

**A Study on Conditions for Continual Operations and
Activities, Management, and Income Improvement of
Silk Weaving Groups in Northeast Thailand**

(タイ東北部における絹織グループの運営・活動
継続条件、経営管理および所得向上に関する研究)

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The United Graduate School of Agricultural Sciences
Tottori University, Japan

2021

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By

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Table of Contents

	Page
Acknowledgement	i
Table of Contents	iii
List of Tables	v
List of Figures	vii
Chapter 1 Introduction	1
1.1 Background of research and problem statement	1
1.2 Objectives of the study	4
1.3 Organization of the thesis	5
Chapter 2 Overview of silk weaving groups, existing literature, and a conceptual framework	7
2.1 The situation and characteristics of silk weaving groups in Thailand	7
2.2 The existing literature	16
2.2.1 Conditions for continual operations and activities of silk weaving groups in Northeast Thailand	16
2.2.2 Committee characteristics of silk weaving groups and the factors generating their variety in Northeast Thailand	18
2.2.3 Factors creating additional income among good and excellent silk weaving groups in Northeast Thailand	19
2.3 A conceptual framework of the study	20
Chapter 3 Conditions for continual operations and activities of silk weaving groups in Northeast Thailand	23
3.1 Study area and outline of the survey	23
3.1.1 Study area	23
3.1.2 Sampling method and population	25
3.1.3 Data collection and analysis	26
3.1.4 Conditions and background of the surveyed groups and respondents	28
3.2 General information of surveyed silk weaving groups	34
3.2.1 The number of weavers and circulations of the seven continual groups	35
3.2.2 Types of silk products	35
3.2.3 The overall production schedules of the three continual groups	36
3.2.4 Allocation of group profits	37
3.2.5 Supports from organizations	39
3.3 Conditions for continual operations and activities of surveyed silk weaving groups based on four business functions	41
3.3.1 Organizational function	41
3.3.2 Production function	45
3.3.3 Marketing function	54
3.3.4 Financial function	57
3.4 Conclusion	71

	Page
Chapter 4 Committee characteristics of silk weaving groups and the factors generating their variety in Northeast Thailand	74
4.1 Data and methodology	74
4.1.1 Study area and surveyed groups	74
4.1.2 General structure and the activities of silk weaving groups	75
4.1.3 Methodology	77
4.2 Results and discussion	78
4.2.1 Committee members and functions in silk weaving groups	78
4.2.2 Outline of the 60 silk weaving groups	80
4.2.3 Factors generating variety in committee characteristics	82
4.2.4 Similarities among a pair of functions directed by the committee members	88
4.3 Conclusion	91
Chapter 5 Factors creating additional income among good and excellent silk weaving groups in Northeast Thailand	93
5.1 Outline of the survey	93
5.1.1 Survey method of the silk weaving groups	93
5.1.2 Additional income creation, its related factors, and the regression analysis model	94
5.2 Results and discussion	96
5.2.1 Information of surveyed silk weaving groups	96
5.2.2 Factors creating the additional income	97
5.3 Conclusion	98
Chapter 6 Conclusion	100
6.1 Conclusions	100
6.1.1 Conditions for continual operations and activities of silk weaving groups in Northeast Thailand	100
6.1.2 Committee characteristics of silk weaving groups and the factors generating their variety in Northeast Thailand	103
6.1.3 Factors creating additional income among good and excellent silk weaving groups in Northeast Thailand	103
6.2 Relationships among the conditions for continual operations and activities of silk weaving groups, committee characteristics, and income improvement	105
6.3 Implications of the study	105
References	107
Appendix	110
English summary	165
Japanese summary	167
List of Publications	169

List of Tables

	Page	
Table 3.1	List of 12 silk weaving groups visited in the Chonnabot district	25
Table 3.2	Data collected from government organizations	26
Table 3.3	Field survey phases, methods, respondents and collected data	27
Table 3.4	Basic information on the 12 group leaders and their groups in 2015	30
Table 3.5	Basic information on the five groups in 2016	30
Table 3.6	Objectives of the 12 silk weaving groups	32
Table 3.7	Problems of the 12 silk weaving groups	33
Table 3.8	Overall operations in 2015 of the seven continual groups	35
Table 3.9	Overall production schedules of groups 1 to 3	37
Table 3.10	Allocation of group profits in the seven continual groups	38
Table 3.11	Group profits allocated to each item in the three continual groups and its proportion	38
Table 3.12	The number of groups which have received supports from each organization since their establishment	40
Table 3.13	The most three common types of support among the seven continual groups and two discontinued groups	40
Table 3.14	Responsibilities of the groups' committee members	42
Table 3.15	The number of group committee members	42
Table 3.16	Role of committee members in the continual groups	43
Table 3.17	Frequency of group meetings among the nine groups	44
Table 3.18	Topics addressed in group meetings of the continual groups	44
Table 3.19	Prices of silk threads for the seven continual groups	45
Table 3.20	Prices charged for silk products in the continual groups	48
Table 3.21	Surplus kept within the four continual groups after selling their products	48
Table 3.22	Selling methods of weavers in the seven continual groups	57
Table 3.23	Sources of funding of the seven continual groups and two discontinued groups	57
Table 3.24	Financial supporters of the three continual groups	58
Table 3.25	Financial supporters of the two discontinued groups	60
Table 3.26	Components of group funding	61
Table 3.27	Proportions of group funding sources among the three continual groups	62
Table 3.28	Financial strategies of the seven continual and two discontinued groups	63
Table 3.29	Management of group income after selling silk products	64
Table 3.30	Opinions on the strengths of the three continual silk weaving groups	70
Table 4.1	Descriptive statistics of the variables (N=60)	81

	Page	
Table 4.2	Results of multiple regression analysis showing the relationship between percentage of committee members in charge of each function and the fundamental variables	84
Table 4.3	Results of multiple regression analysis showing the relationship between percentage of committee members in charge of each function and the production of each silk product type	85
Table 4.4	Results of binary logistic regression analysis showing the relationship between the designation of committee members in charge of non-specific functions and the fundamental variables	87
Table 4.5	Results of multiple regression analysis showing the relationship between the number of committee members in charge of each function and the production of each silk product type, including the number of group members	88
Table 4.6	The degree of similarity between the pair of functions directed by the committee members	89
Table 5.1	Descriptive statistics of the additional income creation change score and the factors creating the additional income	97
Table 5.2	Results of the regression analysis on the factors creating additional income	98

List of Figures

	Page
Figure 1.1	6
Figure 2.1	7
Figure 2.2	8
Figure 2.3	9
Figure 2.4	10
Figure 2.5	10
Figure 2.6	11
Figure 2.7	13
Figure 2.8	13
Figure 2.9	14
Figure 2.10	14
Figure 2.11	15
Figure 2.12	15
Figure 2.13	16
Figure 2.14	22
Figure 2.15	22
Figure 3.1	24
Figure 3.2	36
Figure 3.3	46
Figure 3.4	46
Figure 3.5	49
Figure 3.6	53
Figure 3.7	54
Figure 3.8	55
Figure 3.9	56
Figure 3.10	65
Figure 3.11	66
Figure 3.12	67
Figure 3.13	68
Figure 3.14	69
Figure 3.15	71
Figure 4.1	75
Figure 4.2	77
Figure 4.3	79
Figure 4.4	91

Chapter 1

Introduction

The aim of this chapter is to present an outline of the thesis, which consists of background of the research and problem statement, the research objectives, and the organization of the thesis.

1.1 Background of research and problem statement

Thailand is a developing country located in Southeast Asia and its rural people, especially in Northeast region, rely mostly on agriculture to sustain their livelihoods. The total area dedicated to agricultural land use is 149,236,233 rai (1 rai = 0.16 hectares), or 46.53% of the area of the whole country. Almost half of the total agricultural land used is located in the Northeast, around 42.78% (63,847,741 rai) of the total regional area dedicated to agricultural production. The main agricultural production system employed in this area is the production of paddy rice; this has had a positive impact on the Thai economy as it is one of the world's most vital countries for rice production. According to the Office of Agricultural Economics in 2015, Thailand exports approximately 27 million tons of rice, bringing in annual revenue of about 174,853 million Thai baht (1 USD = 34.252 THB). Although agricultural production, such as that of rice, has proved to be the main source of income for Thai farmers, farming is still being a risky business. Farmers have faced a number of uncertain and risky factors such as weather, the environment, and unreliable market conditions, and this can have a big impact on household income in terms of agricultural production (Hazell, Jaramillo, and Williamson, 1990). In addition, most farming households in rural areas that cultivate rice usually end up selling it at local markets for a very low price¹. Moreover, natural disasters such as drought and rainstorm have destroyed agricultural production². Therefore, promoting other sources of income other than agricultural production for farmers and rural people, together with an

¹ A farmer in Khon Kaen province, Northeast Thailand mentioned that the local market price of un-milled rice is only 10 to 12 Thai baht per kilogram in 2015 (1 USD = 34.252 THB).

² Many farmers in Khon Kaen province also informed that it has been drought almost every year. After they planted rice in the field, the rice seeds or seedlings were destroyed by the drought or rainstorm. This made the farmers could not gain any rice product and had not sufficient rice to consume and sell.

improvement of the economy and society among rural people is very important. Likewise, Thailand was one of the countries affected by the Asian financial crisis in 1997. The issue of rural development then has consistently been raised in the 8th (1997–2001) until the 12th (2017–2021) National Economic and Social Development Plans. In order to realize together of economic and social development, Thai government has encouraged many categories of community business groups to generate supplementary income and to create jobs/employment for farmers and people in rural areas. In 2005, the project of “Community–Based Enterprises (CBEs)”, which is a kind of community business groups managed by farmers and rural people in the village, has been officially enacted in the National Plans. The project has been regulated by Department of Agricultural Extension, Ministry of Agriculture and Cooperatives. The number of CBEs for the whole country was 91,953 groups with 1,490,588 group members in September 2020, which has drastically increased from 5,118 groups in 2005 (Department of Agricultural Extension, 2020). Over a half of all CBEs (54.11%) was undertaken in the Northeast. There are two major categories of CBEs which comprise of production and service categories. The production category consists of 18 sub–activities, such as production of plant/crop, livestock, food processing, inputs, and textile/garment. Another category is a service which is made up of six sub–activities, such as community shops, community saving and tourism. One of the unique and valuable activities of the community business groups in Thailand is silk weaving, as it represents the traditional heritage and culture as well as the creativity of ethnic weavers (Prempee, Chantachon, and Wannajun, 2014). Silk weaving is well known and popular in Thailand, especially in Northeast region. The percentage of silk weaving groups in the Northeast was taken about 97.46% of the country. Silk weaving groups are one of the CBEs under the textile and garment category, which is the fifth largest of the production categories (Department of Agricultural Extension, 2020). Silk weaving also generates supplementary income for farmers after the harvest season, and supports the intensive use of the rural labor force, as well as the empowerment of women in rural areas (Khanson, Sreshthaputra, Limnirunkul, and Na, 2015).

Silk fabrics and products have enhanced the Thai economy, as the products are one of the important exports. Regarding the statistical data from Customs Department in 2019, the export value of Thai silk products was over than 300 million US dollars (1 USD = 31.047 THB). The major export markets were America, Belgium, China, and Japan. Meanwhile, the trend of domestic demand for silk fabrics and products has been growing (Leerojanaprapa and Atthirawong, 2015). For centuries, silk industry has supported Thai

economy to hundreds of thousands of people in Northeast Thailand and become a part of the cultural heritage. Khon Kaen province is one of the intensive commercial silk centers of the Northeast (Graham, 2011). The data from Provincial Community Development Office of Khon Kaen in 2019 presented that the provincial circulation of silk fabrics and products was more than 2 billion Thai baht which has grown approximately five times from the circulation in 2015. Although the number of textile and garment groups which include silk weaving groups has been increasing, the performance of the groups has not been very successful. About two-thirds of the groups have been evaluated below a good performance level (Department of Agricultural Extension, 2019). In fact, the silk weaving groups are unable to satisfactorily operate the group activities and that some of them eventually ceased to operate³. Most silk weaving groups could not show high performance and implementation of group activities was low. Statistical data from Department of Agricultural Extension since 2005 until 30th September 2020, presented that about 65,580 groups have stopped their activities. I will then focus on the silk weaving groups among many kinds of community business groups and choose Khon Kaen province as a study area.

However, several previous studies have not discussed about this problem clear. The former studies only assessed the problems of group management, factors affecting group management, and recommendation about the way to operate the groups professionally. For instance, Valeepitakdej and Wongsurawat (2015) pointed out the problems of group management which are the unclear record and management of financing and accounting. In addition, Chantawansri (2004) displayed that the groups should aim to operate professionally in terms of the accumulation of capital, finance, accounting and determining how profits should be allocated in order to achieve more efficient and effective management results. In a similar way, Watchareejirachot (2013) recommended that the groups should also be managed in line with the simple business functions, especially in

³ Concerning a pre-interview on filed survey in 2015, community business groups have not been able to manage their accounts appropriately because they did not know their own actual production costs. Moreover, group leaders sometimes used the group's money to finance their own personal expenses. In cases where groups manufactured multiple products or had multiple registered activities, the problem identified always lay in their failure to clearly to account for every source of income. Furthermore, some group members are inactive; they are listed as being a part of the groups but they don't contribute to production activities. This issue might lead to a situation whereby a group is unable to continue.

terms of managing finance and accounts. Such findings are important for the good management of community business groups including silk weaving groups.

According to the previous studies mentioned above, the conditions for the continuance of silk weaving groups in order to keep running their group activities in future has not analyzed yet, in spite that it is one of the serious issues of silk weaving groups in Thailand. Therefore, more studies related to the group's conditions for the continuance in operations and activities are necessary. Then, in this Doctoral thesis I will analyze conditions for the continuance of silk weaving groups. Moreover, committees of the silk weaving groups take an important role of group management. However, there are not sufficient former studies which focused on committee members and their activities. Then, I will also analyze committee characteristics and functions. Furthermore, as silk weaving is an economic activity in Thailand which has an impact on domestic and export values as mentioned before. In order to realize further improvement of economic activity, analyzing additional income creation is important for the groups, especially for the group weavers. By analyzing these phenomena, it will become clear that how the findings contribute to the further improvement of silk weaving groups. Therefore, such the analysis is vital in Thailand.

1.2 Objectives of the study

Silk weaving groups in Thailand are important in terms of economic and social development. However the groups have been evaluated as low performance level. As the research problems clearly stated in the section of background of research and problem statement, thus this study aims to analyze conditions for a groups' continuance, management, and income improvement of silk weaving groups in Northeast Thailand. The aim covers making clear the important factors which contribute to the continuance of group operations and activities, committee characteristics and functions, and additional income creation for further improvement among silk weaving groups. In order to achieve the main objective, the following specific objectives were set as follows:

1.2.1 Conditions for a groups' continuance

- a) To clarify factors contributing to the continuance of silk weaving groups based on four business functions; organizational, production, marketing, and financial functions.

1.2.2 Committee characteristics

- b) To analyze committee characteristics of silk weaving groups.
- c) To find out the factors generating variety in committee characteristics among silk weaving groups.

1.2.3 Additional income creation

- d) To analyze factors creating additional income among silk weaving groups.

1.3 Organization of the thesis

In order to achieve the main objective, this study is organized into six chapters as shown in Figure 1.1. Chapter 1 is the introduction, which includes the background of research and problem statement, the main and specific objectives of the study, and the organization of the thesis. Chapter 2 is an overview of silk weaving groups, existing literature, and a conceptual framework.

Chapter 3 clarifies the factors contributing to the continuance of silk weaving groups based on four business functions which consist of organizational, production, marketing, and financial functions. Firstly, the study area, sampling method and population, data collection and analysis, and basic information of the respondents will be described. Then, the general information of the surveyed groups will be explained. This chapter highlights discussion of the differences between continual groups and discontinued groups based on the four business functions.

Chapter 4 discusses committee characteristics of silk weaving groups and the factors generating their variety in Northeast Thailand, including similarities among a pair of functions directed by committee members. The chapter also describes committee members and functions in silk weaving groups, outline of the 60 silk weaving groups, study area and surveyed groups, general structure and the activities of the groups, and methodology.

Chapter 5 presents factors creating additional income among good and excellent silk weaving groups in Northeast Thailand. So, additional income creation and its related factors as well as general structure and activities of silk weaving groups, survey method of the silk weaving groups, and analysis model (regression analysis model) are explained. This chapter also indicates information of surveyed silk weaving groups and discusses the factors creating the additional income. Finally, the conclusion is described in Chapter 6.

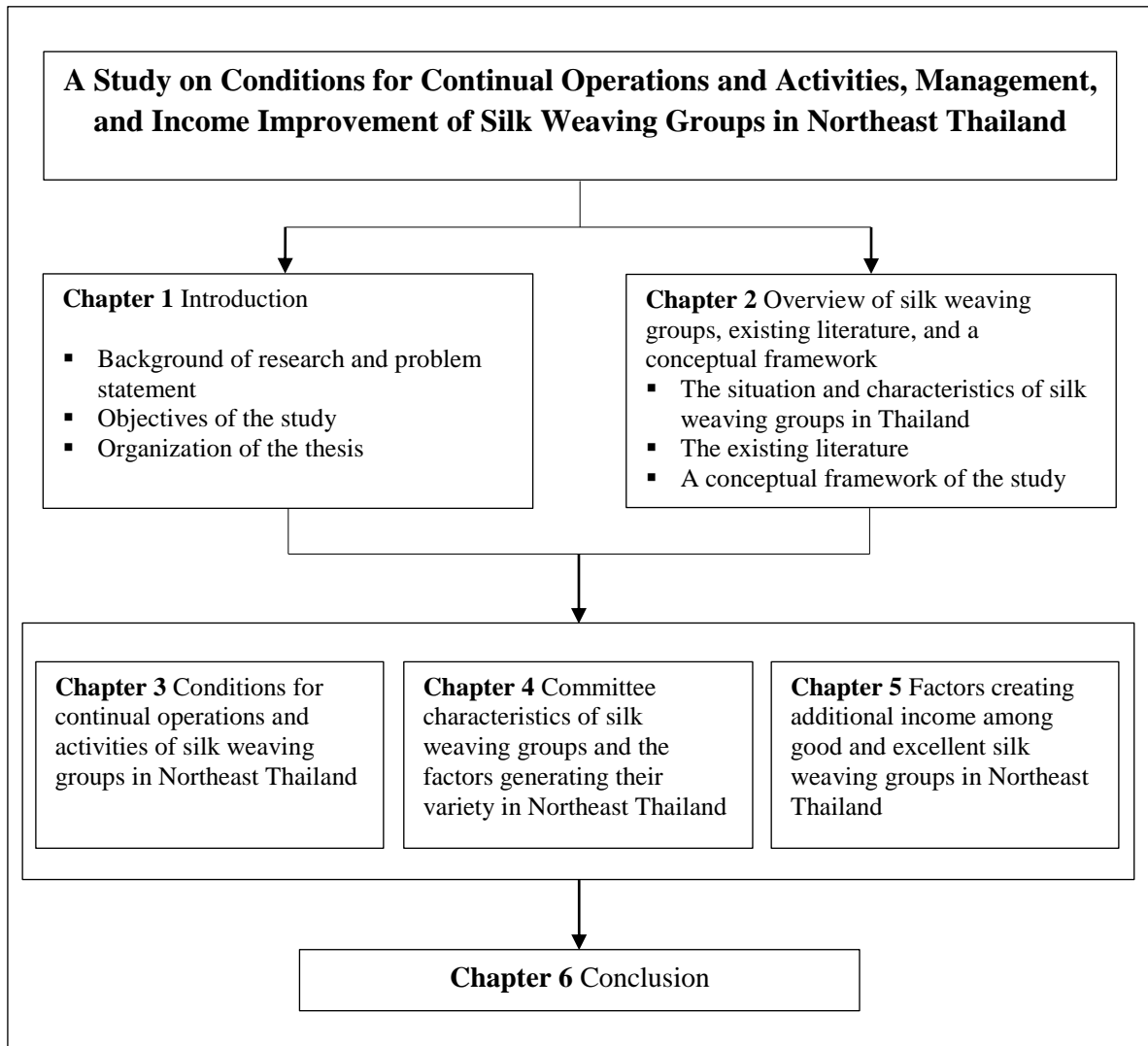


Figure 1.1 Organization of the thesis

Chapter 2

Overview of silk weaving groups, existing literature, and a conceptual framework

Three main disciplines are reviewed in this chapter, beginning with the situation and characteristics of silk weaving groups in Thailand, following by the existing literature, and a conceptual framework of the study.

2.1 The situation and characteristics of silk weaving groups in Thailand

Silk weaving groups are one of the community business groups which have been greatly promoted since 2005 under the government projects such as Community-Based Enterprises (CBEs) regulated by the Department of Agricultural Extension. The CBEs project works to promote poverty alleviation both economic and social development, in terms of generating supplementary income and increase employment in rural areas.

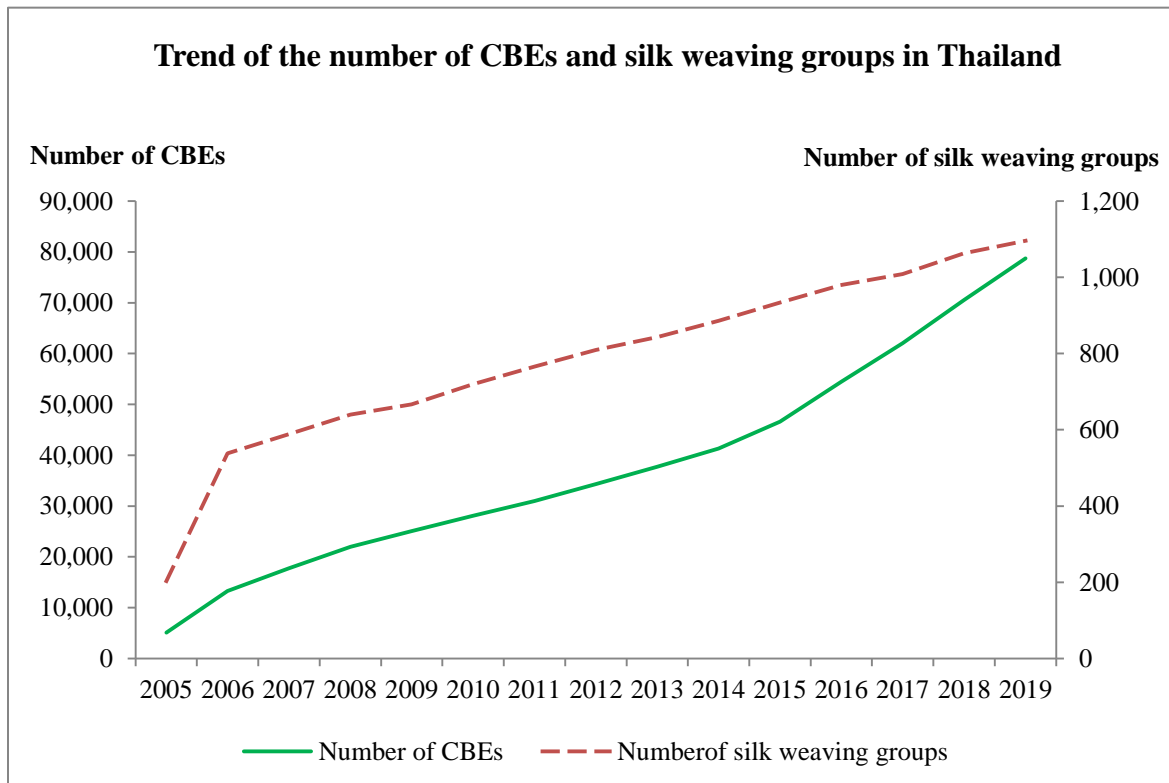


Figure 2.1 Trend of the number of CBEs and silk weaving groups in Thailand

Source: Department of Agricultural Extension

According to the data from the Department of Agricultural Extension, the number of CBEs and the number of silk weaving groups have been gradually increasing since 2005. From 2005 to 2019, the increase in the number of CBEs and the number of silk weaving groups were 73,621 and 893 groups, respectively (Figure 2.1).

Recently, the Northeast of Thailand had the highest number of silk weaving groups (1,114 groups; 97.46%) and of CBEs (49,764 groups; 54.11%). Khon Kaen province is an important hub of intensive commercial silk fabrics and products in the Northeast as mentioned clearly in Chapter 1. Since 1979 every November 29th to December 10th, Silk festival has been held in Khon Kaen provincial city hall, so-called the “International Silk Festival, Pook Xiao Tradition and Red Cross Fair Khon Kaen”. This festival has provided silk markets made by outstanding silk weaving groups from Thai rural areas and some neighbor countries in order to show and sell silk products for Thai or foreigners (Figure 2.2 and 2.3).



Figure 2.2 The environment of silk markets in the silk festival

Source: Field survey in 2018



Figure 2.3 An example of silk shops in the silk festival

Source: Field survey in 2018

Hand-woven silk fabric has inherited from ancestor in rural areas for many centuries. Thai government sectors have attempted to treasure and also promote the activities in order to add value of silk fabrics and products. In Thailand, weavers have handlooms at home or at group space (Figure 2.4 and 2.5). Silk weaving groups have provided freedom to active members such as weavers to produce/create their silk fabrics and products at the group spaces or at their owned home independently. Accordingly, famers/rural people can perform their housework or farming activities and whilst simultaneously weaving silk fabrics and create silk products.

Since the past, silk fabric is used as a cloth worn around lower part of the body or wrap skirt plays the most important role in the cloth of Thai people both men and women and in all levels in the society. It can be said that Thai people wear silk fabrics as wrap cloth or skirt at home, at work or at ceremonial occasions.



Figure 2.4 Weaving at the group space

Source: Field survey in 2018



Figure 2.5 Weaving at owned home

Source: Field survey in 2018

Mudmee is a popular and unique silk fabric type which has a neatness weaving method that requires precision in tying the silk threads to create smooth and correct designs which are based on imagination or memory inherited from the past and created new design. Some designs are very delicate, made by repetition of tie-dyeing to create multi-colored patterns (Figure 2.6). Thai people who are skillful in making Mudmee are mostly descendants who live in the Northeast. Apart from being the locality of people who are competent in weaving Mudmee cloths, Northeast Thailand is also suitable for growing mulberry plants which are the only food of the silkworms who are the creators of beautiful silk filaments used in weaving silk cloths. Silk produced in the Northeast are not only used in the region but also sent to other regions, for instance, the North and the South (Ministry of culture, 2020).



