAL REGION OF THAILAND

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**Abstract**

Community enterprises play a crucial role in the economic and social development of communities. To promote their effective operation, it is essential to emphasize leadership, and a group culture based on the philosophy of sufficiency economy to enhance the success of community enterprises. Therefore, this research aims to develop a structural equation model of the causal relationships of factors affecting the sustainable success of handicraft community enterprises in the central region of Thailand. The sample consists of 420 members from handicraft community enterprises in the central region, selected through multi-stage random sampling. Data were collected using questionnaires and analyzed using structural equation modeling. The results indicated that leadership, group culture based on the sufficiency economy philosophy, and engagement positively affected the sustainable success of community enterprises. Additionally, leadership and group culture based on the sufficiency economy philosophy positively affected member engagement. Leadership also positively affected the group culture based on the sufficiency economy philosophy, with a statistical significance level of .05.

**Keywords:** Leadership, Group Culture Based on the Philosophy of Sufficiency Economy, Engagement, Sustainable Success, Handicraft Community Enterprises

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## **Introduction**

The philosophy of sufficiency economy, as conceived and developed by His Majesty King Bhumibol Adulyadej (King Rama IX), have been implemented for over 30 years, focusing on enabling citizens to be self-reliant and secure in their lives for true happiness. This philosophy emphasizes moderation, reasonableness, the creation of immunity, and the application of knowledge alongside virtue, starting from a foundation of sufficiency in basic needs. Once stability is achieved, economic development can be pursued for sustainable community growth. This philosophy has been supported by various projects aimed at helping community members live by the principles of sufficiency and utilize local skills and wisdom to generate income. A key initiative includes encouraging communities to establish community enterprises that leverage local resources to create unique products and add value (Pimta, 2024).

Community enterprises can be categorized into various types, such as handicraft production, agricultural processing, and the procurement of consumer goods. However, community enterprises face numerous challenges that must be addressed to become robust and stable businesses, particularly in the area of handicrafts, where product development and management must align with market demands to achieve sustainable growth. The literature review indicates that leadership and the quality of leader are crucial for smooth operations. Managers should possess knowledge, seek to learn, be able to teach and develop subordinates, foster a positive work culture, inspire others, and encourage out-of-the-box thinking. Good leadership enables community enterprises to operate efficiently (Chunnui & Lapthananon, 2019). Managers should adapt to all situations and maximize their knowledge and skills. Moreover, societal changes compel organizations to adjust their operational strategies for competition and survival. Aside from leadership, organizational culture and member engagement also significantly affect the success of the organization (Kayani, 2023; Frankel et al., 2006).

Given the importance of leadership, group culture based on the philosophy of sufficiency economy, and engagement, these factors play a vital role in driving community enterprises toward success, especially for handicraft community enterprises that are pivotal in utilizing local resources for benefits and enhancing economic value. The researchers aim to develop a structural equation model of the causal relationships of factors affecting the sustainable success of handicraft community enterprises in the central region to derive findings that will guide the promotion of handicraft community enterprises in line with the royal initiative of the sufficiency economy for sustainable success.

## **Literature Review**

### **Leadership, Group Culture Based on the Philosophy of Sufficiency Economy, and Engagement Are Associated with the Sustainable Success of Community Enterprises**

The success and sustainable growth of these enterprises depend on the cooperation of community members and the management capabilities of leaders. Leaders with vision and the ability to manage personnel in a collaborative work environment will enable the organization to operate effectively (Madhukar & Sharma, 2017).

Effective leadership significantly fosters organizational cohesion and pride among subordinates, resulting in enhanced work efficiency (Schuetz, 2016). Moreover, cultivating a group culture based on the philosophy of Sufficiency Economy emphasizing self-sufficiency and mutual support can promote the sustainability of community enterprises (Sriphong, 2024). Additionally, the commitment individuals feel towards the organization encourages them to perform to their fullest for the organization's success (Khan, 2013). In summary, leadership, group culture based on the philosophy of sufficiency economy, and engagement positively affect the sustainable success of community enterprises.

## Leadership, Group Culture Based on the Philosophy of Sufficiency Economy, and Engagement

Good leadership is a crucial factor in motivating group members. Leaders with a high sense of responsibility tend to live by principles that value sufficiency and sustainability, creating a friendly atmosphere that fosters collaboration and builds trust in the leader (Zanabazar et al., 2023). Furthermore, establishing a group culture based on the philosophy of sufficiency economy enhances member engagement (Mazzetti & Schaufeli, 2022), allowing members to feel a sense of belonging and shared responsibility for the group's success (Eduzor, 2024). Leaders of community enterprises who exhibit strong leadership and embody a group culture based on the philosophy of sufficiency economy significantly impact member engagement (Jerab & Mabrouk, 2023). Thus, it can be concluded that leadership and group culture have a positive influence on engagement.