Figure 2.6 Repetition of tie-dyeing silk threads

Source: Field survey in 2018

Mudmee is one of famous silk fabric types in the Northeast especially Khon Kaen province which has a unique and beautiful pattern and can be worn as wrap skirt or make ready to wear cloth/skirt/trousers. The range of Mudmee's price is wide based on materials,

technique, and skills of weavers which a fabric (1×2 meters) can reach 150,000 Thai baht or more (1USD = 31.047 THB in 2019), the general price of one Mudmee fabric which all weavers can make is around 1,800 Thai baht and more (Figure 2.7).

Besides Mudmee, there are other well-known silk fabric types and products which are dyed silk, sarong, loincloth, scarf/shawl, cloths such as cloth/skirt/trousers and small item for use and decoration such as hand bag, earring, hairpin, brooch, necktie, shoes, keychain pendant, and handkerchief (Figure 2.8). Dyed silk, sarong, and loincloth can be worn as wrap skirt or make ready to wear cloth/skirt/trousers and the rest of the fabrics can be used to create small products as well. All of the products can be used as souvenirs to give to relatives, elders and friends.

For, dyed silk fabric has to use skillful technique to dyeing and weaving smoothly. The way to use dyed silk and Mudmee is similar. The price of dyed silk is cheaper than Mudmee a little bit, for example, one fabric (1×2 meters) is about 1,300 Thai baht and more (Figure 2.9). Sarong and loincloth are similar products which are used as apparel for male to wrap or wear in traditional festivals, ceremonies or occasions. However, female also can wear cloth/skirt/trousers made from sarong. Producing sarong fabric uses higher skills to produce and the size is wider which make the price more expensive than loincloth. The price of a sarong fabric (1×2 meters) is approximately 1,850 Thai baht, while a loincloth fabric (0.7×1.8 meters) is 750 Thai baht (Figure 2.10). Shawl and scarf are similar products which female prefer to use as an accessory or decoration (Figure 2.11). Shawl is wider and a little more expensive than scarf. The price of a shawl fabric (0.8×1.8 meters) is about 800 Thai baht while a scarf fabric (0.5×1.8 meters) is 500 Thai baht. As it is wider, it can be used in many aspects than scarf such as blanket for cover knees, head or body for female. For silk cloth, it is convenient and ready-to-wear as the cloth is popular for who prefer fast service and it is not necessary to wait for the cutting-sewing process. The price's range of cloth is about 2,500 to 4,500 Thai baht or more (Figure 2.12). Regarding small item, it is used as a souvenir, donation, and decoration such as hand bag, earring, hairpin, necktie, belt, shoes, keychain pendant, handkerchief, and small box. The price is various based on each product, for example a small bag can sell 100 to 500 Thai baht, and a bigger hand bag is around 2,000 to 4,000 Thai baht (Figure 2.13).



Figure 2.7 Mudmee fabrics
Source: Field survey in 2018

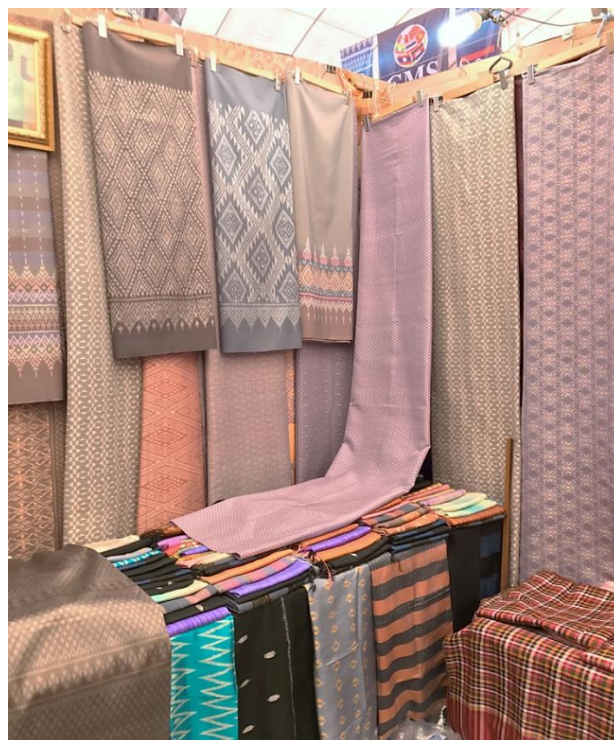


Figure 2.8 Silk fabrics and products
Source: Field survey in 2018



Figure 2.9 Dyed silk fabrics
Source: Field survey in 2018



Figure 2.10 Sarong and loincloth fabrics
Source: Field survey 2018



Figure 2.11 Shawl and scarf fabrics

Source: Field survey 2018



Figure 2.12 Silk cloths

Source: Field survey in 2018

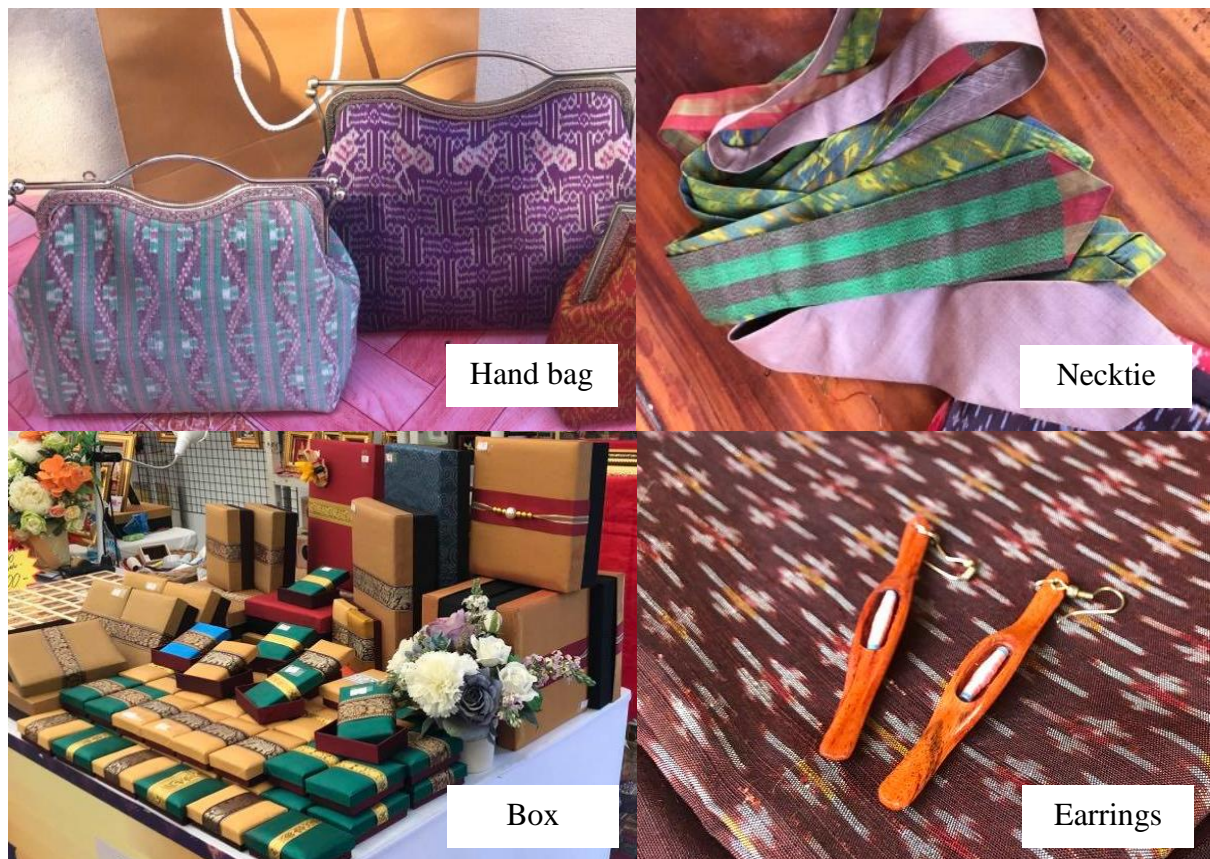


Figure 2.13 Small items made from silk fabrics

Source: Field survey in 2018

2.2 The existing literature

This section will discuss contents of existing literature and its importance undertaken in Chapter 3, 4, and 5.

2.2.1 Conditions for continual operations and activities of silk weaving groups in Northeast Thailand (Chapter 3)

A previous study found that over 35 % of the working population in rural Thailand engaged in informal work organizations, especially women, as well as the middle-aged or elderly, who are forced to retire from the formal sector (Kitahara, 2000). It can be inferred that community-based enterprises (CBEs) project since 2005, can constitute a solution in developing countries for economic problems such as the economic crisis in Southeast Asia which occurred in the middle of 1997; many workers from the formal sector then returned to rural areas and switched to working in the informal organizations and CBEs. In addition, CBEs such as silk weaving groups can provide opportunities for women to show their

abilities and potential in business management and social development (Khanson et al., 2015 and Phadungkiati, Kusakabe, and Pongquan, 2011.). CBEs also encourage the integration of traditional knowledge into the production of unique goods and services. Furthermore, these groups assist in the building of good relationships between villagers in the community (Poosiri, 2007). Even though the number of the community business groups such as silk weaving groups has been increased, the implementation of the groups has not been very successful. This might be a result of the unclearness of the group management, especially in terms of financing and accounting (Valeepitakdej et al., 2015). There have been several management problems which led the groups becoming inactive and eventually ceasing to operate. For example, the management of accounts has not been able to be practiced appropriately because the actual production costs have not known or recorded well. Moreover, group leaders and group committee members sometimes managed the group's money to finance other activity's expenses which is not related to the group activities. In cases where groups manufactured multiple products or had multiple registered activities, the problem identified always lay in their failure to clearly to account for every source of income. Watchareejirachot (2013) suggested that the community groups should be managed in line with the simple business functions, especially in terms of managing finance and accounts. In order to achieve more efficient and effective group management results, the groups should aim to operate professionally in terms of the accumulation of capital, financial operations, accounting and determining how profits should be allocated (Chanthawongsri, 2004). Moreover, based on the current situation in Thailand, one problem is that some group members are inactive; they are listed as being part of the group members but they don't contribute to production activities. This issue might lead to a situation whereby a group is unable to continue. From all of the problems mentioned above, the proportion of active members in a group and group management, especially financial management play a vital role in the success of the groups. Therefore, the study focuses on the conditions for the continuance of the group operations and activities based on basic business functions is important to assist them in better achieving their goals, to help them improve and to ensure their continued success. Then, I will discuss the differences between the continual groups and discontinued groups via four business functions; organizational, production, marketing, and financial functions, then clarify factors contributing to the continuance of silk weaving groups.

2.2.2 Committee characteristics of silk weaving groups and the factors generating their variety in Northeast Thailand (Chapter 4)

In Thailand, silk weaving is spread widely across the country, especially in the Northeast region. It is a traditional and unique local industry, important for local people, through which they are able to earn additional income (Graham, 2011 and Vianmana and Nohmi, 2020). Previous studies have focused on researching problems or factors related to the development of this sector. These past studies have mainly focused on the areas of management, potential, performance of community businesses, and silk weaving groups¹ in Thailand.

For instance, Sakolnakorn and Naipinit (2013) presented the main problems in community businesses as marketing, finance and accounting, production, management information systems, product design, and the cost of production. They also noted that the state agency plays a vital role in developing and supporting community businesses with respect to knowledge, all aspects of production and management skills, marketing, and regulations. Khanson et al. (2015) revealed strategies and actions to develop silk weaving groups such as standard production, marketing support and new information, a clear accounting system, product design, social networks, traditional weaving knowledge transfer, and practical and skillful training for members. Leerojanaprapa et al., (2015) measured the performance of silk weaving groups in order to improve management practices. Their results indicated that meeting deadlines, production capacity, quality control, design preferences, and marketing are common challenges for the groups. Furthermore, they found that silk weaving groups do not use efficient material planning, recording, and inventory management. There is also a lack of information sharing or coordination, both internal and external to the groups. Nittayakamolphun (2020) analyzed the factors affecting the technical efficiency of the textile businesses and found that the proportion of capital per labor, location, leader's experience, and types of product are the main factors for improving the management of the businesses in the future. Tuamsuk, Phabu, and Vongprasert (2013) found that a knowledge management model is very important for successful national community businesses as it propels the process of community business management and improves knowledge management success factors such as leadership, organizational culture, human capital, and knowledge. Wichitsathian

¹ The legal status of the silk weaving groups is a preliminary business/local occupational group run by local community members who are registered under the Community-Based Enterprise (CBE) project, of the Department of Agricultural Extension. Or it can be referred to as a local/community business group.

and Nakruang (2019) studied the knowledge integration capability of silk weaving groups. The study suggested that learning culture, knowledge management capability, and information technology skills are important elements in the development of knowledge integration capability in silk weaving groups. In addition, Graham (2013) and Distanont, Khongmalai, and Distanont (2019) pointed out that marketing strategies, such as internet marketing and innovation, are key sources of success for community groups or silk weaving groups.

However, in my humble opinion, no previous studies have analyzed committee-related affairs as the study objective. Thus, it is unclear how committee members practiced their activities. It is also not certain which factors generate a variety of committee characteristics. Therefore, this study aims to analyze the committee characteristics of silk weaving groups and the factors generating their variety. Thus, this study has originality.

In this study, committee characteristics represent the following:

- 1) the number of committee members in charge of each function;
- 2) the weight of each function among the committee activities;
- 3) the manner in which functions practiced by the committee are allotted among its members;
- 4) the similarity of committee members in charge of different functions.

The analysis is significant to clarifying committee characteristics, which are not well understood. The analysis also contributes to clarifying intervening elements (group situation) between the variety of committee characteristics and factors generating it. Knowledge about the elements is useful to understand which elements influence changes in the committees' characteristics. Therefore, when silk weaving groups tackle new product, change their member/production size, and age, or new groups' form, this knowledge is important for evaluation of appropriate committee characteristics. In other words, this analysis is useful to understand what kinds of committee characteristics are suitable given certain conditions including group size, product type, group age, etc.

2.2.3 Factors creating additional income among good and excellent silk weaving groups in Northeast Thailand (Chapter 5)

To realize economic and social development, the government has encouraged many kinds of projects to generate additional income and to create jobs/employment in local areas. The creation of silk weaving groups has been introduced as an extensive project. Silk weaving is an important source for farmers to acquire additional income after the

harvest season, and it supports the intensive use of the rural labor force, as well as the empowerment of women (Khanson et al., 2015). Income creation is the most important goal in silk weaving groups, as silk weaving is an economic activity.

Furthermore, Ruengdet and Wongsurawat (2010) conducted a study on the important determinants of success among various types of community groups in Thailand. They established five factors, such as the members' drive for business, the systematic division of work, regular accounting records, intelligent marketing plans, and achieving certain kinds of quality certifications. By contrast, Watchareejirachot (2013) compared the degrees of business management between two silk weaving groups by evaluating the degrees of four management aspects, namely, administration, production, marketing, and finance, which indicated the existence of different types of management. Such findings are important in facilitating good management of the various community and silk weaving groups. However, judging from the standpoint of further development of each silk weaving group, it is imperative for the members in the silk weaving groups to realize additional income, regardless of their present income levels.

However, former studies have not considered the relationship between additional income creation and its related factors. Therefore, this study analyzes the important factors that affect additional income creation among silk weaving groups by using a multiple regression analysis. It presents key measures for additional income creation based on these factors. The clarification of the factors and the presentation of these measures will be useful for silk weaving groups to realize additional income.

2.3 A conceptual framework of the study

There are several categories of business functions. Within these processes are business functions that describe in greater detail the specific activity performed by a firm in order to produce its product, provide its service or otherwise achieve its objective. These processes begin with the procurement of inputs and end with the services provided following the sale of the goods or service. The eight processes are grouped into core business processes and support business processes. Core business processes are those relating most directly to the basic business of the firm, to those operations representing the key industry activity of the company. Support business processes facilitate core business processes (Brown, 2008).

Management involves coordinating and overseeing the work activities of others so that their activities are completed efficiently and effectively, which includes: 1)

Coordinating and overseeing the work of others; this is what distinguishes a managerial position from a non-managerial one. 2) Efficiency; this means getting the most output from the least amount of inputs in order to minimize resource costs. Efficiency is often referred to as “doing things right”. Effectiveness means completing activities so that organizational goals are attained; it is often described as “doing the right things”. No two managers’ jobs are exactly alike. All managers perform certain functions, enact certain roles and display a certain skillset in their jobs (Joefil, 2011).

Management functions have long been categorized into the four major functions of planning, organizing, leading and controlling. A manager’s primary challenge is to solve problems creatively. The framework of management functions draws from a variety of academic disciplines and helps managers to respond to the challenge of creative problem solving. The framework of functions is actually highly integrated when carried out as part of the day-to-day realities of running an organization. It is important to note that this framework is not without criticism, for example, it has been said that the functions might be ideals, but they do not accurately depict the day-to-day actions of actual managers (Mintzberg, 1973 & Lamond, 2004). Management functions are varied and are easier to conceptualize than to measure; for example, farming and agribusiness leaders must make decisions as to how, when, and what to produce when organizing their input, when and how to market the business’s output, how large to grow and how to finance business expansion.

Therefore, this study employs four basic business functions to explain the management in an organization or business group which comprise of organization, production, marketing and finance. The explanation of management will be based on four simple management functions which are planning, organization, leadership and control, in order to clarify the phenomena inherent in the organizational management of the silk weaving groups. The conceptual framework for management and functions used in Chapter 3 is displayed as figure 2.14.

The overall study framework is shown in figure 2.15. The factors contributing to continuance of silk weaving groups based on four business functions will be discussed in Chapter 3. For the committee characteristics and functions of silk weaving groups and the factors generating its variety, it will be discussed clearly in Chapter 4. Likewise, factors related to the creation of additional income among silk weaving groups will be analyzed clearly in Chapter 5.

Management topics of silk weaving groups			
Organization	Production	Marketing	Finance
a) Group structure and responsibilities of committee members b) Decision-making and keeping the group members informed	a) Materials b) Prices of silk products and aftersales management c) Process of response to orders d) Production management patterns	a) Places of sales and proportion of products sold in each place b) Selling methods	a) Sources of funding b) Composition of groups funding c) Financial strategies of the groups d) Management of group income e) Financial management system

Figure 2.14 Management of silk weaving groups based on four basic business functions

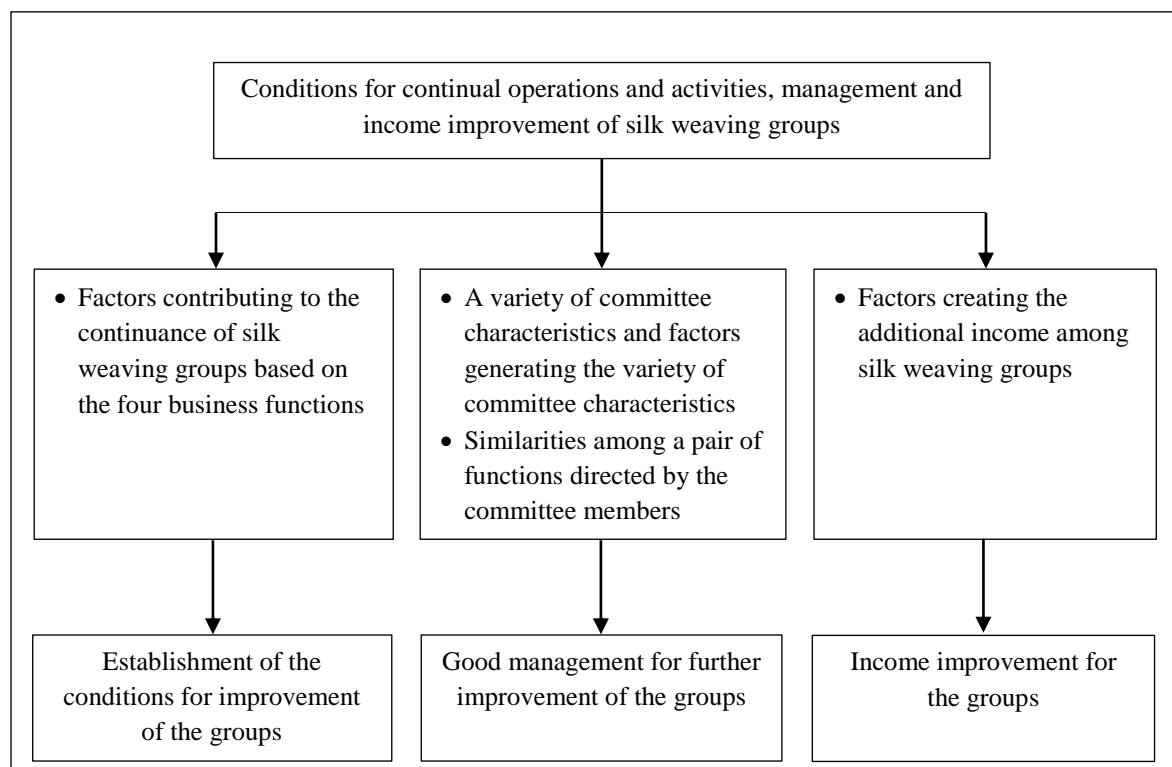


Figure 2.15 An overall study framework

Chapter 3

Conditions for continual operations and activities of silk weaving groups in Northeast Thailand

This chapter is divided into four sections. The first section elaborates on the study area and outline of the survey. The second section explains general information of surveyed silk weaving groups. The third section discusses the differences between continual groups and discontinued groups based on the four business functions presented in Chapter 2. The last section is conclusion. Through this exploration, the discussion provides a clear understanding of how the silk weaving groups manage their group activities in order to keep themselves in operation.

3.1 Study area and outline of the survey

3.1.1 Study area

Khon Kaen province is the sixth largest of Thailand's northeastern provinces, with a total area of 10,885.99 square kilometers and a total population of 1,801,753 inhabitants (Department of Provincial Administration, 2016). The province is divided into 26 districts (amphoe). The districts are further sub-divided into 199 sub-districts (tambon), with 2,331 villages (muban). The Phong, Chearn and Chi rivers are the main natural water sources for crop cultivation in the province, and are supplemented by the Ubolratana dam for irrigation (Khon Kaen Governor's Office, 2016). More than 60% (6,751.08 square kilometers) of the province's total area is devoted to an agricultural holding in which rice, cassava and sugarcane are the major crops grown (National Statistical Office, 2013).

The province is an important hub for transportation and commerce in the Northeastern region, which connects to the East Sea; there are also plenty of major governmental organizations in the area. In 2013, the gross regional and provincial product (GPP) of the province was 187,271 THB (1 USD = 30.732 THB), representing an increase of 1.90% when compared to the previous year. Agricultural organizations contributed to about 11% of the total GPP; the rest came from non-agricultural organizations (Office of the National Economics and Social Development Board, 2015).

Chonnabot district is located in the Southern part of the Khon Kaen province, which is located approximately 60 kilometers from downtown. The total population is

48,643 inhabitants, with a total area of 404.3 square kilometers, which is further divided into eight sub-districts, consisting of 80 villages. The district is well known for being a place of silk production in Northeast Thailand. The province's circulation of silk products in 2015 was worth approximately 390 million THB (1 USD = 34.252 THB). Indeed, 70% of this amount comes mainly from the circulation of silk products in the Chonnabot district (Community Development Department, 2016). There were 74 of Community-Based Enterprises (CBEs) that produce textile and garments in Chonnabot. Of this number, 69 groups were silk weaving groups; 61 of these 69 groups had their performance evaluated through the measurements of government organizations. The evaluation of the performance of these groups consists of three levels: good, moderate and improving; 95% of these groups were judged as either moderate or improving (Department of Agricultural Extension, 2016). The study area is shown in Figure 3.1.

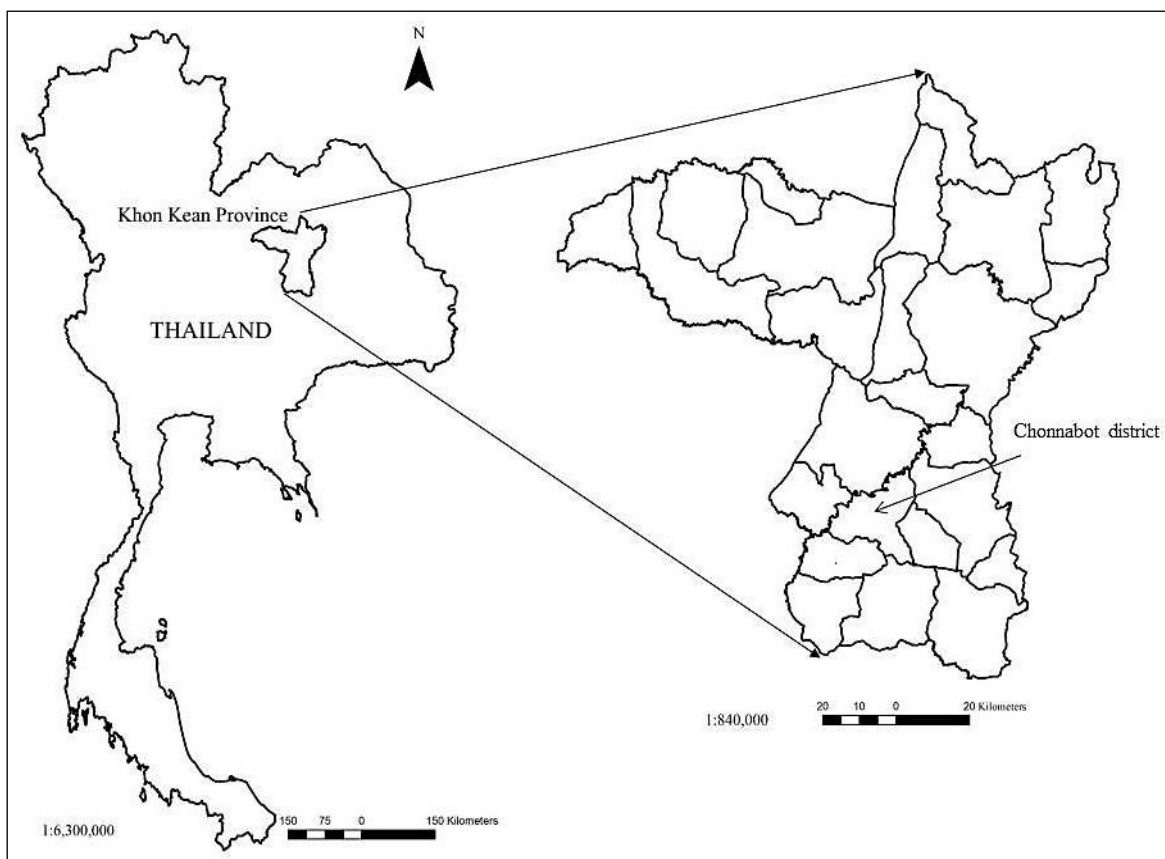


Figure 3.1 Location of study area in Chonnabot district, Khon Kaen province

Source: The Royal Forest Department

3.1.2 Sampling method and population

Purposive sampling was used to select the case studies, as well as the respondents whose interest best suited the research objectives. Key informants (group leader or committee members), with the ability to provide information about group management, were interviewed. As mentioned above, I focused on Chonnabot district, consisting of 12 silk weaving groups (Table 3.1).

Table 3.1 List of 12 silk weaving groups visited in the Chonnabot district

No.	Name of groups	Address	Distance (km)*	Status
1	Women's cooperative and community enterprise, Ban Huai Fai	Ban Hua Fai Mu 2, Tambon Por Daeng	24	Continual
2	Silk weaving group in Ban Don Han	Ban Don Han Mu 4, Tambon Huay Kae	15	Continual
3	Mudmee community enterprise, Ban Ya Krue	Ban Na Dok Mai Mu 9, Tambon Chonnabot	5	Continual
4	Mudmee community enterprise, Ban Non Pha Yom	Ban Non Pha Yom Mu 6, Tambon Non Pha Yom	13	Continual
5	Silk community enterprise, Ban Ya Krue	Ban Ya Krue Mu 6, Tambon Kud Pia Khom	10	Continual
6	Silk weaving group, Koom Kee Tao	Ban Koom Kee Tao Mu 3, Tambon Sri Boon Ruang	2	Continual
7	Silk weaving group	Ban Por Daeng Mu 1, Tambon Por Daeng	27	Continual
8	Silk weaving group	Ban Khok Krang Mu 6, Tambon Ban Taen	18	Continual
9	Silk weaving group, Ban Non Kha Tai	Ban Non Kha Tai Mu 10, Tambon Wang Saeng	27	Discontinued
10	Women's silk weaving group Ban Huai Rai Nue	Ban Huay Rai Nue Mu 2, Tambon Non Pha Yom	13	Discontinued
11	Silk weaving group, Ban Tha Muang Noy	Ban Tha Muang Noy Mu 11, Tambon Sri Boon Ruang	10	Discontinued
12	Mudmee community enterprise, Ban Kud Pia Khom	Ban Kud Pia Khom Mu 1, Tambon Kud Pia Khom	8	Discontinued

Note: *Distance from the Chonnabot district to each group

3.1.3 Data collection and analysis

The secondary and primary data were collected and analyzed using the descriptive analysis method. The field survey was conducted at various intervals from February 2016 to February 2017. The details of the data collection and analysis methods are explained below.

The secondary data regarding silk weaving groups were collected from previous related studies and publications, as well as reports, journals, articles, text-books and internet articles containing basic information from both fields. Moreover, the study searched online sources for statistics and a literature review, in order to analyze the current situation and management of silk weaving groups. In addition, reports or records from related government offices, e.g., the Agricultural Extension Office, the Community Development Department and local governmental organizations, were collected (Table 3.2).

The primary data were collected from interviews from key informants (group's leader, treasurers or committee members) using a semi-structured interview, open-ended questions, focus group interviews and an in-depth interview to understand more about the current situation of silk weaving groups and how they are managed (Table 3.3).

This study employed the descriptive analysis method to clarify the phenomena underlying silk weaving groups in terms of their current situation, problems, group management and factors enabling groups to continue their operations, while other groups are unable to continue. The collected data was collected using the descriptive statistics method, such as numbers, percentage, frequency, maximum, minimum and arithmetic means. The data was clarified and interpreted via text, table, figures and diagrams.

Table 3.2 Data collected from government organizations

No.	Name of organization	Collected information
1	Community Development Office in the Khon Kaen province and Chonnabot district	General information on local groups, e.g., OTOP, farming groups, related policies, developmental implications, role of the office in community development and silk weaving groups
2	Agricultural Extension Office in the Khon Kaen province and Chonnabot district	Responsibilities regarding community development, especially CBEs, role of the office in the development of local group activities, information on related government organizations and silk weaving groups

Table 3.2 Data collected from government organizations (continued)

No.	Name of organization	Collected information
3	Community development office in the Khon Kaen province (inside Khon Kaen City Hall)	History of silk and the importance of the silk trade (observing and asking officers about the silk festival held annually at the City Hall)
4	Chonnabot District Agricultural Extension Office	General information regarding local groups, developmental implications, role of the office in supporting CBEs or other types of local groups
5	Queen Sirikit Sericulture Center (Khon Kaen)	Sericulture farmers in the Khon Kaen province and the responsibilities of the office in terms of the development of sericulture, silk groups and cultivated mulberry areas in the Chonnabot district
6	Agriculture and Cooperatives Office in the Chonnabot district	Responsibility for community development, especially silk weaving groups
7	Khon Kaen Technical College	History and importance of silk (silk exhibition center, located inside the collage)

Table 3.3 Field survey phases, methods, respondents and collected data

Phases	Duration	Methods	Respondents	Collected data
First	Feb 2016	Semi-structured interview and open-ended questions	12 silk weaving groups (eight continual groups and four discontinued groups)	Group problems and the rough factors that enable groups to continue or cease activity
Second	Aug 2016	In-depth interview using a questionnaire	Seven out of 12 silk weaving groups	General characteristics of the groups, e.g., production, marketing, group management, opinion of group leaders about what has enabled the group to continue up to this point, group problems and requirements.
Third	Feb 2017	In-depth interview using a questionnaire	Five out of 12 silk weaving groups (three continual groups and two discontinued groups)	Activities and services of the groups' finances in 2016

3.1.4 Conditions and background of the surveyed groups and respondents

1) Background and trend of silk weaving activity and groups in communities

Silk weaving activity has a long history as it is related to traditional knowledge and rural Thai culture. In the past, rural people have no money to purchase clothes, but they are skillful in agricultural activities and traditional knowledge use, thus they do sericulture, produce silk threads, and weave fabrics for household consumption after doing their main agricultural activities (e.g. rice, cassava, and sugarcane farming) which related to both male and female works. The male also could help with sericulture work until before reeling/weaving processes; most females are responsible for the reeling and weaving activities. Actually, the proportion of people in each village involved with sericulture and/or silk weaving activities were during 50% to 80% of the whole village. After they keep producing silk fabrics for many years, the volume of the fabrics increasing a lot, then they try to sell their products individually. Thai culture is related to wearing traditional clothes made from silk by handmade for attending activities in temples, traditional activities in the villages or other activities outside the village. This is one of sales promotional strategies by wearing their silk fabrics or clothes made from silk when they go somewhere and meet people then they can promote the products by taking to each other. Then, when there are large orders from customers, weavers try to ask for other nearby weavers to help producing silk fabrics and products in order to gather the products with the volumes to response customers in time. Then, they set up silk weaving groups for production and sale including networks among weavers and silk weaving groups. Silk fabrics and products response niche market which inherited traditional knowledge which make the products valuable. Recently, trend of silk production and marketing have been changing followed by the change of fashion of consumers which is different from the past.

2) Conditions of silk weaving groups and communities surrounding

The characteristics of silk weaving groups and other community business groups are similar (formal and informal groups¹) which are different in group management and specific activities in production or services. The basic management methods are the same to each community business group. But, the detail management activities are based on manners of each group as well. Mostly, the management inside the groups is suitable for the conditions of the community, group members, and their manners/culture. Normally, conditions before establishment or setting up any type of community business groups are

¹ The formal groups mean the community business groups which have registered with government sectors such as Community Development Department and/or Agricultural Extension Office.

depending on their traditional knowledge, skills, and available time of rural people in each community, in order to make unique and special production or services. The people need to produce or service based on their skills and then, they can start to gather production or services and sell to consumers, on behalf of informal groups at first. After that in case of the groups could form themselves well and have activities of production and marketing, the government sectors will come to the groups and support them afterwards and encourage the groups to register to become formal groups. Then, the government sectors could support the formal groups with subsidies, materials, knowledge or information about production and marketing, such as sale and consumers' information. Thus, the formal and active groups could access supports easier than informal groups. In communities, there are many types of community groups which related to commercial (produce and sell something or services) and non-commercial activities (preserve culture/traditional knowledge or not for sales activities). To set up any type of the groups, mainly group leader and committee members will be introduced the names and voted by group members also by the leader and committee members, then finish up with their willingness to be responsible for those positions. The next steps after forming a group are accumulating group funds, followed by turnover and return the profit in terms of dividends to group weavers and members.

3) The number and information of the groups and respondents

In 2016, a total of 12 silk weaving groups were visited to find out their current situation and the problems that they have been facing. The first eight groups have been running their operation well, while the remaining four groups have ceased operating. Information on the groups' leaders showed that they were more than 60 years old on average, and most of them had finished junior high school. The majority of the groups have been running for more than 15 years. Group 1 is likely to be very active due to its having the highest number of members, weavers, and the highest group age. Then, the first seven out of 12 groups were continual groups² and two discontinued groups 9, 10 were available to answer the questions about group management situation in details (Table 3.4).

The five out of the total 12 groups were selected as respondents to assess how the groups were being managed, especially in financial terms, which provided the cooperation

² The continual groups refer to silk weaving groups which have been continuous operations and activities during five years (2012/13-2016/17). Discontinued groups refer to silk weaving groups which have stopped groups' operations and activities.

and sufficient information. Groups 1, 2 and 3 were representatives of continual operations, while groups 9 and 10 represented groups that had discontinued operations (Table 3.5).

Table 3.4 Basic information on the 12 group leaders and their groups in 2015

Group No.	1	2	3	4	5	6	7	8	9	10	11	12
Information on leaders												
1) Age of leader (years)	68	45	62	58	61	58	75	49	61	59	43	64
2) Years of education (years)	9	9	9	9	6	9	6	6	9	9	9	6
Information on the groups												
1) Age of group (years)	20	31	19	15	5	23	17	14	11	14	1	na.
2) Number of members (persons)	116	80	50	20	10	35	30	10	14	80	10	10
3) Number of weavers (persons)	65	30	31	20	10	15	10	5	4	30	3	10
4) Active members in 2015 (%)	56	38	62	100	100	43	33	50	29	38	30	100
5) Number of weavers in 2016 (persons)	60	7	33	na.	na.	na.	na.	na.	4	30	na.	na.
6) Thread producers in 2016 (persons)	82	40	0	na.	na.	na.	na.	na.	10	24	na.	na.

Source: Survey data in 2016

Note: na. means the data is not available.

Table 3.5 Basic information on the five groups in 2016

Group activities	Group type	Group age (years)	Members (persons)	Active members (persons)	Committee members (persons)	Status
1) Silk weaving group 1	Production	20	116	65	12	Continual
2) Silk weaving group 2	Production	31	80	30	15	Continual
3) Silk weaving group 3	Production	19	50	31	15	Continual
4) Silk weaving group 9	Production	11	14	4	4	Discontinued
5) Silk weaving group 10	Production	14	80	30	21	Discontinued

Source: Survey data in 2016

Note:

Group 2 had three previous leaders; the present leader is the fourth since 2009 until present.

Group 9 had been running since 2001, with 14 members until 2002 and four members until 2012.

Group 10 ran from 1996 to 2010.

2) The reasons to establish silk weaving groups and groups' problems

There are mostly two types of the establishment of silk weaving groups. The first type is totally focusing on of silk production (main job) and the second type is producing silk fabrics and products as a secondary job. The first type emphasizes on commercial silk production along with fashionable trend which brings about high income level for rural people in communities. This type of the groups could determine the volume of silk product and promote sales activities well. The second one, silk production is secondary work after rural people finish their agricultural activities in every day, nowadays the fashionable trend is also gradually considered issue.

The reasons to establish the groups were evaluated by the objectives of each group. The first three reasons are the major objectives, similar across the board, that the groups wished to fulfill by starting their simple businesses. The continual groups focused on creating additional income, promoting harmony through group work, providing support materials and investment to silk weavers and preserving and passing on traditional knowledge, while the discontinued groups only set themselves up in order to receive support from government organizations or NGOs. This shows that continual and discontinued groups have different attitudes towards group activities and different reasons for establishing them; these reasons contributed to the groups' current condition (Table 3.6). In addition, the continual group focused on avoiding low products' prices which related to lacking of confidence to develop silk products showing in Table 3.7. The continual groups could produce and sell silk fabrics and products by themselves with high price because the groups keep adding value, developing innovation related to quality and value of products, identity and logo of the products including creations of ideas. According to the leaders of the discontinued groups, they mentioned that "The ideas in their groups were somehow limited and affected to the group development, this might lead to discontinuance."

Furthermore, the main problems experienced by the groups were the first two problems which were high production costs and long production times (Table 3.7). Group members seeking other alternative source of income which could receive quick and much wage, such as working on their own farm, producing silk individually or working in other jobs, e.g., laborers in construction, factory workers or farmhands. In fact, rural people need instant income which can use in household consumption daily. But, silk production takes long time to complete all processes because it is handmade products; therefore the

movement of hiring is one of reasons to lead silk weavers/producers inactivate to working in silk weaving groups.

In the case of the still continual groups, a small number of active members or weavers contribute to part of the group's production. For discontinued groups, lacking of successors was the main problem for quitting the groups. Moreover, limitation of the villages' conditions such as drought and environmental factors contributed to sericulture activities/silk thread production which led discontinuance of the groups. For instance, the continual group such as group 1 has been engaged in both sericulture and silk weaving activities. The group could keep producing silk threads and silk products with high quality. Moreover, inactive leaders and/or members including lacking of permanent marketing channels also cause the groups' discontinuance.

Table 3.6 Objectives of the 12 silk weaving groups

Objectives	Continual groups (n=8)	Discontinued groups (n=4)	n=12
1) Create additional income	7	1	8
2) Promote harmony through group work	5	0	5
3) Provide materials and investment for silk weavers	5	0	5
4) Preserve and pass on traditional knowledge	4	0	4
5) Receive support from government organizations or NGOs	1	3	4
6) Support and develop occupations	3	0	3
7) Support and provide markets for weavers	3	0	3
8) Develop and improve knowledge and skills in silk production	3	0	3
9) Encourage unemployed people to work	0	1	1
10) Avoid low products' prices	1	0	1

Table 3.7 Problems of the 12 silk weaving groups

Problems	Continual groups (n=8)	Discontinued groups (n=4)	n=12
1) High production costs	8	4	12
2) Long production time	8	4	12
3) Lack of successors	0	3	3
4) Low number of members and weavers	2	0	2
5) Use of group's budget for other purposes	1	1	2
6) Lack of financial support	1	1	2
7) Limitation of village conditions (drought, environmental factors)	2	0	2
8) Unhealthy or aging leaders and members	1	0	1
9) Lack of cooperation between group members	1	0	1
10) Inactive leaders and/or members	0	1	1
11) Lack of permanent marketing channels	0	1	1
12) Lack of confidence to develop products	1	0	1

Source: Survey data, 2016

Based on the above results, the common objectives of the continual groups and discontinued ones were very different. The objectives of the continual groups were many and varied, while the discontinued groups had only one major objective: to solely rely on outside subsidies, e.g., funds from government organizations. Receiving supports from government sectors or NGOs after setting up the groups was an outgrowth which was common for the groups which could operate and manage the groups quite well. Failure to receive any support from external organizations was caused by their attitude problems and mismanagement which was inside factors of the discontinued groups. If the groups can operate and develop the activities inside the groups well, there are many chances to receive supports from outside.

Other major problems faced by the continual groups were the low number of active members and the limitations of village conditions. The number of active members is important for driving forward group operations, especially in terms of the amount of silk products and group funding. The limiting conditions of villages, especially a lack of water supply due to drought and high temperatures, had a negative impact on sericulture

activities (which include processes such as mulberry tree growing, silkworm feeding and thread reeling). In the case of the groups which could operate well, like group 1, the group needed to have a greater knowledge of information technology (IT), e.g., so that they could use computers and the internet to promote their products; they also wished to improve their English language skills so as to converse easily with foreign consumers. For the discontinued groups, a lack of successors has been highlighted main problem contributing to the cessation of group activities; nobody wanted to lead the groups because of an overload duties and times.

If the groups could not produce enough volume of silk products and/or could not control quality well, including refusing some orders, these made losing the groups' credit and trust. Actually, consumers understand the situation of handmade products well and can negotiate with the volume and time of the production, thus, the some consumers can wait until completing the products. Therefore, setting up the groups could help with 1) an increase in amount of production and credit for sale, 2) easier to receive some supports from government e.g. subsidies, materials, and information, and 3) the groups can keep continuing producing and marketing activities, and determine the volume for each weaver to produce sufficient volume to response to consumers' orders in each year. It proved that the groups had chances to fail by themselves. If they could not manage the groups well e.g. production and sales promotion, also could not maintain good fabric quality. Consumers' base believes in quality and credit of the groups. The help and support from government is just an outgrowth of gathering and focusing production and marketing of silk weaving groups and help with construction of networks among the groups. Setting up the groups is easier and faster to access sources of funds, raw materials, and information than to do it oneself.

3.2 General information of surveyed silk weaving groups

This section describes the general information of the surveyed silk weaving groups which consist of overall operations of these groups and support receiving from the government organizations. Based on the cooperation, willingness, and convenience of the group leaders, the seven continual groups including the two discontinued groups were selected for an in-depth interview. However, the information in this section is available only on the continual groups, except 3.2.5.

3.2.1 The number of weavers and circulations of the seven continual groups

In 2015, there were 65, 30, 31, 20, 10, 15 and 10 weavers in the continual groups, respectively (Table 3.8). Of the continual groups, group 1 had both the highest number of weavers (65 persons) and the highest total number of members (116 persons), which generated the highest circulation, 3.7 million Thai baht (1 USD = 34.252 THB). The majority of group 1's income came from selling silk threads and fabrics to the Royal Chitralada Projects two to three times a year. They would receive the total income for these products two or three months later.

Table 3.8 Overall operations in 2015 of the seven continual groups

Items	G1	G2	G3	G4	G5	G6	G7
1) Number of weavers (persons)	65	30	31	20	10	15	10
2) Circulation (THB)*	3,742,500	1,463,000	1,020,000	852,800	45,000	1,115,000	1,050,000
Circulation per capita/year (THB)*	57,577	48,767	32,903	42,640	4,500	75,333	105,000

Source: Survey data in 2016

Note: *Exchange rate: 1 USD = 34.252 THB in 2015

3.2.2 Types of silk products

There were nine types of silk products were sold last year by the seven continual groups. These were Mudmee silk, dyed silk, scarves, weft threads, sarongs, loincloths, shawls, warp threads and silk soap (Figure 3.2). The most popular products produced by the groups were Mudmee silk, dyed silk and scarves. Mudmee silk is the most popular product in this area; Mudmee and dyed silk fabrics were sold as a set in order to make cloth.

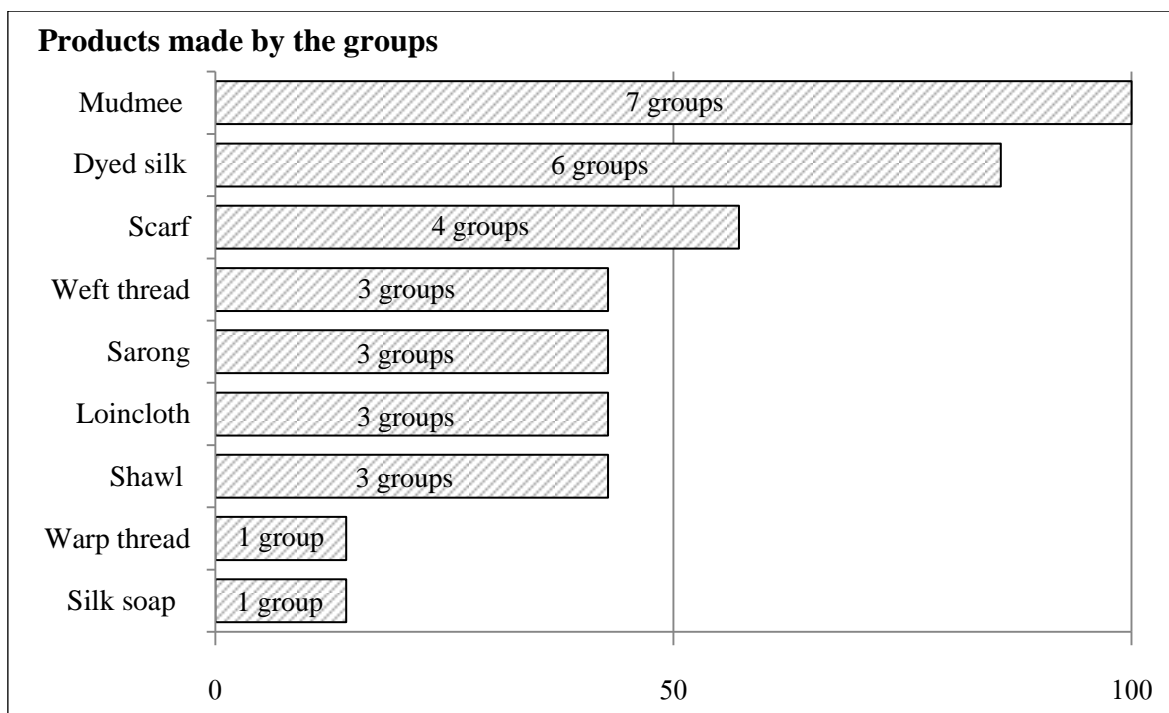


Figure 3.2 Products made by the groups

Source: Survey data in 2016

3.2.3 The overall production schedules of the three continual groups

Group 1: The group produced products and attended events, e.g., the OTOP festival, all year round. The exception to this was the month of April due to extremely high temperatures and the fact that few events were held. Silk fabrics sold well in the winter season until early summer (from November to March). This group carries out activities related to its savings and loans every month and distributes dividends at the end of the year (Table 3.9A).

Group 2: The group reinvested every April, e.g., purchased new silk threads. The weavers prepared the silk threads they would need for weaving from April to June, and wove from July to September. They sold their products from October to March because there were many ceremonies within village during this time, e.g., wedding ceremonies and traditional festivals beginning in October. Winter (from December to February) was usually peak selling time (Table 3.9B).

Group 3: The group purchased and distributed silk threads to its weavers twice a year in December and May. Weaving activity was mostly carried out from November to June and from May to July. The products they made were sold well from December to April (Table 3.9C).

The group leader always acted as a coordinator between the consumers and weavers. The decision to accept an order was made during a meeting. The assignment of weavers to tasks took the form of an agreement made between the weavers. The consumers picked up the products in the group space or directly from the weavers' houses. The silk products were sold well during the winter season.

Table 3.9 Overall production schedules of groups 1 to 3

(A) Overall production schedule of group 1

Group 1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1) Produced and sold silk threads and fabrics	← →				← →								
2) Participated in OTOP festivals in Khon Kaen and Bangkok	← →				← →								
3) Peak selling period	← →										← →		

(B) Overall production schedule of group 2

Group 2	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1) Purchased threads, ties and dyes	← →											
2) Wove during the rainy season				← →								
3) Sold products							← →					
4) Peak selling period								← →				

(C) Overall production schedule of group 3

Group 3	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1) Purchased threads and distributed them to weavers			← →					← →				
2) Wove		← →						← →				
3) Peak selling period			← →									

Source: Survey data in 2016

3.2.4 Allocation of group profits

The groups' profits were generated by interest on loans and the money remaining after deducting production costs from the amount made selling the products. Depending on how the group was managed, the allocation of group funds directly contributed to its future activities. For example, the groups' profits were divided six ways to include dividends,

allowances for committee members, cumulative funds, member welfare support, community welfare support and other expenses (Table 3.10).

Two of the three groups distributed dividends and varying amounts of the profits as cumulative funds, based on their regulations. Group1 had the highest profits, followed by groups 3 and 2 (Table 3.11).

Table 3.10 Allocation of group profits in the seven continual groups

Unit: %

Items Allocated	G1	G2	G3	G4	G5*	G6	G7
1) Dividends		60	20	20			20
2) Allowances for committee members	20	15	20	40		70	10
3) Cumulative funds	10	15	50	10	100	30	70
4) Member welfare support	20	10		15			
5) Community welfare support	5			10			
6) Other expenses	45		10	5			

Source: Survey data in 2016

Note: *Group 5 used its total profits to purchase equipment and souvenirs for members

Table 3.11 Group profits allocated to each item in the three continual groups and its proportion

Items Allocated	G1	G2	G3
1) Dividends	10,000 (20.0%)	0 (0.0%)	21,170 (73.0%)
▪ Stocks	5,000 (10.0%)	0 (0.0%)	0 (0.0%)
▪ Savings	5,000 (10.0%)	0 (0.0%)	0 (0.0%)
▪ Interest on loans	0 (0.0%)	0 (0.0%)	21,170 (73.0%)
2) Allowances for committee members	6,000 (12.0%)	3,087 (25.0%)	7,250 (25.0%)
3) Cumulative funds	6,580 (13.2%)	6,174 (50.0%)	0 (0.0%)
4) Member welfare support, e.g., souvenirs for members	2,420 (4.8%)	0 (0.0%)	0 (0.0%)
5) Community welfare support (donations)	24,000 (48.0%)	0 (0.0%)	0 (0.0%)
6) Other expenses, e.g., transportation, training, meetings, food, beverages, documents, etc.	1,000 (2.0%)	3,087 (25.0%)	580 (2.0%)
Total profits	50,000	12,348	29,000

Source: Survey data in 2016

3.2.5 Supports from organizations

The information about supports that the continual and discontinued groups have received is explained as follows.

The surveyed groups have received four types of supports from various organizations, which took the form of 1) training programs; 2) subsidies and loans; 3) materials, buildings and equipment; and 4) the promotion and coordination of their activities. The two discontinued groups also attended training programs, subsidies and loans, raw materials, and the promotion of their activities. But, the ways to inform and utilization of the information and knowledge receiving from training programs were different based on each group. For example, in discontinued groups, committee members who attended to training programs could not convey information and knowledge receiving from the training program to group weavers/members well. This led to the insufficient/mis-information and caused to wrong information utilization in the groups.

There were 15 organizations supporting the seven continual groups, namely: 1) Chonnabot District Agricultural Extension (DOAE); 2) Khon Kaen Provincial Agriculture and Cooperatives (OAC); 3) Khon Kaen Provincial Commercial Affairs (OCA); 4) Chonnabot District Non-Formal Education (NFEC); 5) Chonnabot District Community Development Department (CDD); 6) Khon Kaen Queen Sirikit Sericulture Center (QSS); 7) Khon Kaen Industrial Promotion (DOIP); 8) Khon Kaen Provincial Administrative Organization (PAO); 9) Khon Kaen Vocational College and University; 10) Sub-district Administrative Organization (SAO); 11) NGOs, e.g., Tiang Chirathivat Central Department Store; 12) Community Organizations Development Institute (CODI); 13) Ministry of Science and Technology (MOST); 14) The Small, Medium and Large Villages Project (SML); and 15) Banks, e.g., BAAC or the Government Savings Bank (GSB). The first four (1-4) organizations actively have supported the continual groups, while the discontinued groups were only supported by three organizations, e.g., CDD, DOIP, and SAO (Table 3.12).