### Leadership and Group Culture

The leadership within community enterprise groups involves interacting with group members. Community enterprise leaders express their leadership through situational rewards, proactive management, idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Insan & Masmarulan, 2021).

Setting goals and providing rewards for members upon achieving those goals, having a vision focused on success and individualized caring for members, encouraging members to think and solve problems with new perspectives (Xenikou, 2022) fosters their ability to address challenges and adapt to recognize and feel the connections, issues, and happiness of work. This promotes self-development towards success, including mutual encouragement (Woodhead, 2011). Group participation encourages members to focus on collective benefits, fostering unity and friendship while challenging them to carry out practical tasks. It can be summarized that leadership positively influences group culture based on the philosophy of sufficiency economy.

### Conceptual Framework

From the review of the literature on leadership, group culture based on the philosophy of sufficiency economy, and engagement, a research framework can be synthesized as follows.

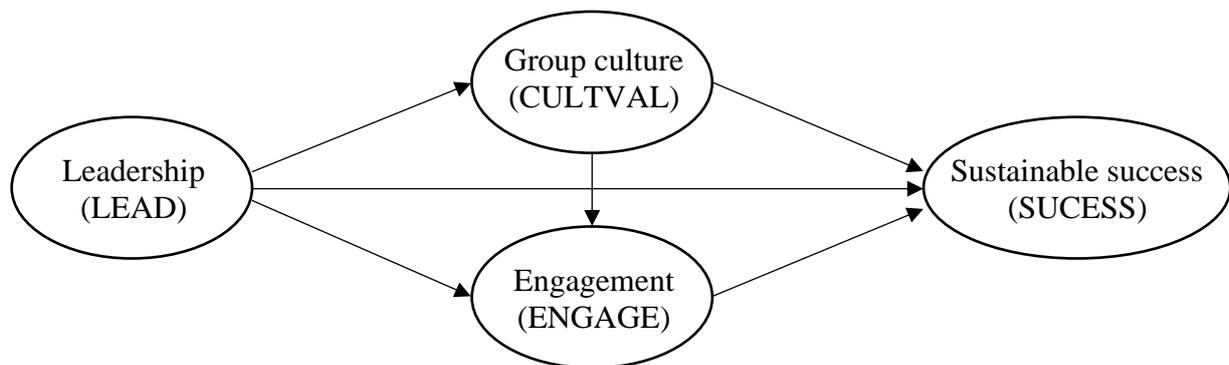


Figure 1 Conceptual Framework

## Research Methodology

In this research, quantitative research approach was utilized. Data were collected from members of community enterprise groups producing handicrafts in the central region. The sample size was determined according to Structural Equation Model (SEM) analysis techniques, requiring a sample of no less than 20 times the number of observed variables (Hair et al., 2014). In this study, there are 21 observed variables, hence a minimum sample of 420 is required. Sampling was conducted through a multi-stage random sampling method. The research instrument was a questionnaire divided into five sections: the first section pertains to demographic information, while sections two to four utilized Likert scales to measure

community enterprise success (SUCCESS), leadership (LEAD), group culture (CULTVAL), and engagement (ENGAGE), with six, three, nine, and three observable variables respectively. Prior to data collection, the Instrument's Objective Congruence (IOC) and reliability (Cronbach's alpha coefficient) were tested. The IOC was found to be 0.88, and the Cronbach's alpha coefficient was 0.874, indicating the quality of the research instrument

Data collection involved distributing questionnaires to community enterprise group members for completion. Upon data collection, survey staff checked the responses and requested participants to provide additional information if necessary, taking an average of 30 minutes per respondent. After conducting the survey, the researchers verified the accuracy of the data and coded it in a coding sheet for processing with computer software. Univariate statistical analysis was performed to analyze general conditions and data distribution, including frequency, percentage, mean, standard deviation, skewness, and kurtosis. Additionally, multivariate statistical analysis was used to test research hypotheses through Structural Equation Modeling (SEM) using AMOS version 18. The analysis results were summarized into a statistical model.