Table 3.13 shows the number of organizations providing each type of support received by the groups. On average, the continual groups received more of each type of support than the discontinued ones. Training programs are related directly to enhance information and skills for human resources who are committee members in the groups. The topics mostly related to silk production and marketing (e.g. silk patterns, design, and innovation), group management in terms of finance (recorded method), production (sericulture and materials), and marketing (consumers and trend). Sharing up-to-date

information is also practiced which is related to trend of silk products, fashion, consumers, and informing projects about silk development and supports including construction of the network of local industry in the process of sales activities which is mentioned in the above sub-section.

Table 3.12 The number of groups which have received supports from each organization since their establishment

Name of supporting organizations	Continual groups (n=7)	Discontinued groups (n=2)
1) Chonnabot District Agricultural Extension	6	0
2) Khon Kaen Provincial Agriculture and Cooperatives	6	0
3) Khon Kaen Provincial Commercial Affairs	6	0
4) Chonnabot District Non-Formal Education	6	0
5) Chonnabot District Community Development Department	5	2
6) Khon Kaen Queen Sirikit Sericulture Center	5	0
7) Khon Kaen Industrial Promotion	3	1
8) Khon Kaen Provincial Administrative Organization	3	0
9) Khon Kaen Vocational College and University	3	0
10) Sub-district Administrative Organization	2	1
11) NGOs, e.g., Tiang Chirathivat Central Department Store	2	0
12) Community Organizations Development Institute	1	0
13) Ministry of Science and Technology	1	0
14) Small, Medium and Large Villages Project	1	0
15) Banks, e.g., BAAC or the Government Savings Bank	1	0

Source: Survey data in 2016

Table 3.13 The most three common types of support among the seven continual groups and two discontinued groups

Unit: organizations

Type of supports	Continual groups								Discontinued groups		
	G1	G2	G3	G4	G5	G6	G7	Average	G9	G10	Average
1)Trainings	5	7	5	4	5	8	6	6	2	2	2
2)Finances	6	2	3	2	1	3	3	3	2	1	2
3)Materials	5	5	0	2	2	0	0	2	1	1	1

Source: Survey data in 2016

Only group 1 has received financial support from NGOs, and it has also been receiving the highest support in terms of subsidies from six organizations, while the other continual groups received support from less than four organizations. On the other hand, the discontinued groups received support from less than three organizations. Thus, these supports show opportunity for the group receiving many supports to run their operation better than the others. Among the four types of support received by the continual groups, training programs constituted the most common type of support provided to the groups by government organizations, while other types of support were not clearly defined. According to the problems experienced by these groups, most of them were faced with insufficient funds to reinvest because of high production costs. If supporters emphasized the provision of subsidies or raw materials in order to assist group productions, it would go a long way to solving the major problems faced by the groups. Basically, the organizations would select the appropriate groups to provide supports, especially given to the active groups which have often cooperation to the organizations. Normally, the inactive group leaders or discontinued groups were intermittent cooperation or not often contact with local officers. As a result, the government organizations or NGOs will provide the supports to the active groups which cooperate well and require for the supports.

3.3 Conditions for continual operations and activities of surveyed silk weaving groups based on four business functions

This section mainly discusses the differences between continual and discontinued groups based on the four business functions which are explained in Chapter 2 on the section of a conceptual framework of the study.

3.3.1 Organizational function

a) Group structure and responsibilities of committee members

The groups' structure and responsibilities were similar to those of a simple business. The main group structure was made up of a leader, vice-leader(s), secretary(ies), treasurer(s) and committee members in charge of other responsibilities depending on each group (Table 3.14).

According to the rules of each group, the group leader was selected by the group members, committee members or consultants by mutual consent. The term of office of the group leaders was between one and four years depending on each group; however, the members always reselected the same leaders and committee members, excepted in the case of those who were very old and unhealthy. There were several types of members, namely

stock holders, thread and silk producers, borrowers, and weavers. One person could be in several categories at once. Most of the continual groups have 15 committee members, while groups 1, 5 and 6 have 10, five and eight committee members, respectively. In the case of the discontinued groups, groups 9 and 10 had five and 21 committee members, respectively (Table 3.15).

Table 3.14 Responsibilities of the groups' committee members

Positions	Responsibilities
1) Leader	<ul style="list-style-type: none"> ▪ Manage overall group activities, govern and assist group members ▪ Coordinate with external players (government organizations, other supporters, consumers) and members.
2) Vice-leaders	<ul style="list-style-type: none"> ▪ Assist leader to manage group operations and be a point of contact for government organizations or other supporters.
3) Secretaries	<ul style="list-style-type: none"> ▪ Record information collected from group meetings or other events ▪ Manage group documents.
4) Treasurers	<ul style="list-style-type: none"> ▪ Govern group finances.
5) Pattern designers	<ul style="list-style-type: none"> ▪ Design and develop patterns for silk products.
6) Credit collectors	<ul style="list-style-type: none"> ▪ Remind borrowers to repay loans (if the groups are in possession of a loan).
7) Auditors	<ul style="list-style-type: none"> ▪ Check group accounts and group finances.
8) Marketers	<ul style="list-style-type: none"> ▪ Sell and promote group products.
9) General committee members	<ul style="list-style-type: none"> ▪ Welcome visitors, e.g., decorate group location, prepare food and beverages and assist other committee members who have specific duties.

Source: Survey data in 2016

Table 3.15 The number of group committee members

The number of group committee members	Continual groups (n=7)	Discontinued groups (n=2)
1) Less than 15 persons	3	1
2) 15 persons	4	0
3) More than 15 persons	0	1

Source: Survey data in 2016

In addition to the production of silk products, the major roles played by committee members and members were publicizing and exchanging the knowledge acquired from training programs to group members during meetings, as well as distributing duties,

keeping the group informed and exchanging opinions through group meetings. The four committee members in group 9 were divided into leader, vice-leader, treasurer and secretary. The committee members and 10 other group members prepared silk threads and weaved together in the group space. Meanwhile, group 10 divided the duties of its committee members into five categories, these being administrative (five persons), marketing (five persons), auditing (five persons), financial (three persons) and hosting (three persons) duties (Table 3.16).

The number of committee members in continual groups had not exceeded than 15 members, while the discontinued groups had mostly less and more than 15 members. Although, it is difficult to show allotment of the functions among committee members in the discontinued groups, in the case of the continual groups, functions are allotted among committee members clearly.

Table 3.16 Role of committee members in the continual groups

Role of committee members	n=7
1) Publicize and exchange the knowledge acquired in training programs with group members during meetings	3
2) Distribute duties, keep the group informed and exchange opinions through group meetings	2
3) Govern and assist the group members	1
4) Check and grade the quality of silk products made by committee members	1
5) Dye and check the quality of thread color after it has been dyed by committee members	1
6) Dye, tie and weave together in the group space (equipment belongs to the group)	1
7) Accumulate budget to provide loans to group members	1
8) Prepare location and welcome visitors together	1
9) Write report to submit to SAO or other organizations coming to check how the group has been implemented	1
10) Design silk patterns together	1
11) Create colors to dye threads	1
12) Reeling, dyeing and tying by the committee members (in the group space or at someone's house)	1
13) Production of silk thread or silk products by individual members	1

Source: Survey data in 2016

b) Decision-making and keeping the group members informed

All of the groups had meetings to share their opinions of how to solve group problems, to discuss and vote for the best solutions as well as to find out the needs of members so as to inform their supporters. The frequency of these meetings depended on each group; however, they usually had four meetings per year (Table 3.17). Groups 1 and 3 had 12 meetings per year, group 6 met six times per year and the rest met four times per year. The average number of meetings per year of the continual groups was seven.

Table 3.17 Frequency of group meetings among the nine groups

Frequency of group meetings (meetings per year)	Continual groups (n=7)	Discontinued groups (n=2)
1) Less than four times	1	1
2) Four times	3	0
3) More than four times	1	1
4) 12 times	2	0

Source: Survey data in 2016

The topics often addressed during meetings included 1) asking what members needed, sharing and transferring knowledge received by committee members during training programs to the group members; 2) updating financial information, e.g., savings, loans, repayment and dividends; and 3) assigning orders from consumers to members (Table 3.18). In the case of the discontinued groups, groups 9 and 10 had three and six meetings per year, respectively, or five meetings on average.

Table 3.18 Topics addressed in group meetings of the continual groups

Topics	n=7
1) Ask what members needed, share and transfer knowledge acquired in training programs to members	7
2) Update financial information, e.g., savings, loans, repayments and dividends	5
3) Assign orders from consumers to members	4
5) Improve and develop patterns and product quality	3
6) Plan the production of products according to village needs	1
7) Update marketing information, e.g., consumers' product needs	1

Source: Survey data in 2016

The frequency of group meetings of the continual groups had more often than the discontinued groups. As, the often group meetings assist sharing and discussing members' opinions of how to solve group problems, and vote for the best solutions as well as to find out the needs of members so as to inform their supporters. Therefore, the often meetings help finding best solutions to solve problems of the groups.

3.3.2 Production function

a) Materials

Table 3.19 shows the price of warp (main line) and weft (minor line) threads which were 2,400 and 1,800 THB/kg, respectively, from silk shops in Chonnabot district. For the groups able to produce weft threads by themselves, like groups 1, 2, 5 and 7, they could save about 500 to 700 THB/kg. Groups 1 and 5 produced enough weft threads, while groups 2 and 7 had to purchase some of their threads from district shops (at 1,800 THB/kg) and from other groups that sold threads, like group 1 (at 1,300 THB/kg).

Table 3.19 Prices of silk threads for the seven continual groups

Price of threads	G1	G2	G3	G4	G5	G6	G7
1) Warp (THB/kg)	2,400	2,300	2,400	2,400	2,400	2,400	2,400
2) Weft (THB/kg)	1,300	1,100	1,800	1,850	1,100	1,800	1,300

Source: Survey data in 2016

The group 1 has been receiving support from Queen Sirikit Sericulture Center, which has been providing them with free silk eggs approximately eight to 10 times per year. The weavers owned personal equipment for the production of silk products and invested in this using their own money. All of the continual groups purchased warp threads from the district. Five groups were able to produce enough weft threads, while two of the five groups produced an insufficient number of threads. Thus, some of the groups could produce silk threads by themselves, but some could not. This added to the cost of making silk products and led to small profits (Figures 3.3 and 3.4).

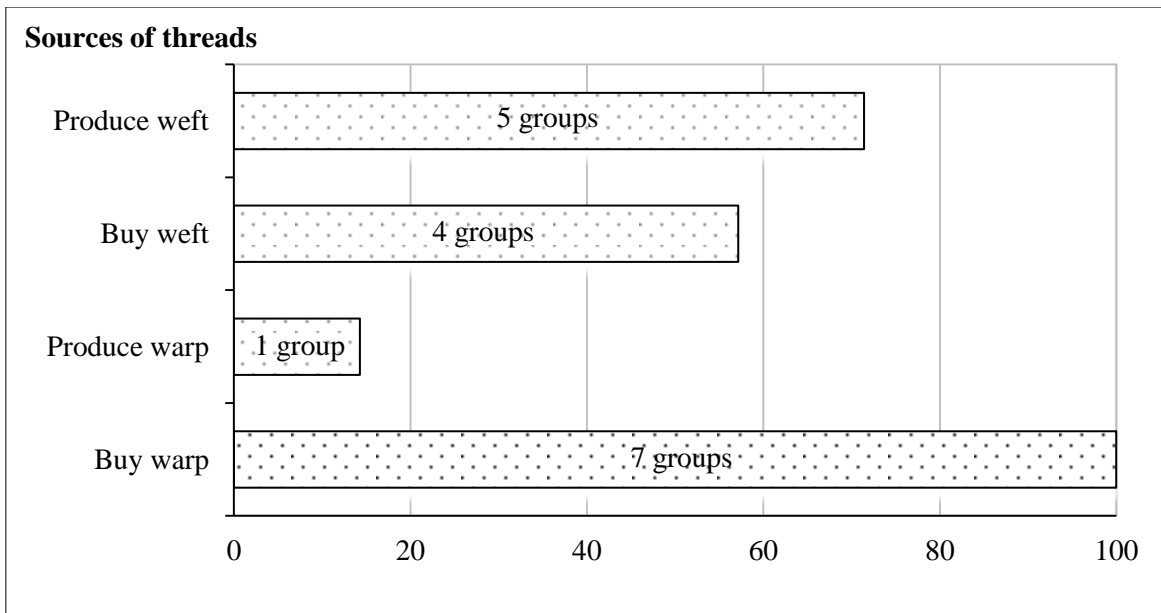


Figure 3.3 Sources of threads

Source: Survey data in 2016

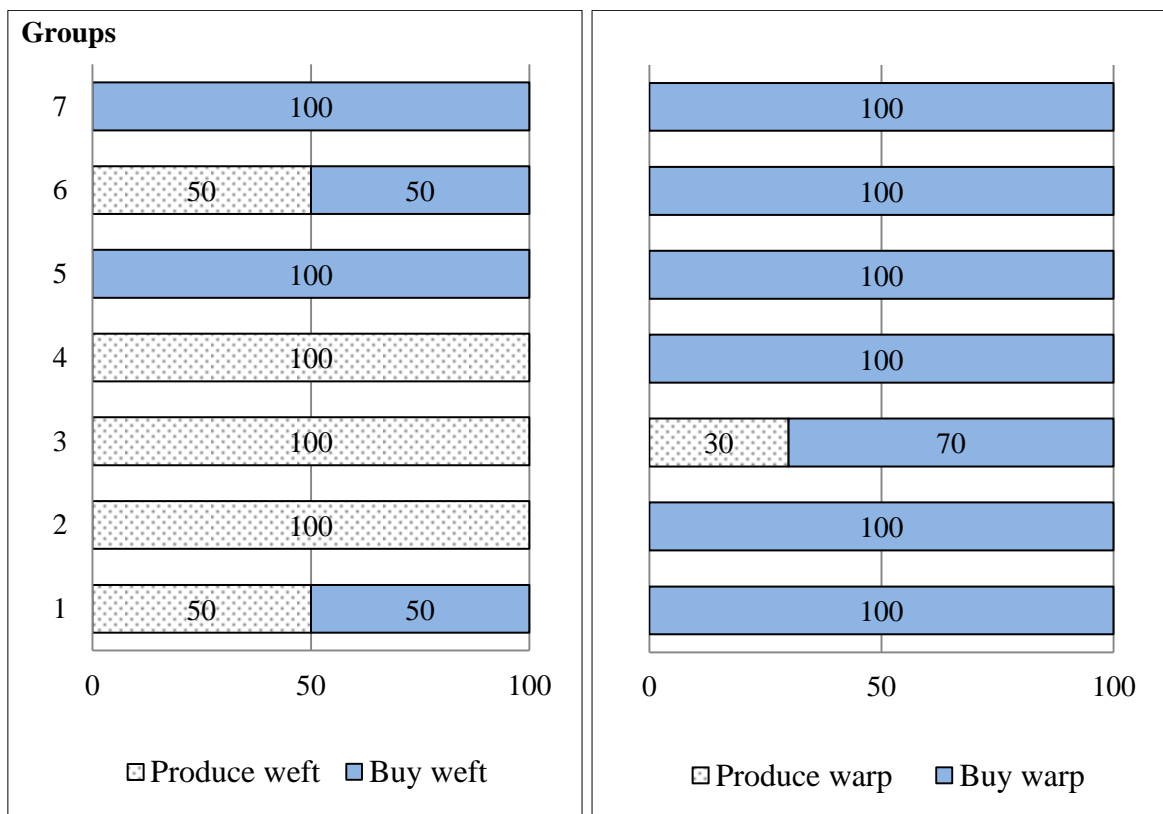


Figure 3.4 Proportion of silk thread produced by the groups

Source: Survey data in 2016

Note: Produced and purchased weft threads = 100%;

Produced and purchased warp threads = 100%

In the case of the discontinued groups, group 9 produced enough silk threads for a few years, yet two to three years after it had been established, the group was purchasing silk threads from the district. The members of group 10 were able to produce enough silk threads for silk weaving. Thus, the ways to gain the materials of continual groups were various which were from producing by themselves, purchasing from silk threads' sellers, and somewhat supports from the government organizations. On the other hand, the discontinued groups produced silk threads only by themselves and purchase it from silk threads' sellers.

b) Prices of silk products and aftersales management

The prices at which the continual groups sold their products are shown in Table 3.20. Groups 1 and 4, who controlled the quality of their silk products, sold Mudmee fabric at a cost of around 2,000–2,500 THB. This price could be demanded if the fabric was thick and smooth, depending on the equipment used and the weaving methods. Other groups that produced lower grade or lower quality fabrics sold them at about 1,200–1,600 THB. Of the discontinued groups, group 9 sold Mudmee silk for 750 THB and dyed silk for 400 THB per fabric from 2001 to 2003. Group 10 sold Mudmee silk for 1,000 THB; and the group also produced dyed silk, scarves and shawls.

Groups 1, 2, 3 and 5 kept the profits to provide further funds for the group after selling their products (Table 3.21), while group 7 kept 20% of the profits from each round of sales.

According to the price of silk fabric such as Mudmee, the continual groups could sell it with higher price than the discontinued groups; it might because of the popularity of the continual groups and the quality of the products was controlled well. This led a low ability of the discontinued groups to increase income for re-production in the next cycle and be one of the reasons to discontinue the groups.

Table 3.20 Prices charged for silk products in the continual groups

Price of products	G1	G2	G3	G4	G5	G6	G7
1) Warp thread (THB/kg)	1,600						
2) Weft thread (THB/kg)	1,400–1,600			1,500	1,300		
3) Mudmee silk (THB/fabric)	2,500–5,000	1,200	1,350	2,000–2,500	1,600	1,250–2,500	1,600
4) Dyed silk (THB/fabric)		1,200	1,200	1,000–1,500	1,600	1,750	1,400
5) Sarong (THB/fabric)	1,200–1,500			1,300–1,500			1,500
6) Loincloth (THB/fabric)	600–750	500–800		700–1,000			
7) Scarf (THB/fabric)	300–400	500		500–700			200
8) Shawl (THB/fabric)	550–600			700–1,000			450
9) Silk soap (THB/cube)	100						

Source: Survey data in 2016

Note: *Exchange rate: 1 USD = 34.252 THB in 2015

Table 3.21 Surplus kept within the four continual groups after selling their products

Price of products	G1	G2	G3	G5
1) Warp thread (THB/kg)	100			
2) Weft thread (THB/kg)	100			200
3) Mudmee silk (THB/fabric)	100–125	200	100	200
4) Dyed silk (THB/fabric)		200	100	200
5) Sarong (THB/fabric)	100			
6) Loincloth (THB/fabric)	100	200		
7) Scarf (THB/fabric)	50	20		
8) Shawl (THB/fabric)	50			
9) Silk soap (THB/cube)	50			

Source: Survey data in 2016

c) The process of response to orders

Most of the groups produced silk products primarily based on consumer orders. The process of response to orders can be defined as follows: 1) the group leader receives orders from consumers; 2) the leader asks the weavers to attend a group meeting in order to

assign work to the weavers in accordance with their skills; 3) the weavers manufacture the products and they are kept in the group space or simply at their homes until the consumers come and take the products away (Figure 3.5). The leader has the final say on whether to accept or turn down consumer orders after carefully consulting with the weavers to ensure that they are able to manufacture the products, that the number of orders is not beyond their capacity and that product quality is high enough. Weavers in discontinued groups such as group 9 simply produced and sold their products within the village and in nearby areas without any prior consumer orders. As the discontinued groups had not received any order from consumers, therefore they sold the products without the process of orders' distribution to weavers.

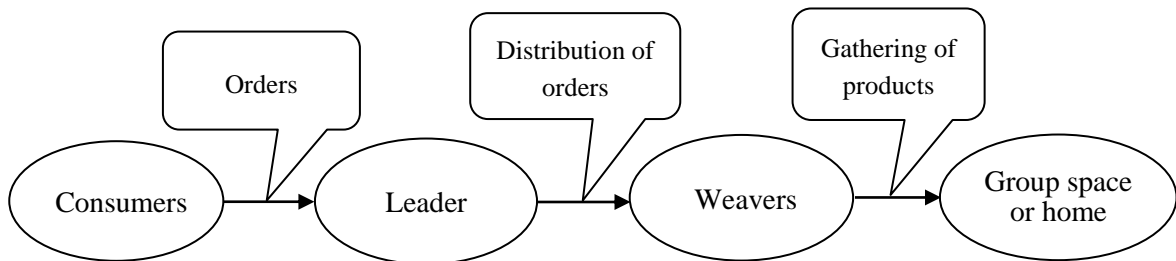


Figure 3.5 Response to orders

Source: Survey data in 2016

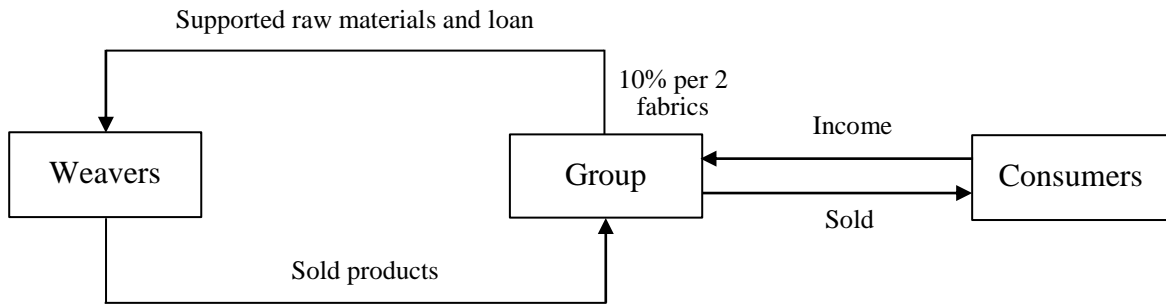
d) Production management patterns

I will define the production management patterns as the detailed processes of production management among the weavers, groups, and consumers in each surveyed group. The production management patterns of continual groups are displayed on Figure 3.6: (1) to (7)) and of discontinued groups are displayed on Figure 3.7: (1) to (2)).

Continual groups

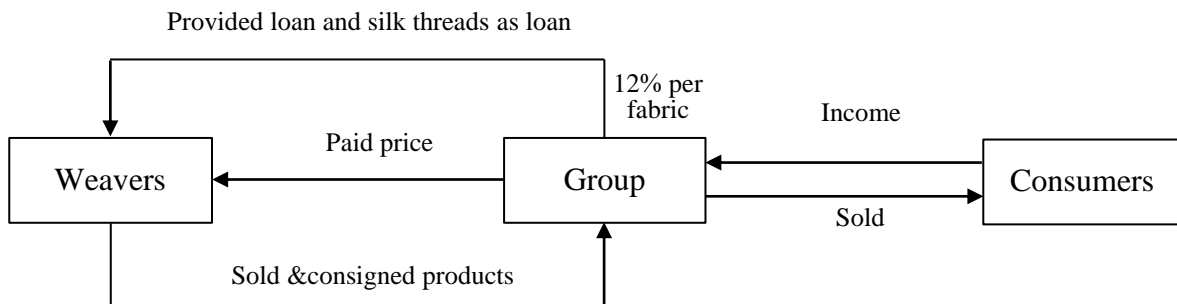
Group 1: The group supported individuals with loans for individual production and also supported with raw materials such as silkworms to produce silk threads; then the group sold the silkworms to thread producers and weavers. This helped in monitoring and controlling the quality of silkworms, which is very important for the production of high-quality silk thread. The weavers produced and sold the products to the group. Then the

groups did the bulk selling of the products with 10% of one set of fabrics (2 fabrics) from the sales was kept into group fund; this is explained more in details in the next section.



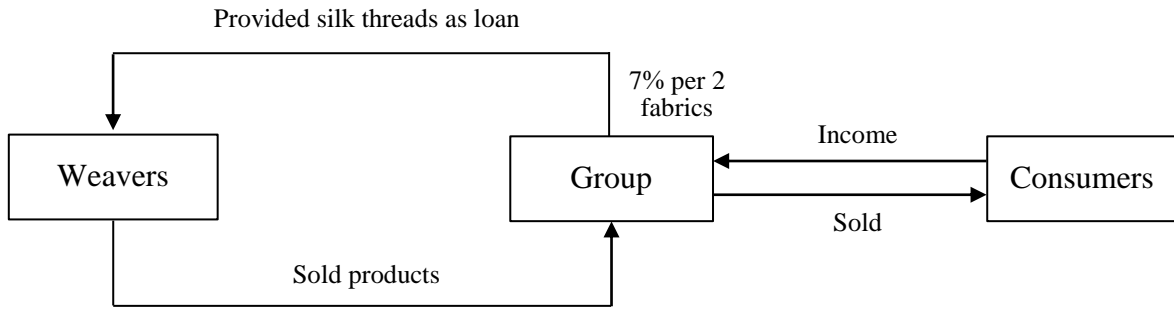
(1) Production management pattern of the group 1

Group 2: The groups provided loan and silk threads to weavers in the form of a loan. The weavers sold and consigned their products to the group to sell in bulk. After the group sold the products, about 12% of a fabric income was kept in the group’s fund and then paid the estimated price of silk products to the weavers based on amounts and types of the products received from each individual.



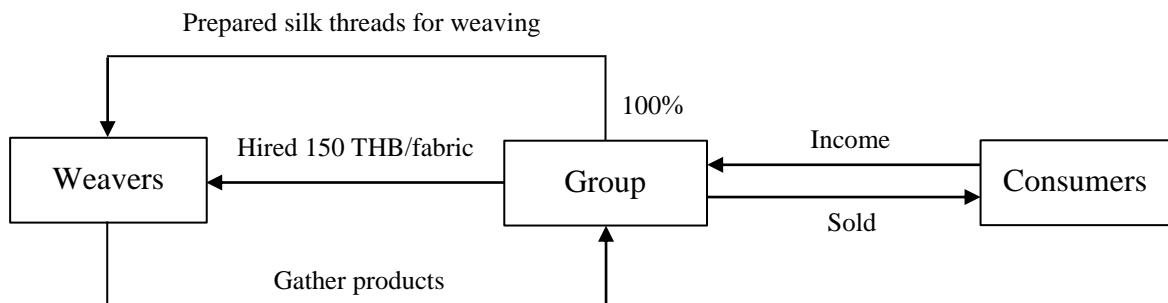
(2) Production management pattern of the group 2

Group 3: The groups provided silk threads for weavers in form of loan. The weavers sold their products to the group. After the group sold the products, about 7% of every 2 fabrics were kept as group’s fund.



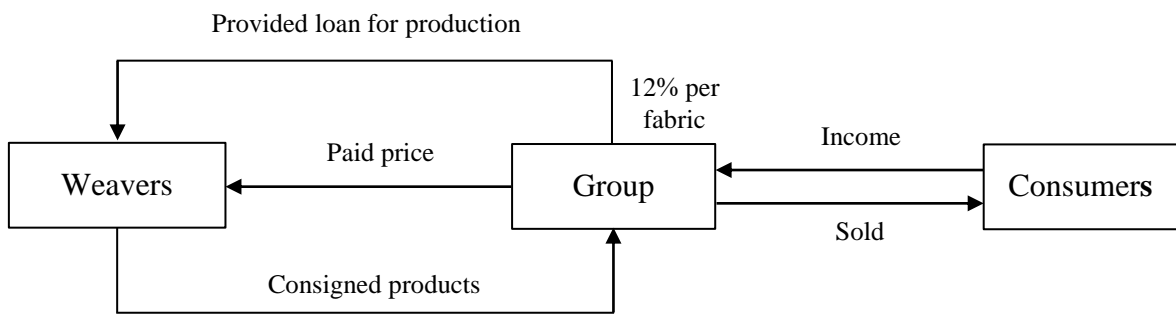
(3) Production management pattern of the group 3

Group 4: The group spent advance money from group’s fund to purchase and prepare silk threads by group’s committee members before distributing to weavers. This is helpful for controlling the quality of silk threads; thus, the members were hired to weave only (150 THB per a fabric). After the group sold the products, the total amount of income was kept as group’s fund for re–investment.



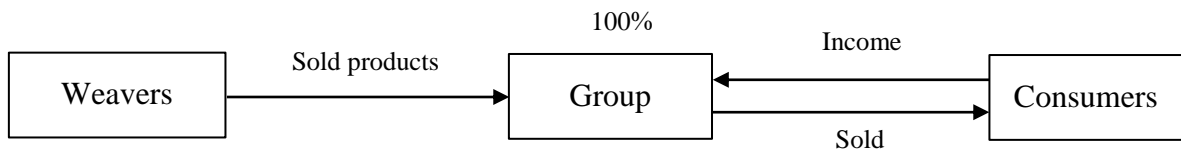
(4) Production management pattern of the group 4

Group 5: The groups provided a loan to weavers for individual production. The weavers consigned their products to the group. After the group sold the products, about 12% of a fabric was kept into group fund and paid the estimated price of silk products to the weavers based on amounts and types of the products.



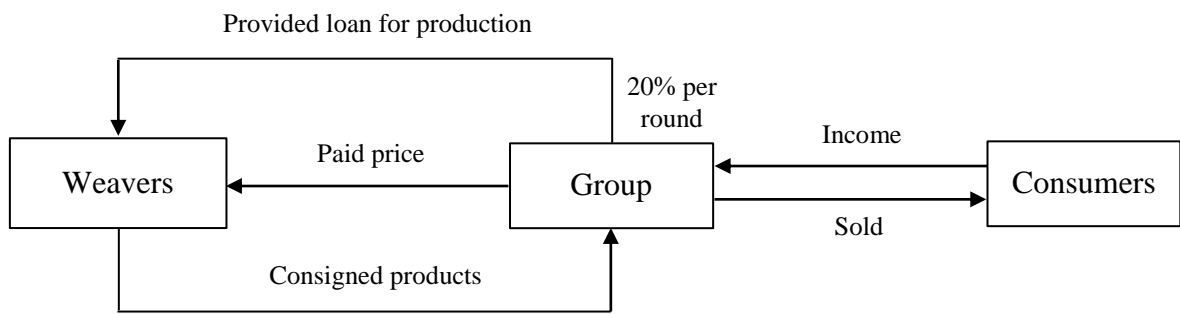
(5) Production management pattern of the group 5

Group 6: The group functioned as a central market for the weavers. They sold the products to the group, of which the group then sold the products in bulk and after selling out the products; the income was kept as group’s fund and also returned money value of the products to the group’s leader. The group’s leader also owned a silk business; thus, she assisted the group by using her advance money to purchase silk products from weavers on behalf of the group.



(6) Production management pattern of the group 6

Group 7: The group provided loan for silk production. The weavers consigned their products to the group. After the group sold the products, about 20% of the profit was kept in a selling round as group’s fund and paid back the estimated price of silk products to the members.



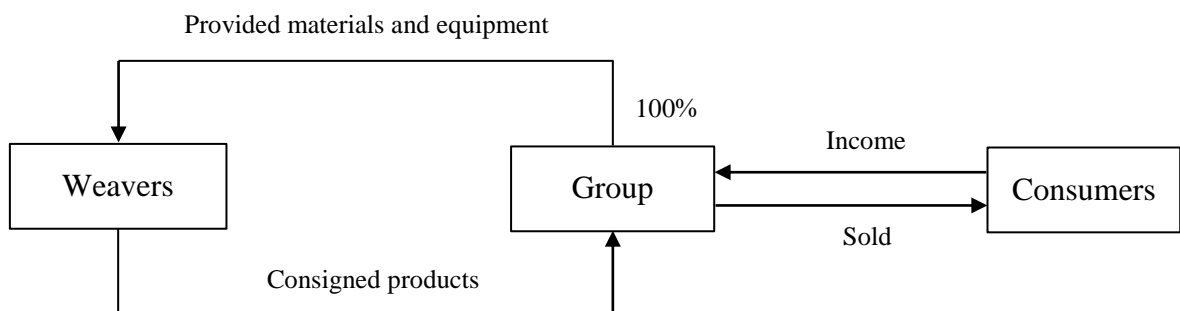
(7) Production management pattern of the group 7

Figure 3.6 Production management patterns of the seven continual groups

Source: Survey data in 2016

Discontinued groups

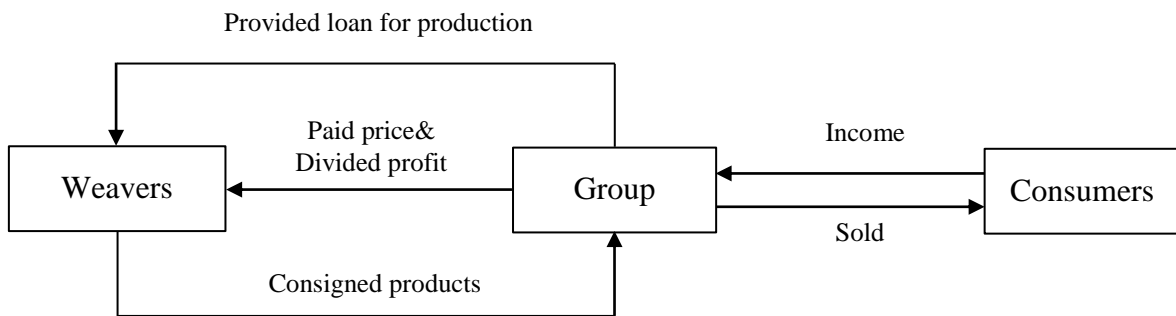
Group 9: The group purchased silk threads from shops in Chonnabot district and prepared the threads to weave together at the group space. There had been sufficient equipment that belongs to the group’s leader. After they sold the products, the group kept all of the income as group’s fund in order to re–investment e.g. purchase of silk threads.



(1) Production management pattern of the group 9

Group 10: The group provided loan for silk production. The weavers then consigned their products to the group for selling in bulk. After the group sold the products, firstly the group paid the estimated price of silk products to the weavers and divided the

profit received in each selling round to the weavers based on amounts and types of products.



(2) Production management pattern of the group 10

Figure 3.7 Production management patterns of the two discontinued groups

Source: Survey data in 2016

Based on the production management patterns, the continual groups provided various ways to support the weavers such as loan, materials, hire, and funds. Moreover, the continual groups had sufficient funds to purchase silk fabrics from weavers, it implied that the weavers can sell their products to the groups directly and get paid quickly. In the case of the discontinued groups, the groups provided only the method of consigned products for the weavers. This means that the weavers have to wait until the products could sell before receiving funds and get back the ones that could not sell out. Therefore, if the silk weaving groups have various production management patterns to support their weavers, it will contribute to re-production in the next production' cycle. It also contributes to the continuance of silk weaving groups.

3.3.3 Marketing function

a) Places of sales and proportion of products sold in each place

There were five places in which the groups' products were sold, these being: 1) within the village or at the groups' premises; 2) in nearby areas; 3) at the Royal Chitralada Projects in Bangkok (capital city of Thailand); 4) at OTOP (One Tambon One Product Project) events; and 5) in other provinces (Figure 3.8). All of the groups mainly sold their

products within the village to walk-in or external consumers who ordered the products and traders from Chonnabot district or other provinces.

Groups 2 and 5 relied solely on selling their products within the village (Figures 3.9). The other groups frequently promoted their products on the OTOP website, on packaging materials, e.g., paper bags, as well as through attending events and presenting their products. For example, group 7 offered the delivery of their products by post. In the case of the discontinued groups, group 9 sold its products mainly to walk-in consumers (90%) from outside of the village, while the rest (10%) were sold to villagers purchasing them for ceremonies, i.e, wedding ceremonies, or by their children taking them to sell in Bangkok. Thus, they mainly sold their products within the village and had no permanent market. Group 10 sold its products to walk-in consumers (95%) from inside and outside of the village, and just a few of the products (5%) were sold to other silk weaving groups in the same district. This group accumulated silk products and gave money to weavers after selling their products. All of their products were sold within a month. Group 10 would also sell their products in Bangkok during festivals, e.g., at OTOP events.

Most of the continual groups had various places to sell their products, while the discontinued groups mostly sold their products to walk-in consumers inside the village. Therefore, the various places of sales contribute to sale alternatives which contribute to stable receipts.

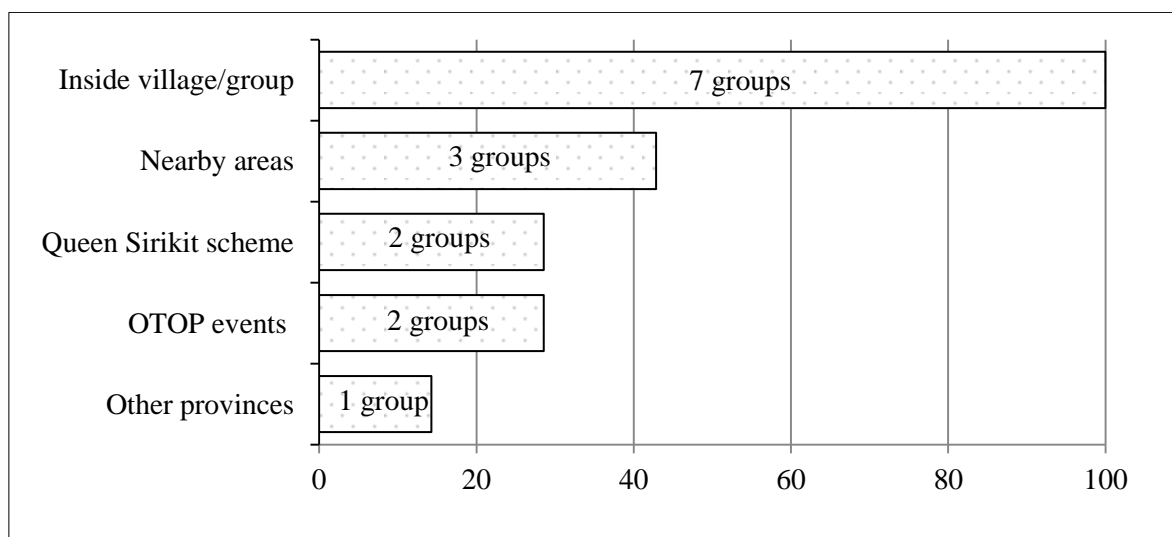


Figure 3.8 Places of sale for the seven continual groups

Source: Survey data in 2016

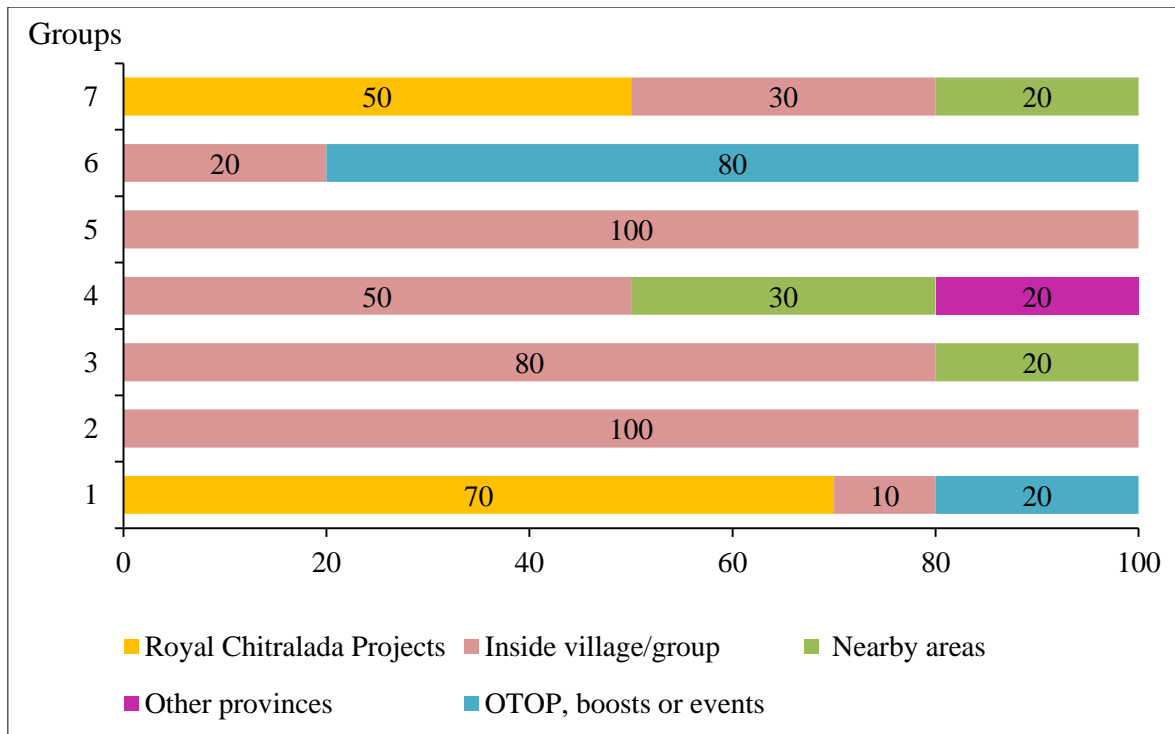


Figure 3.9 Proportion of products sold in each place for the seven continual groups

Source: Survey data in 2016

b) Selling methods

The study has established that the seven continual groups employed various methods to market and sell their products; the methods can be grouped into three categories. Firstly, the weavers sold products to their groups and received cash for them; secondly, the weavers consigned products to their groups and received cash after the groups sold the products; lastly, the weavers sold their products individually (Table 3.22). According to the table, groups 1–6 purchased the products from the weavers, especially groups 1, 3 and 4, while groups 2 and 7 paid the estimated prices to weavers after the products were sold. The results indicate that there were two ways for weavers to sell their products: either through the group or individually.

The continual groups had more ways to sell their products than the discontinued groups. The discontinued groups did not sell products through their groups; this contributes to lacking of liquidity of group funds cycle for weavers. Therefore, many ways to sell products result in liquidities of weavers' income and group funds in order to support re-production. It also contributes to the groups' continuance.

Table 3.22 Selling methods of weavers in the seven continual groups

Unit: %

Ways to sell	G1	G2	G3	G4	G5	G6	G7
1) Weavers sold products through their groups	100	10	80	100	30	40	
2) Weavers consigned products to their groups		60					30
3) Weavers sold products individually		30	20		70	60	70

Source: Survey data in 2016

3.3.4 Financial function

a) Sources of funding

A total of eight organizations provided financial support to the groups. The groups were mostly sustained by subsidies from government organizations, such as the SAO, banks, e.g., BAAC or the Government Savings Bank, the Industrial Extension Department and the CDD. The discontinued groups received subsidies from the SAO and CDD (Table 3.23). Group 1 received higher financial support from these organizations as compared to the other groups. The continual groups obtained financial support from various types of organization, while the discontinued groups obtained the support from only two organizations. Thus, obtaining financial support is important for the groups to continue their operations and activities in future.

Table 3.23 Sources of funding of the seven continual groups and two discontinued groups

Organizations	Continual groups (n=7)	Discontinued groups (n=2)
1) Sub-District Administrative Organization	6	1
2) Banks; BAAC or Government Savings Bank	3	0
3) Community Development Department	3	2
4) Khon Kaen Industrial Extension Center	2	0
5) Small, Medium and Large Villages Project	2	0
6) Agriculture and Cooperatives in Khon Kaen	1	0
7) NGOs, e.g., Tiang Chirathivat Foundation	1	0
8) Provincial Administrative Organization	1	0

Source: Survey data in 2016

The following section will focus more on three of the continual groups based on financial information provided by them during the survey. Among the three continual groups and the two discontinued groups, the most significant financial supporters were the SAO and CDD. The continual groups received subsidies such as complimentary money and loans from government organizations and NGOs, while the discontinued groups only received loans. In addition, both the continual and discontinued groups received some funds to support the purchase of raw materials and equipment. In the case of group 10, the group used the funds as a guarantee for members to request personal or individual loans from the banks; these loans were not related to the group's funds (Tables 3.24 and 3.25).

Table 3.24 Financial supporters of the three continual groups

(A) Group 1

Supporters	Year acquired	Amount (THB)	Details/Conditions
1) Office of Agriculture and Cooperatives, Khon Kaen	1996	40,000	▪ Subsidy for the purchase of silk threads, distributed as a loan to members (1,000 THB per borrower)
	2003	100,000	▪ Zero-interest loan to support group's operation, distributed as a loan to members
	2005	40,000	▪ Zero-interest loan to support group's operation, distributed as a loan to members
2) Sub-district Administrative Organization	2003	20,000	▪ Subsidy to support group's operation
	2002	10,000	▪ Subsidy to support group's operation
	2010	50,000	▪ Subsidy to support group's operation
3) Small, Medium and Large Villages Project	2011	70,000	▪ Subsidy for the purchase of 10 spinning machines, distributed as a loan to members
4) NGOs, e.g., Tiang Chirathivat Central Department Store or Bangkok	2014	1,000,000	▪ Complimentary money for purchasing silk threads and products for members
5) Banks, e.g., BAAC	2015	500,000	▪ Loan for members with 6% interest on the first year, with only a 5% return per year thereafter
6) Khon Kaen Industrial Extension Center	2015	20,000	▪ Subsidy for purchasing silk threads and equipment

(B) Group 2

Supporters	Year Acquired	Amount (THB)	Details/Conditions
1) Office of Chonnabot District Community Development	1985	4,000	▪ Subsidy to support establishment (purchasing equipment)
	2005	8,000	▪ Subsidy to support group's operation
	2014	80,000	▪ Loan to support group's operation with 3% interest, returned within two years (40,000 THB per year); the group kept another 3% of the interest to fund the group, and had already returned the loan by 2016
2) Sub-district Administrative Organization	2005	100,000	▪ Loan for members with 3% interest per year; the group kept another 3% of the interest to fund the group, and had already returned the loan by 2009

(C) Group 3

Supporters	Year Acquired	Amount (THB)	Details/Conditions
1) Office of Chonnabot District Community Development	1997	30,000	▪ Subsidy to support group's operation
	2003	60,000	▪ Subsidy to support group's operation
2) Sub-district Administrative Organization	2002	100,000	▪ Zero-interest loan for members, returned within five years
	2007	100,000	▪ Zero-interest for members, returned within two years
3) Government Savings Bank	2015	860,000	▪ 6% interest loan for members, returned in 2016 (one-year loan)

Source: Survey data in 2016

Table 3.25 Financial supporters of the two discontinued groups

(A) Group 9

Supporters	Year Acquired	Amount (THB)	Details/Conditions
1) Sub-district Administrative Organization	2001	100,000	▪ Zero-interest loan to buy silk threads, deposit of 20,000 THB before receiving the loan, returned (20,000 THB per year) within five years (2006)
2) Office of Chonnabot District Community Development	2004	80,000	▪ Zero-interest loan to buy threads returned (40,000 THB per year) within two years (2006/2007)

(B) Group 10

Supporters	Year Acquired	Amount (THB)	Details/Conditions
1) Office of Chonnabot District Community Development	1996	30,000	▪ Zero-interest loan for members; the group saved 1% of interest per month, e.g., borrowers had to return 1% (7 THB) per month (7 THB×40 borrowers×6 months=1,680), but some of them borrowed for more than six months

Source: Survey data in 2016

The continual groups received various financial subsidies more than the discontinued groups. Also, the total amount of continual groups' funds received from the organizations is more than the discontinued ones. Therefore, subsidy receiving from organizations is very important for the groups' continuance.

According to the above explanations, receiving several sources of funding, especially subsidies from many kinds of organizations contribute to enrich the group funds and drive the re-investment and re-production in the next cycle.

b) Composition of group funding

The composition of the groups' funding consisted of both internal and external sources, as shown in the subsequent tables below. Their internal funds were accumulated from stocks, interest on loans, profits from selling products and savings, while their external funds were composed of grants and loans from government organizations or NGOs. Most of the continual groups had stocks, interest on loans and profits from selling products included in their sources of funding. Most of the groups had stocks, except for

group 6, whose leader had their own business. Interest on loans and profit from selling products were sources of funding for all of the groups except for groups 4 and 6. The funds of groups 1, 3 and 4 were made up of grants, while groups 3, 4 and 7 had loans making up their funds. Group 1, 5 and 7 were also supplemented by funds from savings activities (Table 3.26).

For the 2016 production year, group 1 had accumulated the highest funds (2,250,000 THB), with about 82% of this amount coming from external financial sources. The financial funds of groups 2 and 3 were only made up of internal financial sources, which came from the groups' activities such as interest on loans and profits from selling their products. In 2016, group 2 just paused selling products through the group and the members instead sold their products individually, because the group leader's sister was placing no orders in that year (Table 3.27).

The continual groups had many ways to collect group funds while not all of the two discontinued groups had the same ways to collect the group funds. Thus, the several ways to collect the group funds is one of the reasons to keep the continuance of group activities. Therefore, several ways to collect group funds result in driving the re-investment and re-production activities in the groups.

Table 3.26 Components of group funding

Ways to collect groups' funds	Continual groups (n=7)	Discontinued groups (n=2)
1) Stocks	6	1
2) Interest on loans	5	1
3) Profits from selling products	5	1
4) Grants (free or zero-interest)	3	1
5) Loans (from banks)	3	1
6) Savings	3	1

Source: Survey data in 2016

Table 3.27 Proportions of group funding sources among the three continual groups

Sources of group funding	G1	G2	G3
1) External funds	1,850,000 (82.2%)	0 (0.0%)	0 (0.0%)
▪ Grants (free of charge)	1,210,000 (53.8%)	0 (0.0%)	0 (0.0%)
▪ Loans	640,000 (28.4%)	0 (0.0%)	0 (0.0%)
2) Internal funds	400,000 (17.8%)	102,900 (100.0%)	214,508 (100.0%)
▪ Previous group leader	0 (0.0%)	69,000 (67.1%)	0 (0.0%)
▪ Stocks	11,600 (0.5%)	1,600 (1.5%)	5,600 (2.6%)
▪ Savings	291,400 (13.0%)	0 (0.0%)	0 (0.0%)
▪ Interest on loans & profit after selling products	97,000 (4.3%)	32,300 (31.4%)	208,908 (97.4%)
Total group funds	2,250,000	102,900	214,508

Source: Survey data in 2016

c) Financial strategies of the groups

The financial strategies of both the continual and discontinued groups can be divided into two categories. Firstly, the groups invested through loan activities, such as providing loans to members for individual production and purchasing silk threads using advance budgets from group funds. After the group had distributed the silk threads, the weavers had to return it in the form of a loan (capital and 1–2% interest per month) to the group at a later time. Secondly, the groups purchased silk products from their members and kept some of the profit into group funds after they had sold the products. If the borrowers could not return the capital, they were permitted to return only the interest each month. Most of the continual groups had sufficient funds with which to purchase silk products from weavers, while the two discontinued groups had no funds to purchase the products from weavers (Table 3.28).

Table 3.28 Financial strategies of the seven continual and two discontinued groups

Financial strategies	Continual groups (n=7)	Discontinued groups (n=2)
1) Group provided cash loans to members and weavers (1–2% interest per month)	4	1
2) Groups provided raw materials as loans to members and weavers (1–2% interest per month)	3	1
3) Groups purchased silk products from weavers by cash	5	0

Source: Survey data in 2016

These groups acted as a supporting organ for weavers to produce and market their products. The groups also provided micro financing services, e.g., investing in or providing materials to the weavers in the form of a loan. The continual groups, especially groups 1 and 4, had sufficient funds with which to support weavers by purchasing their silk products. Group 1 had sufficient funds with which to purchase weavers' products, while group 4 had insufficient funds with which to invest in and purchase silk products from weavers at higher prices. Groups 1 and 4 used their committee members to control product quality. The continual groups kept the profit from selling products into group funds in order to distribute dividends at the end of every production year or to divide the profits based on sales. The leader of group 1 was very active, as she attended to the group and kept the group informed. She clearly reported the group's outcomes and did not take group money to use as personal money.

The discontinued groups, such as group 9, did not deal appropriately with clashes between their members' personal and private activities, which contributed to a conflicting schedule. Furthermore, group 9 did not distribute dividends or provide loan for weavers or members; there was nothing to motivate the members to work together. They did not receive any assistance or benefit from participating in these groups. The leader of group 9 might have misunderstood how the group was meant to work. Moreover, she was not active, e.g., she did not participate in events held outside of the village. She usually asked other committee members to attend training programs or meetings on her behalf. These reasons led to the discontinuance of group operations after only one year of operation. As for group 10, it had been doing well since its establishment; however, the group discontinued its operations because its leader's health deteriorated and there was no successor to continue leading the group.

Thus, the continual groups had more liquidity of group funds and the ways of financial strategies than the discontinued groups. Consequently, the various financial strategies, especially the groups purchased silk products from weavers by cash contribute to enrich weavers' income and groups' funds.

d) Management of group income

Weavers could either sell products to the groups or sell them individually. Table 3.29 and Figure 3.10 to 3.14 show the management of groups' income. After the sale of silk products, the groups' profits will be used for marketing activities such as sellers' wage (sellers are group members/ committee members/ leaders), transportation costs and kept some of the profits into group funds. The continual groups had mainly three ways to manage group income after selling the products such as keeping some profit after the sale of silk products into groups' funds, keeping the total income into groups' funds, and paying back the estimated price of the silk products to weavers. On the other hand, the discontinued groups had three ways to manage group income such as keeping the total income into groups' funds, paying back the estimated price of the silk products to weavers, and dividing the profits between the weavers after paying back the value of the silk.