## Results

### Opinions on Leadership, Group Culture Based on the Philosophy of Sufficiency Economy, Engagement and Success of Community Enterprises

The research findings indicated that a majority of respondents had an opinion regarding leadership and group culture based on the philosophy of sufficiency economy at a high level. Engagement was found to be the highest level, while the overall opinion regarding the success of community enterprises was also at a high level.

When considering the data distribution assessed through skewness and kurtosis, the skewness values ranged from -1.06 to -0.25, which was less than 3.0, indicating a left-skewed distribution. The kurtosis values ranged from -0.20 to 1.68, remaining below 7.0 (Kline, 2011), suggesting that some data exhibited a flatter distribution than a normal curve, yet still fell within acceptable criteria. Thus, the data can be concluded to follow a normal distribution, adhering to the conditions required for structural equation analysis (Schumacker & Lomax, 2016), as shown in Table 1.

**Table 1** Mean, standard deviation and agreeable level of the studied variables

<b>Variables</b>	<b>Mean</b>	<b>S.D.</b>	<b>Skewness</b>	<b>Kurtosis</b>	<b>Agreeable Level</b>
<b>Leadership (LEAD)</b>	<b>4.20</b>	<b>0.62</b>	<b>-0.90</b>	<b>1.68</b>	<b>High</b>
- Self-management	4.28	0.70	-1.06	1.68	Highest
- Social management	4.16	0.62	-0.66	1.05	High
- Task management	4.16	0.66	-0.78	1.16	High
<b>Group culture based on the philosophy of sufficiency economy (CULTVAL)</b>	<b>4.19</b>	<b>0.49</b>	<b>-0.47</b>	<b>0.51</b>	<b>High</b>
- Moderation	3.95	0.65	-0.32	-0.20	High
- Integrity	4.15	0.60	-0.41	0.23	High
- Thai Wisdom	4.13	0.57	-0.25	-0.03	High
- Generosity	4.22	0.58	-0.34	-0.10	Highest
- Valuing individuals within the organization	4.27	0.55	-0.54	0.52	Highest
- Valuing diverse stakeholders	4.29	0.60	-0.67	0.44	Highest
- Maintenance and development of social geography	4.42	0.55	-0.83	0.68	Highest
- Perseverance	4.12	0.63	-0.46	0.50	High
- Morality	4.12	0.67	-0.42	0.10	High

Variables	Mean	S.D.	Skewness	Kurtosis	Agreeable Level
<b>Engagement (ENGAGE)</b>	<b>4.21</b>	<b>0.58</b>	<b>-0.58</b>	<b>0.34</b>	<b>Highest</b>
- Group belonging	4.09	0.75	-0.51	-0.14	High
- Discussion	4.32	0.58	-0.67	0.51	Highest
- Commitment	4.23	0.68	-0.80	0.67	Highest
<b>Success of Community Enterprises (SUCCESS)</b>	<b>4.14</b>	<b>0.58</b>	<b>-0.40</b>	<b>0.15</b>	<b>High</b>
- Financial feasibility	4.21	0.62	-0.45	0.12	Highest
- Meeting customer needs	4.16	0.67	-0.72	1.05	High
- Producing quality products and services	4.20	0.64	-0.52	0.41	High
- Promoting innovation and creativity	4.20	0.63	-0.48	0.01	High
- Member satisfaction	4.08	0.71	-0.45	-0.09	High
- Corporate social responsibility	3.98	0.78	-0.68	0.83	High
<b>Total</b>	<b>4.14</b>	<b>0.58</b>	<b>-0.40</b>	<b>0.15</b>	<b>High</b>