Table 3.29 Management of group income after selling silk products

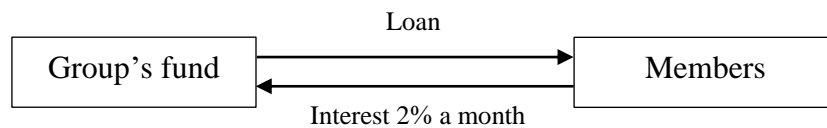
Income management	Continual groups (n=7)	Discontinued groups (n=2)
1) Keeping less than 10% of the profit from every two fabrics sold into group funds	1	0
2) Keeping 10%–12% of the profit from every two fabrics sold into group funds	1	0
3) Keeping 20%–24% of the profit from every two fabrics sold into group funds	2	0
4) Keeping the total income into group funds	2	1
5) Paying back the estimated price of the silk products to weavers	3	1
6) Dividing the profits between the weavers after paying back the value of the silk	0	1

Source: Survey data in 2016

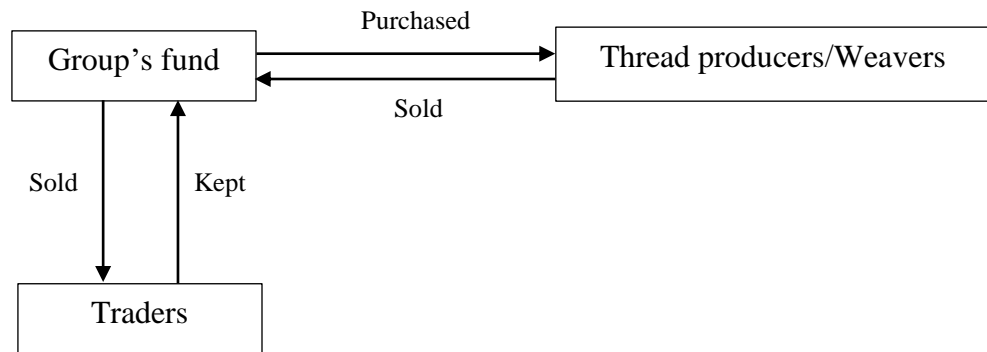
The income management patterns of each group are explained as follows:

Group 1: This group allocated parts of group’s fund as loan to members as production investment and in return the 61 borrowers (3,000–10,000 THB per a borrower) had to pay back 2 % of interest and capital amount every month; the payment plan was divided into two parts; 1) payment within 3 months and 2) payment within 1 year. Some members also produced or purchased threads using their personal money. This group had sufficient funds to purchase silk products from members to resell in bulk on behalf of the group.

There are two patterns of income management in the group 1 which are 1) group provided a loan to members (Figure 3.10A) and 2) group purchased silk threads and fabrics from members, thereafter selling the products to traders, with the profit received was kept in the group fund (Figure 3.10B).



(A) Income management pattern 1

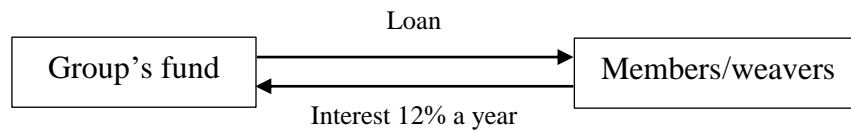


(B) Income management pattern 2

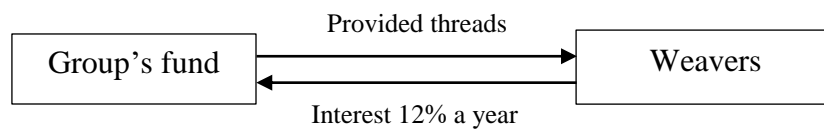
Figure 3.10 Income management patterns of the group 1

Source: Survey data in 2016

Group 2: This group allocated money from the group’s fund as a loan to members for productive investment and in return, the borrowers (7 weavers) had to pay back 12 % of interest per year (1% a month) including capital in every April. The group reinvested again after receiving all the capitals and interests. The investment activities included purchasing raw materials, hiring workers to prepare silk threads before weaving, hiring weavers (7 weavers). The weavers received first priority when they requested for an additional loan as compared to other general members of the group. The two patterns of income management in this group can be stated as 1) group provided loan to members and weavers to invest and purchased raw materials e.g. silk threads by themselves (Figure 3.11A) and 2) group purchased threads for weavers and distributed to weavers as loan which was to be paid back with interest loan (Figure 3.11B).



(A) Income management pattern 1



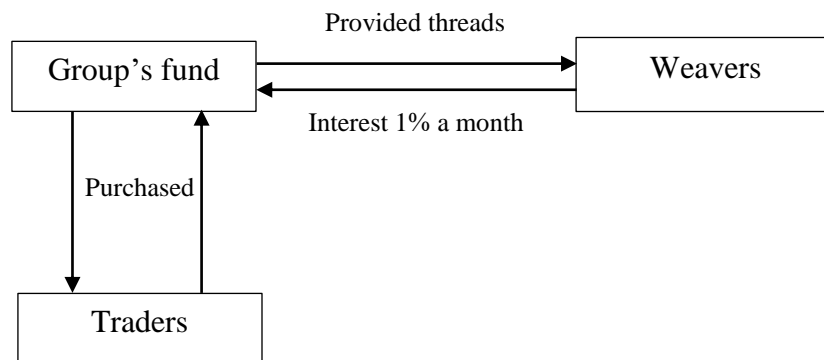
(B) Income management pattern 2

Figure 3.11 Income management patterns of the group 2

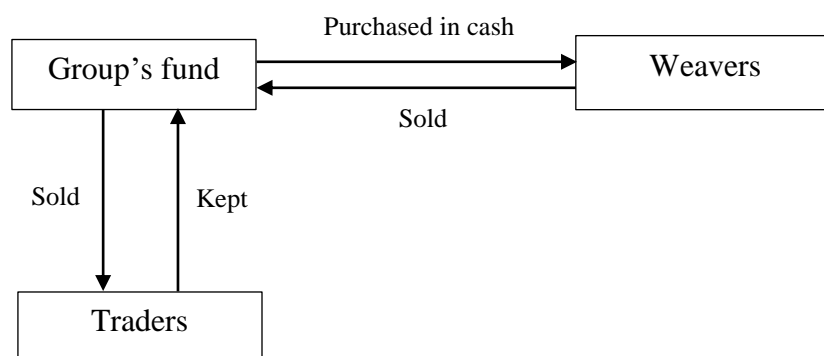
Source: Survey data in 2016

Group 3: This group allocated the available group’s fund as a loan to 33 weavers to purchase silk threads and in return, the weavers had to pay back the capital with 1 % of

interest for every month. The group reinvested two times a year, at the end of December and May after receiving all the capital and interest from borrowers. This pattern is good for weavers as they can receive investment loan to purchase threads at least twice a year. The two patterns of income management in this group can be defined as 1) group purchased threads to weavers and the weavers returning the money as a loan with interest. (Figure 3.12A) and 2) group purchased silk fabrics from weavers and sold to traders, thereafter they saved 200 baht per a couple of fabrics to the group's fund (Figure 3.12B). In 2017, the group decided to stop purchasing fabrics from weavers because of the committee members ongoing works in the village of which they did not have time to do accounting and auditing the silk weaving activities.



(A) Income management pattern 1



(B) Income management pattern 2

Figure 3.12 Income management patterns of the group 3

Source: Survey data in 2016

Group 9 (discontinued): There are 14 members in this group. The group had just purchased silk threads and all activities were ongoing in the group’s space at group leader house. This group had one pattern of income management which is group purchased threads and all members participated in preparing and weaving silk threads together at leader’s house. After selling the products, they reinvested again by purchasing more threads and producing silk products as mentioned (Figure 3.13).

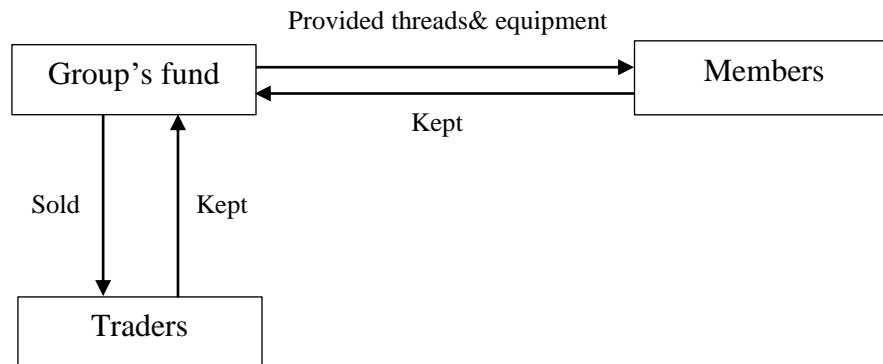
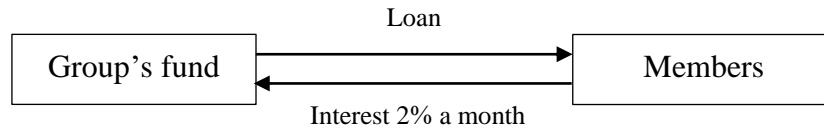


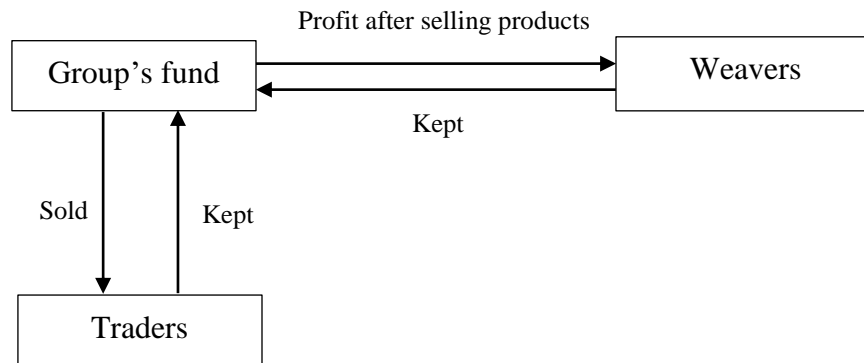
Figure 3.13 Income management pattern of the group 9

Source: Survey data in 2016

Group 10 (discontinued): This group had about 30 borrowers before the group stopped its activities. The group sourced loan from external financiers and later allocated that fund as loan together with savings to weavers to use for purchasing silk threads, in return the weavers had to pay back the loan amount with 1% of interest per month (2 times a year in every 5 months). The two patterns of income management in this group can be stated as 1) group provided the money received from supporters and from group’s savings to weavers and they had to return as loan with interest (Figure 3.14A) and 2) group gathered silk fabrics from weavers, then sold it to traders and after selling, the group will allocate the money for the products prices and some profit to the weavers (Figure 3.14B). In 2011, all members decided to quit because group’s leader was sick and no one wanted to take over as a new leader. Therefore, the group discontinued because there was no successor.



(A) Income management pattern 1



(B) Income management pattern 2

Figure 3.14 Income management patterns of the group 10

Source: Survey data in 2016

According to the income management patterns, the groups which kept some profits after the sale of silk products are easy to continue. On the other hand, dividing the rest of the profits after the sale of silk products to weavers leads to a low creation of the groups' funds. The groups should keep some amount of profit and should not distribute an excessive payment of the profit for weavers in order to continue operations and activities of the groups for long years. Therefore, it is important for the groups to receive a certain amount of profit in order to keep the groups' continuance. Thus, keeping some amount of profit after the sale of silk products into groups' funds is one way to keep driving the group's continuance.

e) Financial management system

Based on the operational problems of the study area, I found that in Chonnabot district, a lack of financial support and failure to use the group's budget for silk production resulted in the discontinuance of two groups, while the remaining three groups were able to overcome these problems and continue to operate until the present day. So, I make clear the financial management systems employed by these three continual groups.

First, I will show the strengths of these three continual silk weaving groups in Chonnabot district were mostly related to financial management, such as financial honesty and transparency, the receipt of support from government organizations and other organizations, as well as the distribution of dividends (Table 3.30).

Table 3.30 Opinions on the strengths of the three continual silk weaving groups

Strong points	No. of groups
1) Sharing and exchanging opinions	3
2) Having harmony between members	3
3) Having financial honesty and transparency	3
4) Receiving a variety of support from government and other organizations	3
5) Distributing dividends	2
6) Having frequent group meetings	2
7) Participating frequently in group activities and events	2
8) Each committee member having a clear responsibility	2
9) Having enough committee members	2
10) Receiving awards for high quality products	2

Source: Survey data in 2016

The financing to establish the groups was supported by several supporters, such as government organizations and NGOs. After the groups received the money and put it into group funds, they divided these funds into two categories. The first of these is financial services and second category is production activities. In terms of financial services, the funds were to provide both active and inactive members with loans. The members also helped to fund the groups through buying its stocks, saving money and paying back interest. It is interesting to note that, after receiving the profits, the groups allocated them to group members in the form of dividends, welfare support and allowances. The second facet is production activity; the group funds were allocated to active members such as

weavers for re-investment purposes. In other words, funds were used to provide loans for buying raw materials or equipment, as well as for training. After the production of the group's products, there were costs involved in selling their products, such as transportation and marketing costs. The income made after selling the products was kept within the group fund and, after taking away the costs, the groups allocated any profit to active members (Figure 3.15).

According to the field survey interviews, I found that some groups failed to reinvest, but that their operations are still continual because they can manage well on the provision of financial services.

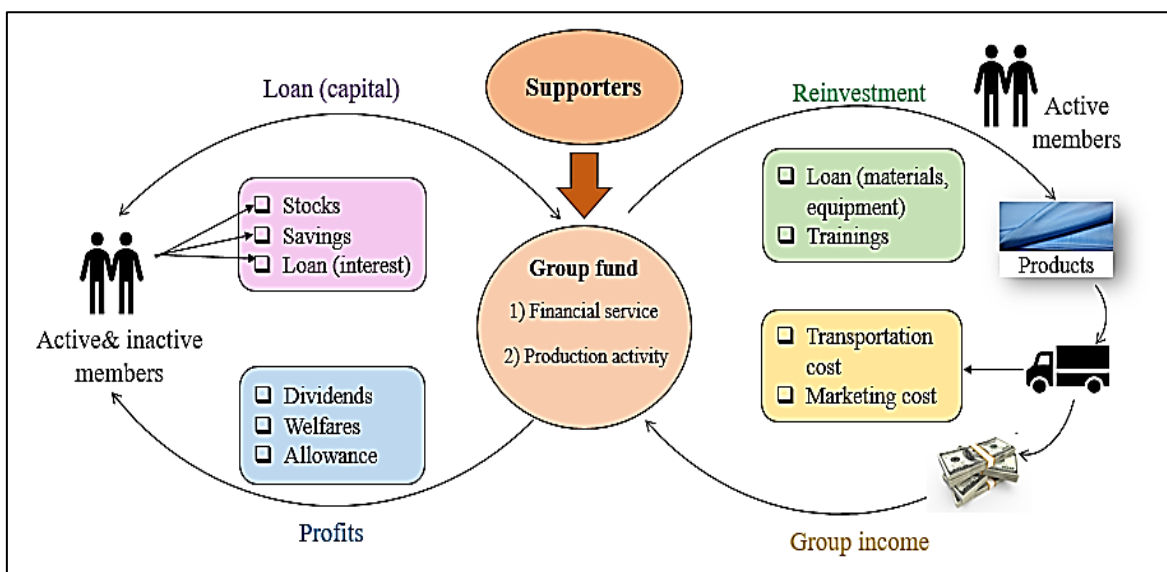


Figure 3.15 The financial management system of silk weaving groups in Thailand
 Source: Survey data in 2016

3.4 Conclusion

In this study, the factors contributing to the continuance of silk weaving groups based on the four business functions have become clear excluding organizational function. The factors about the other three perspectives are explained as follows.

1) from the perspective of production function:

The popularity of the continual groups, the products' quality, and the high price of silk products, including several ways to support weavers (e.g. loan, materials, hiring, and funds) contribute to a groups' continuance. According to the price of silk fabric such as Mudmee, the continual groups could sell it with higher price than the discontinued groups; it might be because the popularity of the continual groups and the quality of the products is

controlled well. This led to a low ability of the discontinued groups to increase income for re-production in the next cycle and be one of the reasons to discontinue the groups.

The number of the production management patterns is one of the important factors to keeping the groups' continuance. The continual groups provided various ways to supports the weavers such as loan, materials, hiring, and funds. Moreover, the continual groups had sufficient funds to purchase silk fabrics from weavers, it implied that the weavers can sell their products to the groups directly and get paid quickly. However, in the case of the discontinued groups, the groups provided only the method of consigned products for the weavers. This means that the weavers have to wait until the products could sell before receiving funds and get back the ones that could not sell out. Therefore, if the silk weaving groups have various production management patterns to support their weavers, it will contribute to re-production in the next production' cycle and lead to the continuance of silk weaving groups.

2) from the perspective of marketing function:

The various places and ways of sales contribute to sales alternatives and stable receipts which drive the groups keep continuing operations and activities. The continual groups mostly have various ways to sell their products, while the discontinued groups mostly sold their products to walk-in consumers inside the village.

Likewise, many ways to sell products result in liquidities of weavers' income and group funds in order to support re-production which contributes to the groups' continuance. The continual groups had more ways to sell their products than the discontinued groups, while the discontinued groups did not sell products through their groups; this leads to lacking of liquidity of group funds cycle for weavers to re-production.

3) from the perspective of financial function:

Obtaining subsidies from several organizations, several ways to collect group funds, financial strategies of the groups e.g. the groups purchased silk products from weavers by cash, and keeping some amount of profit after selling silk products into group funds, contribute to enrich the group fund and drive the re-investment and re-production in the next cycle. The continual groups obtained financial supports from various organizations, while the discontinue groups obtained the support from only two organizations. Therefore, subsidies receiving from organizations are very important for the groups' continuance.

According to the composition of group funding, several ways to collect group funds result in driving the re-investment and re-production activities in the groups. The

continual groups collected group funds with many ways, while the two discontinued groups had not. Thus, the adoption of several ways to collect the group funds is one of the reasons to keep the continuance of group activities.

About the financial strategies of the groups, the various financial strategies, especially the purchase of silk products from weavers by cash, contribute to enrich weavers' income and groups' funds. As the continual groups had more liquidity of group funds and the ways of financial strategies than the discontinued groups.

Concerning the management of group income which related to the ways to create group funds, especially keeping some amount of profit after selling silk products into group funds, brings about the groups' continuance. On the other hand, dividing the rest of the profits after the sale of silk products to weavers leads to a low creation of the groups' funds. The groups' profits will be used for marketing activities such as sellers' wage (sellers are group members/committee members/leaders), transportation costs and kept some of the profits in group funds. Therefore, it is important for the groups to receive a certain amount of profit in order to keep the groups' continuance. In the cases of the discontinued groups, they almost did not keep some of profit after selling silk products into the group funds. Based on the above mention, the groups which kept some profit after the sale of silk products are easy to continue. The groups should keep some amount of profit and should not distribute an excessive payment of the profit for weavers in order to continue operations and activities of the groups for long years. Thus, keeping some amount of profit after the sale of silk products into groups' funds is one way to keep driving the group's continuance.

Above mentioned, subsidies from organizations are very important for the group continuance. However, the dependence only for subsidies is not good for the continuance of the groups. In fact, in case of the discontinued groups, it was a main objective for the establishment of silk weaving groups to receive support from government organizations and NGOs. It is guessed that such a factor at the establishment stage is also related to the groups' continuance.

By the way, the number of surveyed samples was not much and various. The study results might be insufficient to answer the reasons to keep continuing the overall silk weaving groups in Northeast Thailand well. However, at least, the study could find out important reasons to keep the continuance of the surveyed silk weaving groups in order to enhance further research in future.

Chapter 4

Committee characteristics of silk weaving groups and the factors generating their variety in Northeast Thailand

This chapter provides a clear understanding of how committee functions are directed by committee members and whether there exists a variety of committee characteristics and factors generating their variety or not. Committee characteristics of silk weaving groups and the factors generating their variety, including similarities among a pairs of functions directed by the committee members were explained. The chapter also includes the sections of its surveyed data, methodology and conclusion.

4.1 Data and methodology

4.1.1 Study area and surveyed groups

Figure 4.1 indicates the location of the Khon Kaen Province in Northeastern Thailand, where this study was conducted. The province, with its 26 districts and a total population of 1,802,872, is located in the central part of Northeastern Thailand (Distanont et al., 2019). The province is an area of intensive commercial silk production and its silk product output has earned it over 2 billion Thai baht in 2019¹ (Community Development Department, 2019). The total number of silk weaving groups registered with the Department of Agriculture Extension in the provincial office was 135 in 2017 (Agricultural Extension Office, 2017). Out of these, a total of 60 silk weaving groups in the nine districts were interviewed from December 2017 to January 2018, and from January to February 2020. The groups surveyed for this study were introduced by officers of the Agricultural Extension Office and the Community Development Department in Khon Kaen province. The introduced groups are categorized as relatively good and excellent. Therefore, the results gotten by this study are mainly applicable to good and excellent silk weaving groups. The share of the formal silk weaving groups occupied in the province in 2017 was 78.0%. Therefore, this area is an important study area.

The field survey was carried out via interviews with key informants, i.e., group leaders or committee members who know the group's information well, completing a

¹ 1 USD was 31.074 THB in 2019

questionnaire by the author. The questionnaire’s content was related to the committee and the fundamental characteristics of the silk weaving groups such as number of group members, amount of receipts, silk product type, and group age.

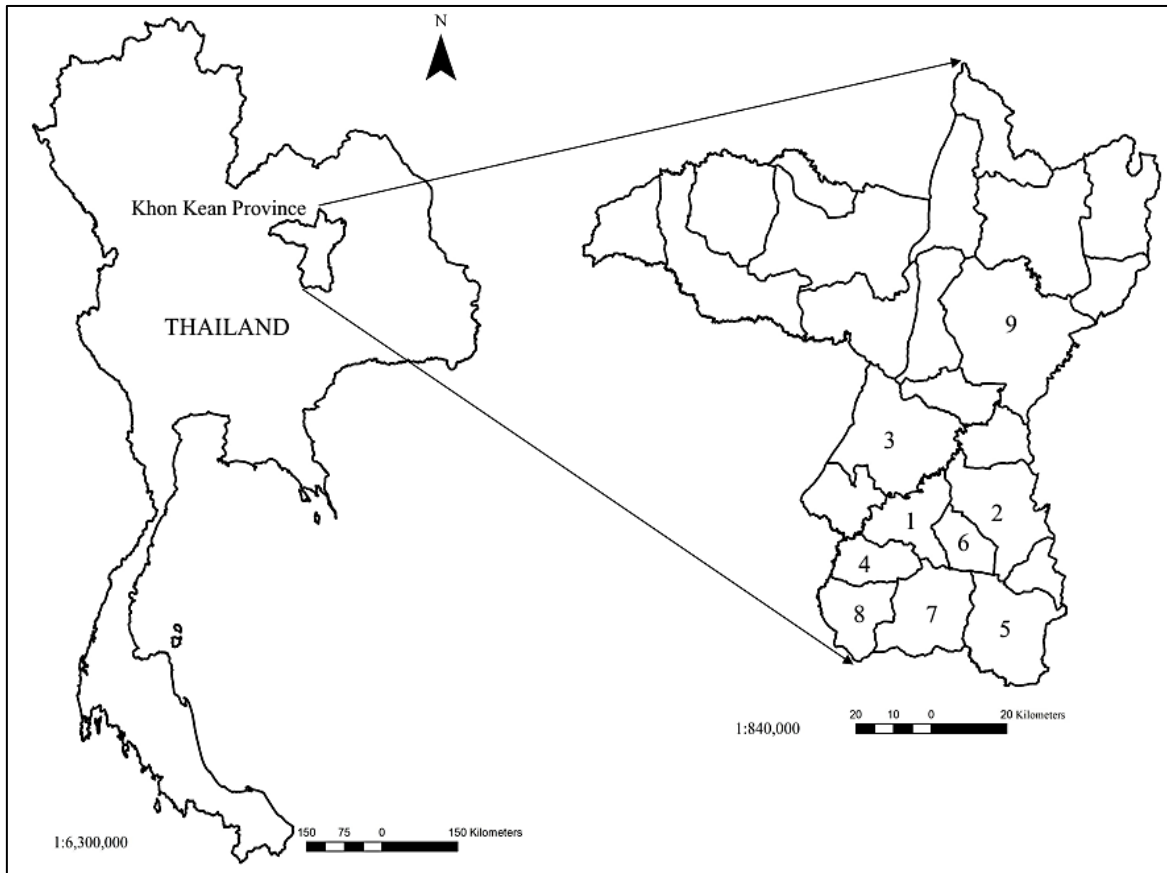


Figure 4.1 Location of the study area, Khon Kaen Province, Northeast Thailand
 Source: The Royal Forest Department

4.1.2 General structure and the activities of silk weaving groups

Silk weaving groups are composed of group committee members and general group members. Group committee members consist of executive and general committee members. Group management is an important part of the committee². It consists of a leader, vice–leader(s), secretary(ies), treasurer(s), consultant(s), and general committee member(s) who have and do not have specific duties (Figure 4.2).

The group leader is responsible for the overall group activities, and he/she directs and supports the group members. He/she also facilitates coordination between the external

² In this paper, the word “committee” refers to a sub–group of people who organize the group activities in different capacities based on a Thai context.

players (government organizations, other supporters, or customers) and group members. The vice-leader assists the group leader in managing the group operations and is the key person that contacts government organizations or other supporters. The secretary records the information collected from group meetings or other events. The treasurer manages the group's finances.

General committee members are responsible for conveying report information to executive committee members. For example, the pattern designer is in charge of the design and development of silk patterns, the credit collector reminds borrowers to repay loans, the auditor checks group accounts and finances, the marketer sells and promotes group products, and the receptionist welcomes visitors, decorates the group location, and prepares food and beverages. They also assist each other in fulfilling other unspecified tasks. The majority of the groups have fewer than 15 group committee members. There are various types of members in the groups, such as stockholders, borrowers, silk weavers, and sericulture farmers. One person could simultaneously belong to multiple categories.

The group obtains financing from various supporters, such as government organizations, NGOs, and state enterprises. In terms of financial activities, funds are provided to the group members through loans. The members also assist in funding the groups by buying its stocks, saving money, and paying interest. After receiving the profits, the group allocates the profit to group members in the form of dividends, welfare support, and allowances. The second facet is production activities. Group funds are allocated to active members, such as weavers, for reinvestment purposes. After selling group products, the groups allocate the remaining profit to active members.

Silk weaving techniques, such as tie/dye and other weaving methods, are some of the traditional practices that the silk weaving groups endeavor to preserve and pass on to younger group members. As a way of transferring this knowledge, the skillful members in the groups teach these techniques to younger members who are interested in silk weaving.

Furthermore, some of the silk weaving groups usually provide opportunities to young people who are not group members to master silk weaving techniques from skillful members. It also helps to recruit young people as new members.

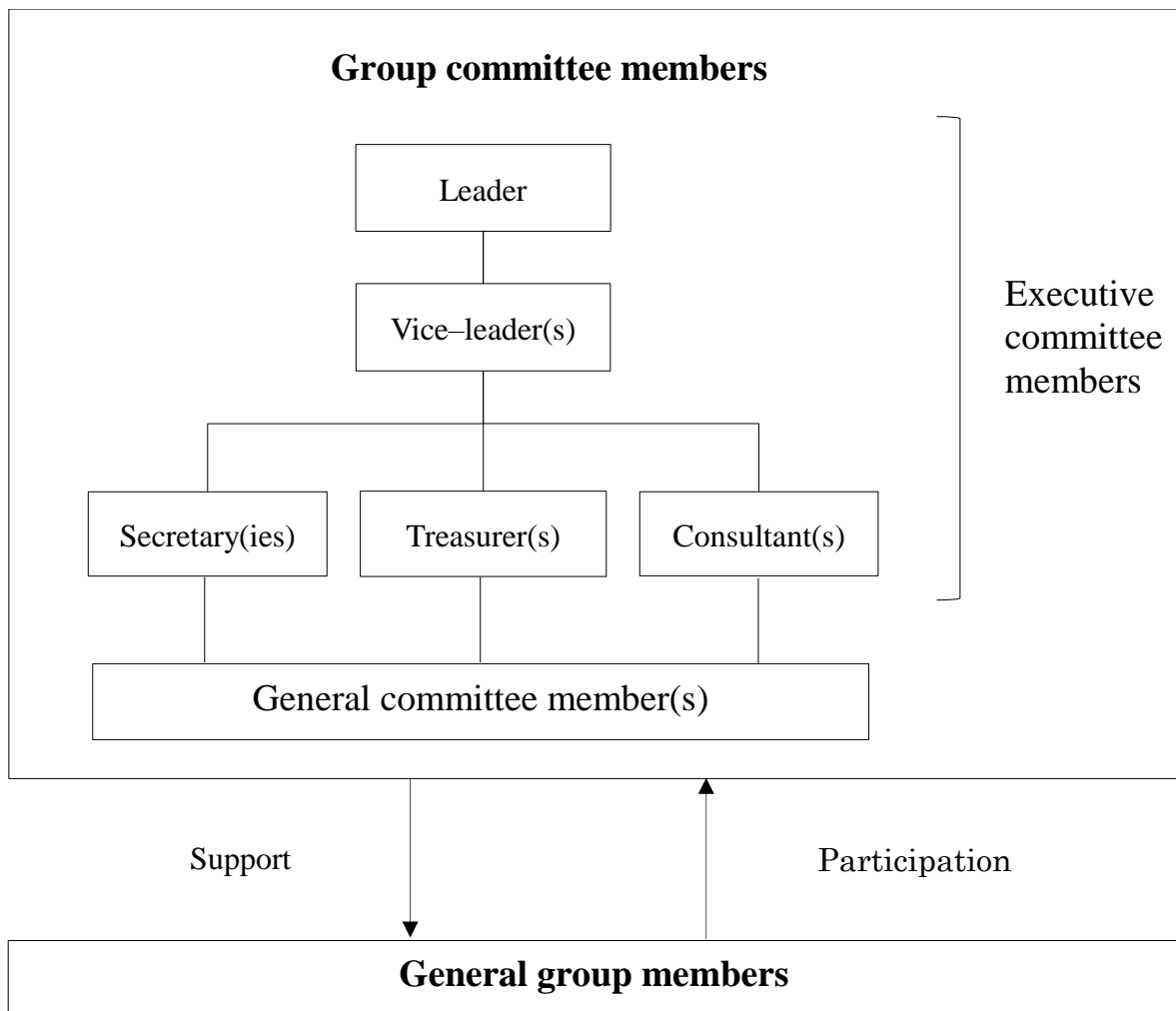


Figure 4.2 General structure of the silk weaving groups

Source: Field survey in 2017

4.1.3 Methodology

I used multiple regression analysis, binary logistic regression analysis, and index showing the degree of similarity between a pair of functions. I used multiple regression analysis to analyze the relationship between the percentage/number of committee members in charge of each function and the fundamental variables, or with the production of each silk product type. I used binary logistic regression analysis to analyze the relationship between the designation of committee members in charge of non-specific functions and the fundamental variables.

As functions are directed by committee members, it is practical and easy to evaluate the degree of similarity between a pair of functions from the standpoint of committee member similarities in charge of both functions. Then, I defined the degree of

similarity between a pair of functions based on the similarity of committee members in charge of both functions. I measured the degree of similarity between functions i and j ($S_{i \cdot j}$), as follows:

$S_{i \cdot j(k)} = (\text{The number of committee members in charge of both the } i^{\text{th}} \text{ and } j^{\text{th}} \text{ functions of the } k^{\text{th}} \text{ group}) / (\text{the actual number of committee members in charge of the } i^{\text{th}} \text{ or } j^{\text{th}} \text{ functions of the } k^{\text{th}} \text{ group}) \times 100.$

$$S_{i \cdot j} = \sum_k S_{i \cdot j(k)} / 60$$

There is a way to apply PCA to grasp similar variables. However, in the case of applying PCA, the percentage of committee members in charge of each function is used as a variable and the degree of similarity is not treated directly. Then, it is difficult to check and pick up all pairs of functions which show a high degree of similarity. In this study I calculated the degree of similarity directly for all pairs of functions and pick up pairs showing a high degree of similarity.

4.2 Results and discussion

4.2.1 Committee members and functions in silk weaving groups

Figure 4.3 displays the committee members and functions in the silk weaving groups. The committee members are mainly composed of a leader, vice-leader(s), secretary(ies), treasurer(s), and consultant(s). Generally, there are two types of committee members: members in charge of specific functions and members with non-specific functions. However, not all silk weaving groups have committee members in charge of non-specific functions as these are unspecified responsibilities. Those in charge of non-specific functions are members who help those in charge of specific functions during the busy season and/or practice other unspecified functions.

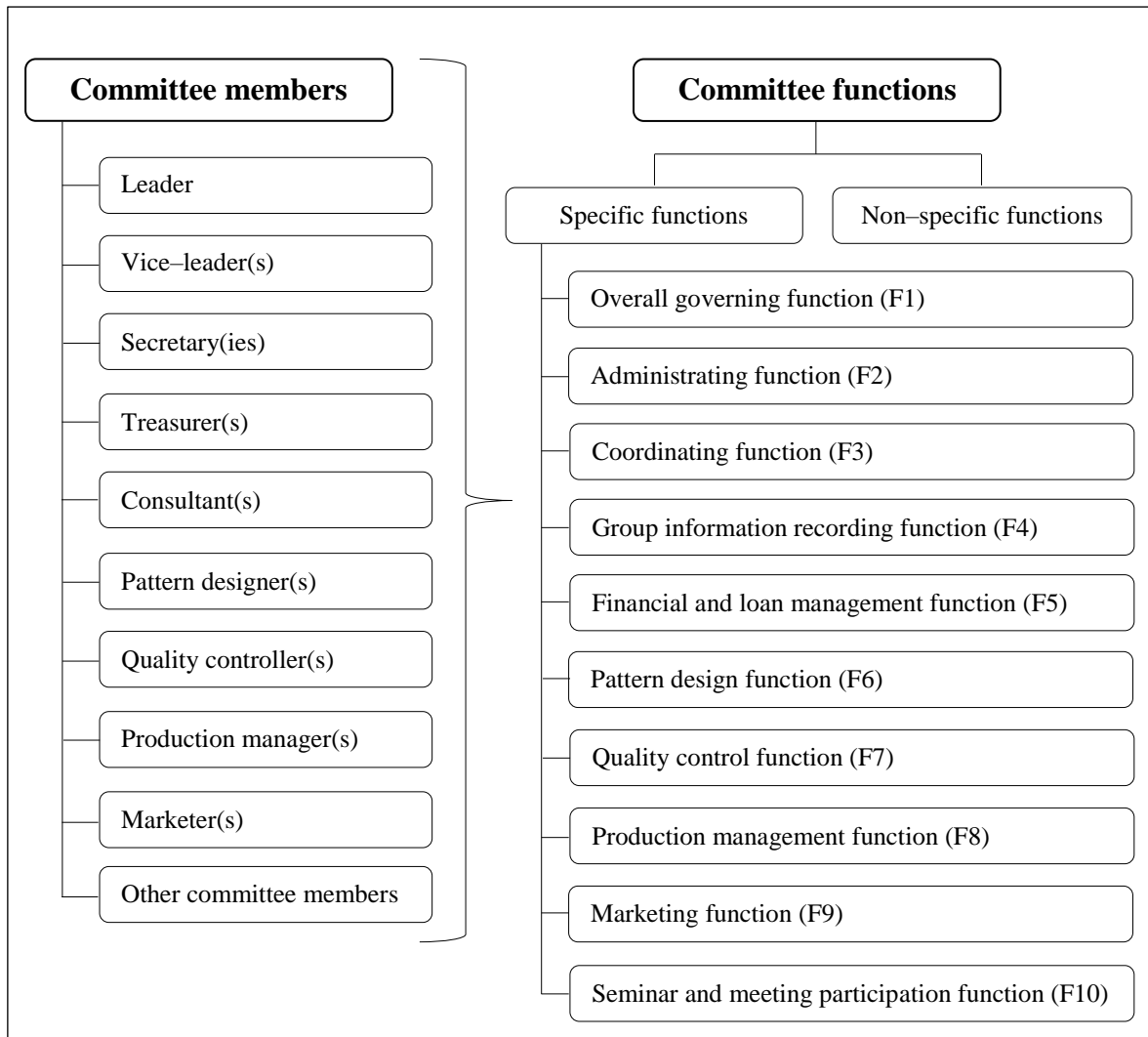


Figure 4.3 Committee members and functions in silk weaving groups

Source: Field survey in 2020

The ten specific functions are also presented in Figure 4.3 and are further discussed below. First, the overall governing function (F1) is mostly the responsibility of the group leader for managing overall group activities, governing, and assisting group members. The administrative function (F2) serves to manage and run group operations or activities. Committee members in charge of the coordinating function (F3), coordinate between external players (government organizations, other supporters, consumers, etc.) and group members. The group information recording function (F4) is the responsibility of the group secretary who is mostly responsible for recording information collected from internal or external documents, such as group meeting minutes or other events. The financial and loan management function (F5) is usually the responsibility of the group treasurer, managing and recording group finances and loans. The pattern design function (F6) is the

responsibility of skillful and experienced weavers, designing and developing the patterns of silk products. The quality control function (F7) is related to the control, check, and quality enhancement of silk products. The production management function (F8) serves to connect the material preparation process to the weaving process. The committee members in charge of the marketing function (F9) are responsible for observing consumers' needs, and the promotion and sales of group products. Finally, the seminar and meeting participation function (F10) is the responsibility of the group leader or other committee members who are available and able to participate in seminars or meeting programs. These functions are allotted among committee members. On average, there are about 10 committee members in charge of specific or non-specific functions among the silk weaving groups.

According to group rules, committee members, including the group leader, are selected by other group members or consultants by mutual consent. The group leaders' term of office is between one and four years, depending on each group; however, the general group members tend to reelect the same leaders and committee members.

4.2.2 Outline of the 60 silk weaving groups

Table 4.1 shows the descriptive statistics of several variables. The following observations about the fundamental characteristics of the surveyed groups (U_i) can be made based on the table: on average, the number of group members (U_1) is 30.72 persons; the amount of receipts (U_2) is 30,717.94 USD; the number of silk product types (U_3) is 4.08 types; and the age of the groups (U_4) is 19.60 years.

Table 4.1 also shows the composition of production and non-production of each silk product type ($V_j=1$ if the group has produced the j^{th} type of silk product, $V_j=0$: if they do not). The most produced products by the groups are Mudmee (100%), followed by dyed silks (78.33%), loincloths (66.67%), sarongs (63.33%), scarves (43.33%), shawls (43.33%), small items (10.00%), and cloths (3.33%).

Among the 10 functions, the mean of the percentage of committee members in charge of the overall governing function (W_1) is lowest (5.59), while the mean of the percentage of members in charge of the administrative function (W_2) is highest (19.82). As for the number of committee members in charge of each function (X_i), the number in charge of the administrative function (X_2) is the highest. On the other hand, the number of committee members in charge of the overall governing function (X_1) is lowest, as this function is usually the responsibility of the group leader only.

Table 4.1 Descriptive statistics of the variables (N=60)

Variables	Minimum	Maximum	Mean	S.D.	Coefficient of variation
Fundamental characteristics of the surveyed groups (U_i)					
The number of group members (persons) (U ₁)	10	106	30.72	23.01	74.91
Amount of receipts (USD) (U ₂) ¹	2,576.74	289,883.08	30,717.94	41,705.78	135.77
The number of silk product types (number) (U ₃)	1	8	4.08	1.72	42.13
Age of the groups (years) (U ₄)	7	34	19.60	6.33	32.30
Production of each silk product type (V_j)					
	V _j =1	V _j =0			
Production of dyed silks (1= if produced, 0= if not produced) (V ₁)	47 (78.33%)	13 (21.67%)			
Production of sarongs (1= if produced, 0= if not produced) (V ₂)	38 (63.33%)	22 (36.67%)			
Production of loincloths (1= if produced, 0= if not produced) (V ₃)	40 (66.67%)	20 (33.33%)			
Production of scarves (1= if produced, 0= if not produced) (V ₄)	26 (43.33%)	34 (56.67%)			
Production of shawls (1= if produced n, 0= if not produced) (V ₅)	26 (43.33%)	34 (56.67%)			
Production of cloths (1= if produced, 0= if not produced) (V ₆)	2 (3.33%)	58 (96.67%)			
Production of small items (1= if produced, 0= if not produced) (V ₇)	6 (10.00%)	54 (90.00%)			
Production of Mudmee (1= if produced, 0= if not produced) (V ₈)	60(100.00%)	0 (0.00%)			
The number of group committee members	3	16	9.95	3.91	39.27
Percentage of committee members in charge of each function (W_k)					
Overall governing function (%) (W ₁)	3.57	11.11	5.59	1.43	25.61
Administrating function (%) (W ₂)	4.76	36.36	19.82	8.49	42.82
Coordinating function (%) (W ₃)	3.57	25.00	7.69	4.01	52.13
Group information recording function (%) (W ₄)	3.57	22.22	6.85	3.40	49.60
Financial and loan management function (%) (W ₅)	3.57	22.22	8.51	4.26	50.05
Pattern design function (%) (W ₆)	0.00	22.22	8.06	5.18	64.19
Quality control function (%) (W ₇)	0.00	25.00	9.10	5.40	59.35
Production management function (%) (W ₈)	0.00	25.00	10.70	6.97	65.08
Marketing function (%) (W ₉)	0.00	27.27	11.94	5.39	45.10
Seminar and meeting participation function (%) (W ₁₀)	4.55	30.77	11.73	5.77	49.22
The number of committee members in charge of each function (X_i)					
Overall governing function (persons) (X ₁)	1	2	1.02	0.13	12.70
Administrating function (persons) (X ₂)	1	6	3.68	1.50	40.76
Coordinating function (persons) (X ₃)	1	4	1.43	0.79	55.05
Group information recording function (persons) (X ₄)	1	4	1.28	0.69	53.86
Financial and loan management function (persons) (X ₅)	1	5	1.60	0.89	55.43
Pattern design function (persons) (X ₆)	0	4	1.60	1.09	68.27
Quality control function (persons) (X ₇)	0	5	1.75	1.14	65.39
Production management function (persons) (X ₈)	0	6	2.12	1.52	71.78
Marketing function (persons) (X ₉)	0	6	2.33	1.17	50.32
Seminar and meeting participation function (persons) (X ₁₀)	1	7	2.25	1.26	55.87
Designation of committee members in charge of non-specific functions (Y)					
	Y=1	Y=0			
(1= if designated, 0= if non-designated)	44 (73.33%)	16 (26.67%)			

Source: Author's calculation based on a 2020 survey

Note: 1) 1 USD was 31.047 THB in 2019.

As for the designation of committee members in charge of non-specific functions (Y), 44 groups designate such committee members in charge of non-specific functions

($Y=1$). From the variables presented above, W_k , X_i , and Y are all related to the committee characteristics. Regarding the other descriptive statistics, the percentage occupied by committee members in the groups are, on average, 42.35%.

4.2.3 Factors generating variety in committee characteristics

In this section I will focus on the factors generating variety in the committees' characteristics by analyzing the following relationships:

a) The relationship between the percentage of committee members in charge of each function and the fundamental variables

I analyzed the relationship between the percentage of committee members in charge of each function (W_1 – W_{10}) and the fundamental variables (U_1 – U_4) using multiple regression analysis. Table 4.2 shows the results of the regression analysis with the statistically significant fundamental variables. Overall, R^2 values are small. The reason is presumed to be as follows: W_k is influenced not only by the fundamental variables, but also by many other factors such as the production of each silk product type, the technical level of the silk weavers, attitudes towards quality control and marketing, the policy embraced by the group leader, etc.

The results indicate that the percentage of committee members in charge of the pattern design function (W_6), quality control function (W_7), marketing function (W_9), and seminar and meeting participation function (W_{10}) are influenced by the fundamental variables (U_1 – U_4) at a statistically significant level.

In the case of groups producing many types of silk products (U_3), the percentage of committee members in charge of the pattern design function (W_6) becomes even higher. The higher the demand for different types of silk products, the greater the percentage needed of committee members in charge of the pattern design function.

A greater number of group members (U_1) contributed to the greater percentage of committee members in charge of the quality control function (W_7). Along with the increase in number of group members, the quality differences among the weavers would also have increased. Therefore, an increase in the number of group members leads to an increase in the necessity for the equalization of the product's quality among group members. Therefore, I estimate that a greater number of group members signals a greater percentage of committee members in charge of the quality control function (W_7). On the other hand, an increase in number of silk product types (U_3) would decrease the percentage of

committee members in charge of the quality control function. Generally, weavers, who produce many silk product types, tend to have the necessary skills to check their product's quality by themselves, so the increase in percentage of committee members in charge of the quality control function is not necessary.

The amount of receipts (U_2) positively influenced the percentage of committee members in charge of the marketing function (W_9). Furthermore, in order to increase the amount of receipts, marketing and sales promotions are necessary.

The number of group members (U_1) contributed positively to the percentage of committee members in charge of the seminar and meeting participation function (W_{10}). They are representatives and group informers who participate in several meetings, and their responsibilities further includes interaction with government officers, experts, and other silk weaving groups. These representatives are also responsible for informing other group members on the matters discussed in the seminar and meeting programs which they attended. Therefore, in cases where the number of group members is larger, it is necessary to have a larger percentage of committee members in charge of the seminar and meeting participation function. On the other hand, the amount of receipts (U_2) contributed negatively to the percentage of committee members in charge of the seminar and meeting participation function.

In Table 4.2, I also showed standardized regression coefficients. In the case of regression equations whose dependent variables are W_7 , W_9 and W_{10} , the order of absolute coefficient values is different with that for the ordinary regression coefficients. In case of the regression equations whose independent variables are W_7 and W_{10} , the standardized coefficients of the independent variables with statistical significance are high compared to those without. In the case of the two regression equations, the variables with statistical significance were substantially influential compared to those without. In the case of the regression equation whose independent variable is W_9 , the absolute coefficient value of U_2 was the highest, although its absolute ordinary coefficient value was lowest.

According to the answers presented by the group leaders, some of them stated that “the leaders and other committee members have to focus on producing and selling silk products, based on a lot of orders, so they do not have time to participate in seminars or meeting programs.” Then, it is difficult to increase the percentage of committee members in charge of the seminar and meeting participation function (W_{10}) simultaneously with the increase of other functions. This is due to the trade-off relationship between the two functions.

Table 4.2 Results of multiple regression analysis showing the relationship between percentage of committee members in charge of each function and the fundamental variables

	Coefficient ¹					R	R ²
	Constant	U ₁ : The number of group members	U ₂ : Amount of receipts	U ₃ : The number of silk product types	U ₄ : Age of the groups		
W ₆ : Percentage of committee members in charge of the pattern design function	2.733	-0.042	-0.000	0.998	0.161	0.364	0.133
t-value	0.846	-1.183	-1.112	2.280**	1.371		
W ₇ : Percentage of committee members in charge of the quality control function	15.902	0.062	0.000	-1.530	-0.143	0.465	0.216
t-value	4.960	1.776 [^]	0.597	-3.522***	-1.224		
W ₉ : Percentage of committee members in charge of the marketing function	8.603	-0.048	0.000	0.324	0.125	0.266	0.071
t-value	2.473	-1.252	1.742*	0.687	0.985		
W ₁₀ : Percentage of committee members in charge of the seminar and meeting participation function	13.381	0.126	-0.000	-0.417	-0.135	0.409	0.167
t-value	3.789	3.246***	-1.936*	-0.871	-1.046		

Source: Author's calculation based on a 2020 survey.

Notes:

- 1) ***, ** and * are significance levels at 1%, 5%, and 10%, respectively.
- 2) Coefficients in the 1st row in each cell show ordinary regression coefficients and those of the 2nd row show standardized ones.

b) The relationship between the percentage of committee members in charge of each function and the production of each silk product type

Table 4.3 showed the results of the multiple regression analysis, along with the coefficients of significance for the variables³. Based on the results, the percentage of committee members in charge of the quality control function (W₇) and marketing function (W₉) are influenced by the production of each silk product type (V₁-V₇) at a statistically significant level. The relationships are described as follows.

The percentage of committee members in charge of the quality control function (W₇) in the groups producing loincloths (V₃) is smaller compared to groups which do not

³ R² values are small. The reason is presumed as follows: W₇ and W₉ are influenced not only by the production of each silk product type but also by many other factors such as group size, technical level of silk weavers, attitudes towards quality control and marketing, and the policy embraced by the group leader, etc.

produce loincloths. The explanation for this result is that loincloths use a basic weaving method and weavers in the groups know how to weave it well.

The percentage of committee members in charge of the marketing function (W₉) is smaller in the groups producing dyed silks (V₁), sarongs (V₂), and small items (V₇) because these product types are mostly custom produced for consumers. On the other hand, the percentage of committee members in charge of the marketing function (W₉) is larger in the groups producing shawls (V₅). Since most of the groups have begun producing shawls only recently, it is important to introduce the shawls to consumers in order to increase the opportunity to sell their products. Therefore, the marketing function is important for groups producing shawls.

Table 4.3 Results of multiple regression analysis showing the relationship between percentage of committee members in charge of each function and the production of each silk product type

	Coefficient ¹								R	R ²
	Constant	V ₁ : Production of dyed silks	V ₂ : Production of sarongs	V ₃ : Production of loincloths	V ₄ : Production of scarves	V ₅ : Production of shawls	V ₆ : Production of cloths	V ₇ : Production of small items		
W ₇ : Percentage of committee members in charge of the quality control function	13.099	-0.801	-1.208	-3.777	2.357	-2.625	-3.651	1.510	0.505	0.255
t-value	8.372	-0.473	-0.618	-1.882*	0.846	-0.925	-0.818	0.551		
W ₉ : Percentage of committee members in charge of the marketing function	14.630	-3.979	-3.507	2.448	-3.819	6.769	7.193	-5.023	0.478	0.229
t-value	9.221	-2.319**	-1.769*	1.203	-1.352	2.352**	1.589	-1.806*		

Source: Author's calculation based on a 2020 survey.

Notes:

- 1) I did not include production of Mudmee (V₈) as one of the independent variables as all 60 groups produced Mudmee.
- 2) ** and * are significance levels at 5% and 10%.

c) The relationship between the designation of committee members in charge of non-specific functions and the fundamental variables

I also analyzed the relationship between the designation of committee members in charge of non-specific functions and the fundamental variables by using logistic regression analysis. The results from the binary logistic regression shown in Table 4.4 indicate that the number of group members (U_1), amount of receipts (U_2), and the number of silk product types (U_3) did not influence the designation of committee members in charge of non-specific functions (Y).

On the other hand, with an increase in the aging of the groups (U_4), the tendency to designate committee members in charge of non-specific functions increases as well. During our interview, the group leaders mentioned the following: “At the beginning stage of the groups, the distribution of functions and the administration of committee members are not very clear. After the groups have worked or have performed group activities for a few years, the group’s management developed as committee members were appointed to be responsible for clear functions and the committee members in charge of non-specific functions were authorized. So, the group activities were done faster.” Likewise, with the passing of time, the amount of group activities increased, making the committee members take on larger tasks. Therefore, the designation of committee members in charge of non-specific functions has become important in order to decrease the work load of those in charge of specific functions such as coordinating, financials, production, marketing, and seminar and meeting participation. Moreover, those in charge of non-specific functions are akin to the general group members, serving as a bridge between fellow committee members and general group members. The committee members in charge of non-specific functions are able to quickly report information concerning the group to those in charge of specific functions. Therefore, the tendency to designate committee members in charge of non-specific functions increases with the aging of the groups.

Table 4.4 Results of binary logistic regression analysis showing the relationship between the designation of committee members in charge of non-specific functions and the fundamental variables

	Coefficient ¹					Cox & Snell R Square	Percentage Correct
	Constant	U ₁ : The number of group members	U ₂ : Amount of receipts	U ₃ : The number of silk product types	U ₄ : Age of the groups		
Y: Designation of committee members in charge of non-specific functions	-1.829	0.038	-0.000	-0.133	0.146	0.176	78.33
p-value	0.274	0.179	0.339	0.547	0.029**		
Exp.(B)	0.161	1.039	1.000	0.875	1.157		

Source: Author's calculation based on a 2020 survey.

Note: 1) ** is the significance level at 5%.

d) The relationship between the number of committee members in charge of each function and the production of each silk product type

Through multiple regression analysis, I analyzed the relationship between the number of committee members in charge of each function and the production of each silk product, with the following results (Table 4.5)⁴. I have shown only the results of the regression analysis in which there are statistically significant variables. In the regression analysis, I also designated the number of group members (U₁) as an independent variable in order to absorb the effect of group scale difference as it influences the number of committee members in charge of each function.