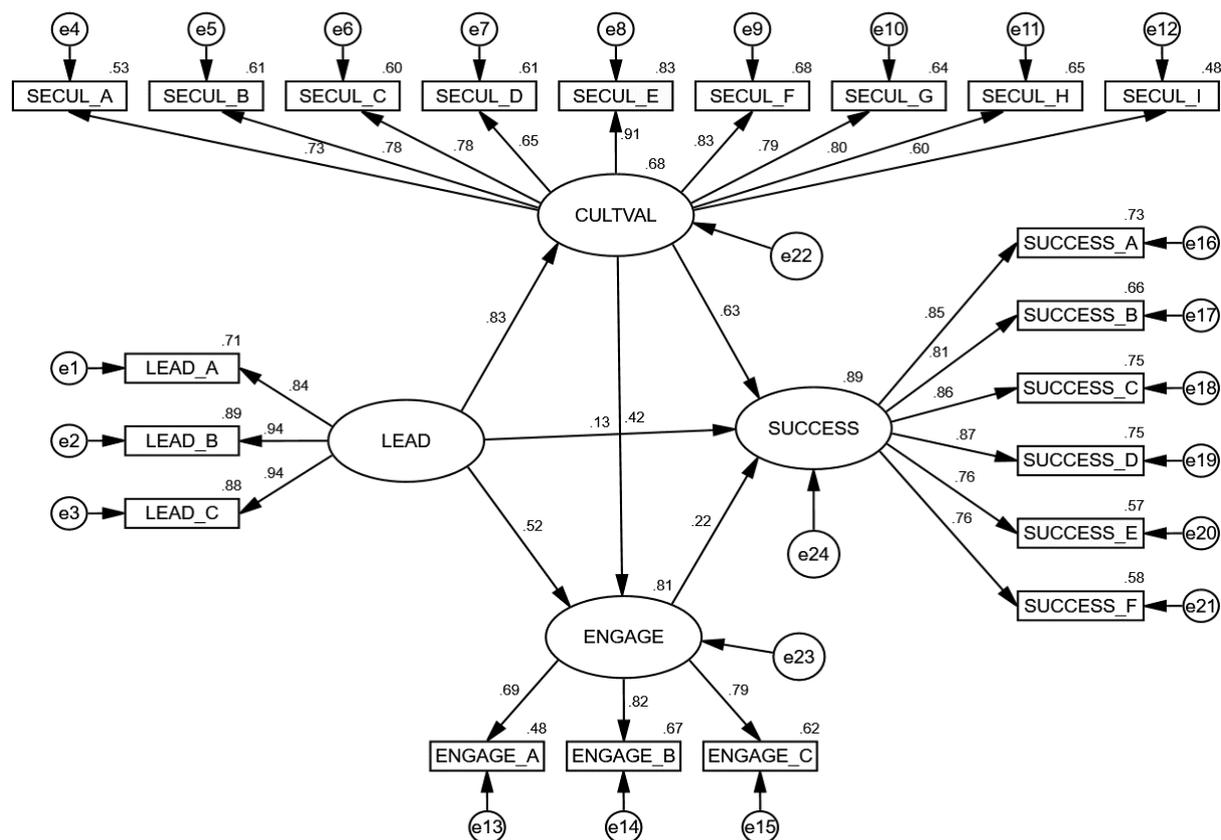
### Structural Equation Model and Hypothesis Testing

After verifying the model through Confirmatory Factor Analysis (CFA), the researchers developed a structural equation model to explore the causal relationships of factors affecting the sustainable success of handicraft community enterprises in the central region. Given the conditions for structural equation analysis, all independent variables must be independent of each other. Consequently, the researchers examined the relationships among independent variables by assessing multicollinearity problems within the model across 21 observed variables. The correlation coefficients were found to range from 0.403 to 0.796, remaining below 0.80, indicating that the independent variables were independent of one another with minimal correlation.

Subsequently, the researchers conducted structural equation analysis to evaluate the model's goodness-of-fit to the empirical data. The results of the initial model analysis (before model adjustment) indicated that some fit indices did not meet the specified criteria. Consequently, the researcher modified the model by following the recommendations in the Modification Index, allowing the correlations to be adjusted until the model aligned sufficiently with the empirical data, as shown in Table 2 and Figure 2.

**Table 2** presents the fit indices of the structural equation model of the causal relationships of factors affecting the sustainable success of handicraft community enterprises

Indices	Criteria	Pre-adjustment		Post-adjustment	
		Index value	Result	Index value	Result
Chi-square ( $x^2$ )	-	926.453	-	130.198	-
df	-	183	-	120	-
p-value	> 0.05	0.000	Fail	0.247	Pass
Chi-square/df	< 2.00	5.063	Fail	1.085	Pass
GFI	> 0.90	0.800	Fail	0.972	Pass
AGFI	> 0.90	0.748	Fail	0.946	Pass
CFI	> 0.95	0.910	Fail	0.999	Pass
TLI	> 0.90	0.897	Fail	0.998	Pass
NFI	> 0.90	0.891	Fail	0.985	Pass
RMSEA	< 0.05	0.020	Pass	0.008	Pass
RMR	< 0.05	0.098	Fail	0.014	Pass



Chi-square=130.198,df=120,p-value=.247, Chi-square/df=1.085,  
 GFI=.972, AGFI=.946, CFI=.999, NFI=.985, TLI=.998,  
 RMR=.008, RMSEA=.014

**Figure 2** The results of testing the structural model of the theoretical framework

In Figure 2, the new model adjustments were made based on consistent Modification Indices. The researcher used statistical valuations to assess the fit of the structural equation model of factors affecting the sustainable success of handicraft community enterprises after the model adjustments, which showed significant consistency with the empirical data (Hair et al., 2014; Hooper et al., 2008). The results of the influence tests were summarised in Table 3.

**Table 3** Results of structural equation analysis, showing Standardized Estimate, Unstandardized Estimate, Standard Error, t-value, and p-value.

Variables (Path diagram)	Standardized Estimate ( $\beta$ )	t-value	p-value	Results
LEAD → CULTVAL	0.83	14.517	0.000***	Supported
LEAD → ENGAGE	0.52	6.796	0.000***	Supported
CULTVAL → ENGAGE	0.42	5.350	0.000***	Supported
CULTVAL → SUCCESS	0.63	7.648	0.000***	Supported
ENGAGE → SUCCESS	0.22	2.531	0.011*	Supported
LEAD → SUCCESS	0.13	2.075	0.038*	Supported
LEAD → CULTVAL → ENGAGE	0.34	3.569	0.000***	Supported
LEAD → CULTVAL → SUCCESS	0.09	1.117	0.248	Unsupported
LEAD → CULTVAL → ENGAGE → SUCCESS	0.71	11.421	0.000***	Supported

Note: \*p < .05; \*\*p < .01; \*\*\*p < .001 (two-tailed test)

Table 3 indicated that leadership (LEAD) had a direct positive influence on group culture based on the philosophy of sufficiency economy (CULTVAL) and engagement (ENGAGE). Furthermore, the group culture based on the philosophy of sufficiency economy (CULTVAL) had a direct positive influence on engagement (ENGAGE) and the success of community enterprises (SUCCESS). Engagement (ENGAGE) also had a direct positive influence on the success of community enterprises (SUCCESS).

While leadership (LEAD) had an indirect positive influence on engagement (ENGAGE) through the group culture based on the philosophy of sufficiency economy (CULTVAL), it also had an indirect positive influence on the success of community enterprises (SUCCESS) through both group culture based on the philosophy of sufficiency economy (CULTVAL) and engagement (ENGAGE). However, leadership (LEAD) did not have an indirect positive influence on the success of community enterprises (SUCCESS) through the group culture based on the philosophy of sufficiency economy (CULTVAL).

## **Conclusion and Discussion**

Leadership, group culture based on the philosophy of sufficiency economy, and engagement had a positive influence on the sustainable success of community enterprises. This was consistent with the study by Yoodee et al. (2022), which indicated that leadership plays a crucial role in resolving conflicts and guiding organizations toward success. It is vital for leaders to have positive interactions with members and to encourage them to use their intellectual skills for problem-solving. Additionally, group culture based on the philosophy of sufficiency economy influenced the success of community enterprises by helping members learn to solve problems and adapt, as well as transmit and teach knowledge and skills to younger generations (Hatala & Gumm, 2006).

Leadership and group culture based on the philosophy of sufficiency economy had a positive influence on group member engagement. Leaders who demonstrate high responsibility and live according to the philosophy of sufficiency economy tend to create a friendly atmosphere and promote cooperation, fostering members' trust and faith in their leaders (Praphaiphiet et al., 2023). This sufficiency-oriented group culture helps members feel a sense of group belonging and collectively responsible for its success (Warrick & Gardner, 2021).

Leadership had a positive influence on the group culture based on the philosophy of sufficiency economy. When leaders of community enterprises engage with members, encourage the intellectual stimulation, and prioritize individualized consideration (House et al., 1999), along with setting goals and rewards, it leads to self-development among members, focusing on success and mutual encouragement (Çetinkaya & Yeşilada, 2022). This promotes collective benefits, love, understanding, and the pursuit of challenging yet feasible work

### **Suggestions**

1) Community enterprise leaders should receive training and development in problem-solving, fostering good interactions, and encouraging members for intellectual stimulation to address issues. Engaging with members, promoting intellectual stimulation, fostering personal interactions, and establishing goals with rewards will help group members develop themselves, aim for success, and encourage each other.

2) Leaders should possess qualities that demonstrate high responsibility and adhere to philosophy of sufficiency economy to create a friendly atmosphere and promote cooperation, instilling confidence and faith in the members regarding their leader.

3) Community enterprises should encourage group formation based on the philosophy of sufficiency economy, allowing members to learn problem-solving and adaptation, fostering a sense of belonging, and shared responsibility for the group's success.

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**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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