The groups which produced dyed silks (V₁), sarongs (V₂), and small items (V₇) were characterized with a small number of committee members in charge of the marketing function (X₉) because these product types were mostly custom produced for consumers. On the other hand, the groups which produced shawls (V₅) and/or cloths (V₆) had a larger number of committee members in charge of the marketing function (X₉). This is explained by the fact that these product types are processed and fashionable, thus with a higher retail price, which in turn increases the demand for marketing and sales promotion.

The groups which produce sarongs (V₂) were characterized with a small number of committee members in charge of the seminar and meeting participation function (X₁₀).

⁴ R² values are also small. The reason is guessed as follows: X₉ and X₁₀ are influenced not only by the production of each silk product type but also by other factors such as group size, attitude towards marketing, and the policy embraced by the group leader, etc.

Most of the topics in the seminar and meeting programs do not focus on special skills related to sarong production as much as the main product types, such as Mudmee which all silk weaving groups in this study produce regularly.

Table 4.5 Results of multiple regression analysis showing the relationship between the number of committee members in charge of each function and the production of each silk product type, including the number of group members

	Coefficient ¹									R	R ²
	Constant	V ₁ : Production of dyed silks	V ₂ : Production of sarongs	V ₃ : Production of loincloths	V ₄ : Production of scarves	V ₅ : Production of shawls	V ₆ : Production of cloths	V ₇ : Production of small items	U ₁ : The number of group members		
X ₉ : The number of committee members in charge of the marketing function	2.930	-0.710	-0.994	0.743	-0.567	1.353	1.853	-1.304	-0.006	0.480	0.230
t-value	7.631	-1.881*	-2.223**	1.628	-0.912	2.115**	1.827*	-2.100**	-0.840		
X ₁₀ : The number of committee members in charge of the seminar and meeting participation function	1.965	0.120	-1.034	0.630	-0.376	0.820	1.064	-0.636	0.009	0.408	0.166
t-value	4.593	0.284	-2.075**	1.239	-0.543	1.150	0.941	-0.919	1.106		

Source: Author's calculation based on a 2020 survey.

Notes:

- 1) I did not include production of Mudmee (V₈) as one of the independent variables as all 60 groups produced Mudmee.
- 2) ** and * are significance levels at 5% and 10%.

4.2.4 Similarities among a pair of functions directed by the committee members

Next, I analyze the degree of similarity between the pair of functions (F1–F10) based on the percentage of functions directed by committee members in the silk weaving groups. Table 4.6 shows the degree of similarity between the pair of functions (F1–F10). The degree of similarity fluctuates, with values ranging from 7.50% to 70.65%. The average percentage among the 45 pairs is 27.68%. Moreover, 22 of the pairs had an above average percentage, which is bolded in Table 4.6. Then, there are many committee members taking charge of several functions. This is because of their special skills, and a shortage in committee members. As a result, there are likely many committee members having to take charge of several related functions at the same time.

In order to check whether there are any differences in the degree of similarity between the two targeted sub-group scales of U_1 – U_4 among the surveyed groups, I calculated the correlation coefficients between the average degree of similarity for the 45 pairs of functions as follows:

The correlation coefficient between the 30 largest groups measured by the number of group members (U_1) and the 30 smallest is 0.914. The correlation coefficient between the top 30 groups measured by amount of receipts (U_2) and the bottom 30 is 0.877. The correlation coefficient between the top 38 groups measured by the number of silk product types (U_3) and the bottom 22 is 0.849. The correlation coefficient between the 31 older groups measured by age of the groups (U_4) and the 29 younger ones is 0.903. I could not adopt an equal number for all of the groups for the two targeted sub-group scales as many groups exhibited the same variable values. Thus, I adopted a different number of groups for the two targeted sub-group scales in the case of the variables U_3 and U_4 . These correlation coefficients are statistically significant at the 1% level.

The high correlation coefficient values indicate that the degree of similarity between the pair of functions are not influenced by the difference in the number of group members, the amount of receipts, the number of silk product types, and the age of the groups. Therefore, the degree of similarity between the pair of functions is almost identical among the silk weaving groups.

Table 4.6 The degree of similarity between the pair of functions directed by the committee members

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	Mean
F1	—	37.61	70.56	7.50	9.17	41.67	52.47	40.69	26.86	51.79	37.59
F2	37.61	—	34.61	22.74	22.97	30.15	34.32	30.13	25.19	42.82	31.17
F3	70.56	34.61	—	15.83	12.89	35.94	42.83	34.11	27.67	45.71	35.57
F4	7.50	22.74	15.83	—	11.69	8.47	9.25	10.89	11.71	16.35	12.72
F5	9.17	22.97	12.89	11.69	—	10.32	15.92	15.99	9.56	13.10	13.51
F6	41.67	30.15	35.94	8.47	10.32	—	37.81	28.14	26.10	34.49	28.12
F7	52.47	34.32	42.83	9.25	15.92	37.81	—	34.07	23.25	43.14	32.56
F8	40.69	30.13	34.11	10.89	15.99	28.14	34.07	—	21.20	35.43	27.85
F9	26.86	25.19	27.67	11.71	9.56	26.10	23.25	21.20	—	32.61	22.68
F10	51.79	42.82	45.71	16.35	13.10	34.49	43.14	35.43	32.61	—	35.05

Source: Author's calculation based on a 2020 survey.

Next, I set four levels for the degree of similarity in order to further clarify the similarities, as shown in Figure 4.4. Most of the committee members served several different functions, and there is a tendency that the degree of similarity between F1 and F3, F1 and F7, and F1 and F10 is higher than 50%. Furthermore, the degree of similarity between F1 and other functions (F2, F3, F6, F7, F8, and F10) is relatively high, whereas they are lower with the functions F4, F5, and F9. Meaning, the group leaders could not focus only on the overall governing function but had to also be in charge of several different functions.

In the case of high relative similarity among functions, such functions are mostly related to the internal activities of silk production. However, the marketing function (F9) is focused on external activities in order to publicize and promote silk products to consumers. Therefore, there are few cases where the marketing function and internal functions are practiced by the same committee members, excluding the seminar and meeting participation function (F10). As for F10, not only the internal functions, but also the external functions such as marketing activities are treated as a subject. Thus, the relationship between F9 and F10 is also relatively strong. As for the internal functions (from F1 to F8), they may not exhibit the same strong relationships with F9. The committee members in charge of the marketing function (F9) are skillful in terms of flexibility in publicity and sales promotion using social media channels and in person connections, which translates to an intensive external interaction activities. Therefore, the percentage of similarity between F9 and the internal functions tend not to be very high.

News and information are important to improve committee functions related to both internal and external group functions. Therefore, the degree of similarity is relatively high between F10 and the other functions, excluding F4 and F5. Why F4 and F5 are the exceptions might be due to these functions being responsible for recording group information and managing the group finances, functions which hardly use the same committee members in charge of other functions. In fact, F4 and F5 have to be directed by special committee members who are young, have good eyesight, and good financial knowledge to record and manage the related information. However, the other functions such as administration, pattern design, quality control, production, and seminar and meeting participation could be relatively well-managed by the same skillful committee members. Therefore, the degree of similarity is relatively low between F4 and F5 and the other pairs of functions.

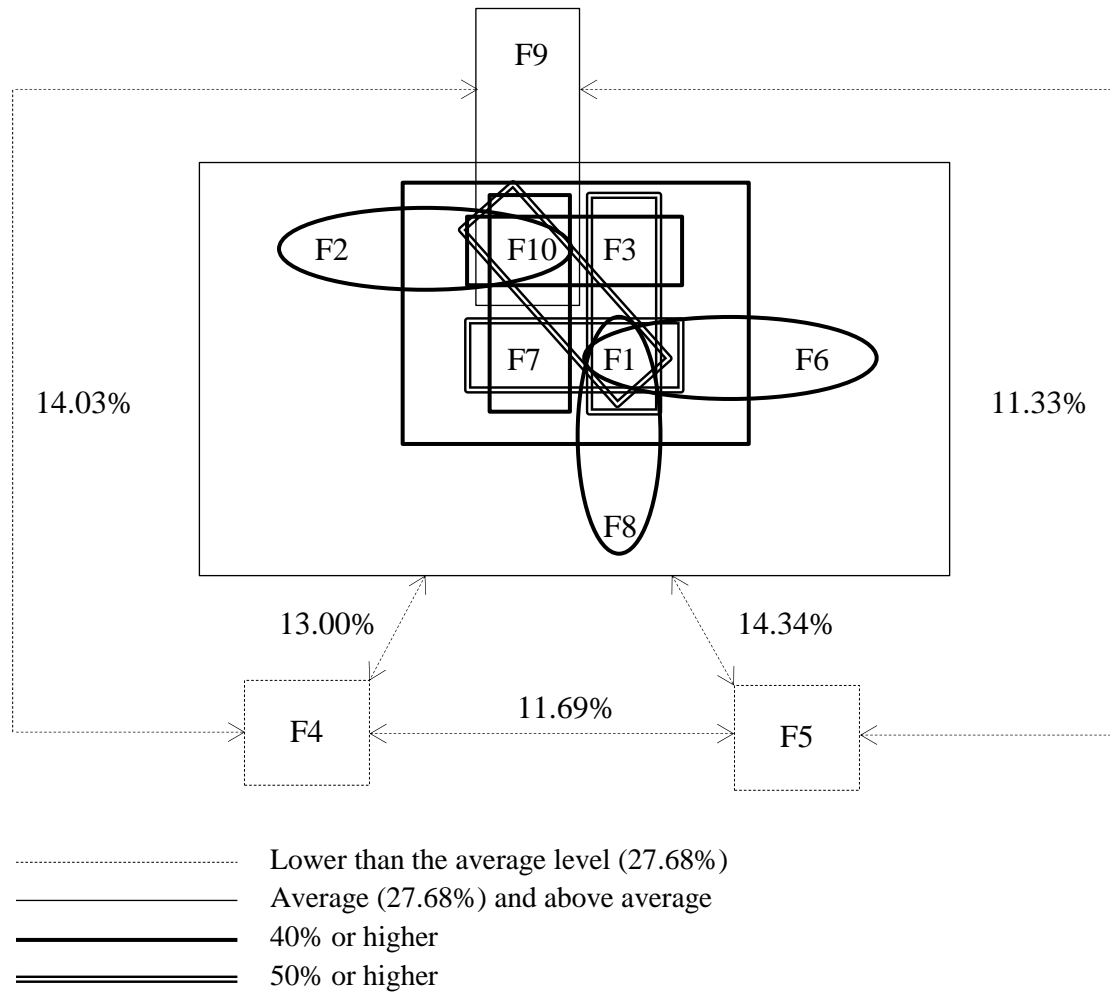


Figure 4.4 Four levels showing the degree of similarity between the pair of functions directed by the committee members

Source: Author's calculation based on a 2020 survey.

4.3 Conclusion

This study underlined the factors generating the variety and characteristics of each committee in silk weaving groups.

These factors are the number of group members, amount of receipts, the number of silk product types, age of the groups, and production or non-production of several silk product types. However, each factor only partially influences the committee characteristics, and there are no factors influencing all aspects of the committees' characteristics. For example, the number of silk product types and the production or non-production of several such types influences only the number and/or the weight of

committee members in charge of several types of functions. The aging of the groups influences only the designation of committee members with non-specific functions.

Between the variety of committee characteristics and the factors generating their variety, the following are intervening elements: 1) the possibility of quality differences among group members, 2) the necessity to develop many patterns, 3) the necessary number of group members to whom important information should be shared, 4) the degree of necessity for marketing activities (e.g. the degree of order based production, the degree of procession and fashionableness), 5) the trade-off relationship between functions where there is an increasing percentage of committee members in charge of specific functions, 6) the necessity to make committee members' responsibilities clear, and 7) the characteristics and required level of production skills and marketing activities of each silk product type.

On the other hand, it has become clear that the degree of similarity between any pair of functions varies because of differences in the relational degree between the pair of functions. There are combinations of functions that are relatively easy to be directed by the same committee members and combinations of functions for which it is difficult to do so. However, the degree of similarity is not influenced by the differences in fundamental characteristics such as the number of group members, amount of receipts, the number of silk product types, and the age of the groups.

Chapter 5

Factors creating additional income among good and excellent silk weaving groups in Northeast Thailand

The chapter is divided into three sections. The first section elaborates on the outline of the survey which includes general structure and activities of the groups, survey method, and the additional income creation, its related factors, and the regression analysis model. The second section discusses the results and discussion the factors creating the additional income including the statistical information of surveyed silk weaving groups. The last section is conclusion. Through this exploration, this discussion provides a clear understanding of analysis the important factors that affect the creation of additional income among silk weaving groups.

5.1 Outline of the survey

This section comprises of 1) survey method of the silk weaving groups and 2) additional income creation, its related factors, and the regression analysis model. The general information of the surveyed silk weaving groups and the surveyed area are explained in the previous chapter (Chapter 4).

5.1.1 Survey method of the silk weaving groups

Purposive sampling was used to select silk weaving groups that had consistently performed group activities for at least five years. All of the silk weaving groups surveyed in this study belonged to some kind of formal community group¹, as they were registered with the Agricultural Extension Office or the Community Development Department. The surveyed groups in this study were introduced by government officers from the Community Development Department, and according to an evaluation, were classified as good and excellent. Due to this classification, there is a high possibility of these groups continuing to perform their activities for many years. Consequently, the analysis

¹ There are also informal silk weaving groups in communities as they are not registered under any kind of government organization. However, the fundamental structure of the informal silk weaving groups is similar to that of the formal silk weaving groups.

concerning additional income creation is useful to these groups, as additional income creation will continue to be an area of concern in the future. The purposive sampling targeting these groups is valid as it enables the gathering of appropriate samples for the study objective.

Key informants (group leaders or group committee members) were interviewed using questionnaires. The interviewees answered several questions and evaluated change scores during the recent five years (from 2012/13 to 2016/17) for additional income creation and its related factors. More than 60 silk weaving groups were interviewed from December 2017 to January 2018. As a result, 55 groups were applicable for the analysis.

5.1.2 Additional income creation, its related factors, and the regression analysis model

Additional income creation was measured using the weavers' income change scores in silk weaving groups during the recent five years². Referring to the additional income creation change scores, a score of +10 indicates a substantial increase, a score of 0 indicates no change, and a score of -10 indicates a substantial decrease³.

In this study, I determine two types of factors creating additional income. One type relates to structural factors such as X_1 : Age of the groups, X_2 : Percentage of group members who were younger than 50 years old, X_3 : Percentage of weavers in the group, X_4 : The number of group members, and X_5 : The number of group committee members. The framework of the silk weaving groups is characterized by structural factors.

The other type concerns activity-related factors. As for these factors, I measured the change scores of group activities or activity results. Judging from the perspective of additional income creation, these factors appear to be important. Therefore, this study adopts several important activity-related factors with reference to the factors adopted from previous studies. The activity-related factors in this study are X_6 : The number of group

² Although a recent five-year change is a short-term change, stacking short-term endeavors leads to long-term development. Therefore, judging from the standpoint of the development of each silk weaving group, conducting an analysis using the five-year change score is important.

³ Several questions related to the additional income creation and its related factors were used in the interview to obtain the change scores for the recent five years from the group leader or committee members. For example, referring to the question concerning traditional knowledge transfer, the question was: "How did the transfer of traditional knowledge about silk weaving techniques change in the recent year, compared with five years ago? Please answer the integer number of change score based on a scale from -10 to +10. A score of +10 indicates a substantial increase, 0 indicates no change, and -10 indicates substantial decrease."

activities created, X_7 : Traditional knowledge transfer, X_8 : Sales activities supported by the groups, X_9 : Sharing of information on the group situation among the group members, X_{10} : Possibility of having a successor, X_{11} : The amount of group funds, and X_{12} : The number of customers. I also measured the activity-related factors' change scores during the recent five years, excluding X_6 , where I used the actual number of group activities created during the recent five years.

I subsequently analyzed the relationship between additional income creation and the two types of factors creating the additional income by applying a multiple regression analysis. I adopted an additional income creation change score as a dependent variable, and the twelve factors creating the additional income as independent variables. The activity-related factors are basically measured by change scores. However, using the change scores directly would lead to a bias of the parameters for the factors by the measurement error of the factors, as they were measured by discrete values (integer values). Therefore, to address this problem in the regression analysis, the factors X_7 , X_8 , X_9 , X_{10} , X_{11} , and X_{12} were changed to binary values based on the median value of each variable, and new dummy variables (D) were created as follows:

$$D_7 = 1 \text{ in case } X_7 \geq 0, D_7 = 0 \text{ in case } X_7 < 0$$

$$D_8 = 1 \text{ in case } X_8 \geq 7, D_8 = 0 \text{ in case } X_8 < 7$$

$$D_9 = 1 \text{ in case } X_9 \geq 8, D_9 = 0 \text{ in case } X_9 < 8$$

$$D_{10} = 1 \text{ in case } X_{10} \geq 0, D_{10} = 0 \text{ in case } X_{10} < 0$$

$$D_{11} = 1 \text{ in case } X_{11} \geq 8, D_{11} = 0 \text{ in case } X_{11} < 8$$

$$D_{12} = 1 \text{ in case } X_{12} \geq 6, D_{12} = 0 \text{ in case } X_{12} < 6$$

I used the median as a threshold for setting the value of 1 for each dummy variable, so the number of samples belonging to each category did not become very unbalanced. There is another reason for not adopting the middle point (0): X_9 cannot be adopted as a threshold, as its minimum value is 0. In this study, as I analyze the effects of factors relating to D_7 – D_{12} based only on the relative degrees of the change scores, the adoption of the threshold, other than the medium point, is not a problem.

The frequency of each category corresponding to the value (1 or 0) of dummy variables is shown as follows:

$$\begin{aligned}
 D_7 = 1 : 47, D_7 = 0 : 8 \\
 D_8 = 1 : 28, D_8 = 0 : 27 \\
 D_9 = 1 : 28, D_9 = 0 : 27 \\
 D_{10} = 1 : 49, D_{10} = 0 : 6 \\
 D_{11} = 1 : 29, D_{11} = 0 : 26 \\
 D_{12} = 1 : 28, D_{12} = 0 : 27
 \end{aligned}$$

The regression analysis on the relationship between additional income creation and factors creating the additional income is modeled as follows:

$$Y = \alpha_0 + \alpha_1 X_1 + \dots + \alpha_6 X_6 + \alpha_7 D_7 + \dots + \alpha_{12} D_{12} + \varepsilon \quad (1)$$

Where Y = the additional income creation change score during the recent five years, $X_1 - X_6$ and $D_7 - D_{12}$ = the factor creating the additional income, and ε = error term.

5.2 Results and discussion

5.2.1 Information of surveyed silk weaving groups

Table 5.1 presents the descriptive statistics of the additional income creation change score (Y) and the factors creating the additional income (X) for the 55 surveyed silk weaving groups. Concerning the other important indexes of the surveyed groups, on average, the number of silk product types is 4.3 (ranging from 1–9 types). The product types with the highest annual sales percentage was Mudmee (42.9%), followed by Dyeing (21.4%), Sarong (11.8%), Loincloth (8.7%), and Shawl (7.3%). Furthermore, the average net income of a group weaver per year is 633 US dollars (ranging from 147–1,759 US dollars)⁴.

⁴ 1 US dollar was 34.11 Thai baht in 2017.

Table 5.1 Descriptive statistics of the additional income creation change score and the factors creating the additional income

Variables	Max.	Min.	Mean	Median	S.D.	N
Y: Additional income creation change score	10	-8	6.4	8	3.9	55
X ₁ : Age of the groups (years)	42	5	15.8	15	7.3	55
X ₂ : Percentage of group members who were younger than 50 years old	76.2	0.0	28.7	24	19.5	55
X ₃ : Percentage of weavers in the group	100.0	10.7	55.0	40	33.0	55
X ₄ : The number of group members	106	10	34.6	28	23.4	55
X ₅ : The number of group committee members	15	4	8.6	9	3.7	55
X ₆ : The number of group activities created	6	1	3.1	3	1.3	55
X ₇ : Traditional knowledge transfer	10	-10	2.3	0	5.3	55
X ₈ : Sales activities supported by the groups	10	-8	5.2	7	4.7	55
X ₉ : Sharing of information on the group situation among the group members	10	0	6.2	8	3.9	55
X ₁₀ : Possibility of having a successor	10	-8	2.7	0	4.9	55
X ₁₁ : The amount of group funds	10	-7	6.7	8	3.6	55
X ₁₂ : The number of customers	10	-5	5.6	6	3.6	55

Source: Author's calculation based on a 2017 survey

Note: 1) Y and X₇-X₁₂ were measured by the change scores during the recent five years.

5.2.2 Factors creating the additional income

The results of the multiple regression analysis based on equation (1) are shown in Table 5.2. The number of samples is 55. The R² value of the regression equation is 0.411. This analysis indicates that the significant independent variables are X₂, D₇, and D₈.

From the perspective of additional income creation, the percentage of group members who were younger than 50 years old (X₂) is a fundamental structural factor of the groups. A higher percentage of group members who are younger than 50 years old positively contribute to additional income creation. Such members are often active and determined to earn more income, compared with older group members. Therefore, the parameter of X₂ showed a positive sign, even though the significance level was 10%.

As expected, traditional knowledge transfer (D₇) is a fundamental and indispensable function. A high change score for this activity in the groups may assist in the improvement of additional income creation, as traditional knowledge is useful in producing silk products. Therefore, the parameter of D₇ showed a positive sign at a 5% significance level.

The parameter of sales activities supported by the groups (D₈) also showed a positive sign at a 1% significance level. Improving the sales activities supported by the groups is important in terms of increasing the sales volume for the silk weavers in the

groups, thereby helping the weavers earn much more additional income. It can therefore be seen that the groups with higher change scores realized higher degrees of additional income creation.

As for the statistically non-significant independent variables, they could not show statistical significance because the number of samples was insufficient.

Table 5.2 Results of the regression analysis on the factors creating additional income

Independent variables	Dependent variable		r between Y and each of the independent variables
	Y: Additional income creation change score		
	Coefficient	t-value	
Constant (a_0)	1.939	0.725	–
X ₁ : Age of the groups	–0.063	–0.795	–0.124
X ₂ : Percentage of group members who were younger than 50 years old	0.051	1.764*	0.185
X ₃ : Percentage of weavers in the group	–0.021	–1.104	0.008
X ₄ : The number of group members	–0.022	–0.749	0.016
X ₅ : The number of group committee members	0.063	0.391	0.167
X ₆ : The number of group activities created	–0.162	–0.375	0.254*
D ₇ : Traditional knowledge transfer	3.719	2.596**	0.358***
D ₈ : Sales activities supported by the groups	3.357	2.938***	0.430***
D ₉ : Sharing of information on the group situation among the group members	–1.188	–1.016	0.233*
D ₁₀ : Possibility of having a successor	0.258	0.153	0.063
D ₁₁ : The amount of group funds	0.566	0.528	0.183
D ₁₂ : The number of customers	1.955	1.658	0.280**

Source: Author's calculation based on a 2017 survey

Note: 1) ***, ** and * are significant at 1%, 5%, and 10%, respectively.

5.3 Conclusion

The results of multiple regression analysis showed that the percentage of group members who were younger than 50 years old, traditional knowledge transfer, and sales activities supported by the groups were important factors that affect additional income creation. Therefore, it can be stated that the measures described below could have a significant effect on additional income creation.

First, it is important for silk weaving groups to endeavor to increase the percentage of younger members. This can be done by promoting the training of young people who are

not group members in silk weaving techniques, as this training will also help in the recruitment of new weavers.

Second, the activation of traditional knowledge transfer should be practiced by increasing opportunities for skillful members of silk weaving groups to teach younger members to enable them to become masters in producing silk products. Third, the activation of sales activities should be practiced by improving the functions of marketers within the groups, as they are responsible for sales and for promoting sales activities.

Concerning the structural factors, I obtained and used data reflecting the present situation. However, as additional income creation is influenced by past situations, originally past data should be adopted. In that sense, there remains a limitation to this study.

Chapter 6

Conclusion

This chapter describes main findings of the study, relationships among three Chapters, and its implications. The main objective of this study is to analyze conditions for a group's continuance, management and income improvement of silk weaving groups in Northeast Thailand. The data used in this study is collected from group leaders or committee members of silk weaving groups in Khon Kaen province in several field surveys from 2016 to 2020.

6.1 Conclusions

The main findings are further divided into three sections as the following.

6.1.1 Conditions for continual operations and activities of silk weaving groups in Northeast Thailand

The study analyzed the conditions for improvement of silk weaving groups by clarifying factors contributing to the continuance of silk weaving groups based on four business functions. According to the results of the study, the factors contributing to the continuance of silk weaving groups based on the four business functions have become clear excluding organizational function. As for the results of the study could not find the differences in factors of organizational function contributing to the continuance of silk weaving groups, therefore the other three functions will be explained below.

From the perspective of production function, the popularity of the continual groups, the products' quality, and the high price of silk products including several ways to support weavers (e.g. loan, materials, hiring, and funds) contribute to a groups' continuance. According to the price of silk fabric such as Mudmee, the continual groups could sell it with higher price than the discontinued groups; it might because the popularity of the continual groups and the quality of the products is controlled well. This led to a low ability of the discontinued groups to increase income for re-production in the next cycle and be one of the reasons to discontinue the groups. The results also showed that the number of the production management patterns is one of the important factors to keeping a groups' continuance. The continual groups provided various ways to supports the weavers such as loan, materials, hire, and funds. Moreover, the continual groups had sufficient funds to

purchase silk fabrics from weavers, it implied that the weavers can sell their products to the groups directly and get paid quickly. However, in the case of the discontinued groups, the groups provided only the method of consigned products for the weavers. This means that the weavers have to wait until the products could sell before receiving funds and get back the ones that could not sell out. Therefore, if the silk weaving groups have various production management patterns to support their weavers, it will contribute to re-production in the next production' cycle and lead to the continuance of silk weaving groups. Thus, it can be concluded that the differences in factors of production function contribute to the continuance of silk weaving groups.

From the perspective of marketing function, the various places and ways of the sale contribute to stable receipts which drive the groups keep continuing operations and activities. The continual groups mostly have various ways to sell their products, while the discontinued groups mostly sold their products to walk-in consumers inside the village. Likewise, many ways to sell products result in liquidities of weavers' income and group funds in order to support re-production which contributes to a groups' continuance. The continual groups had more ways to sell their products than the discontinued groups, while the discontinued groups did not sell products through their groups; this leads to lacking of liquidity of group funds cycle for weavers to re-production. Thus, it can be concluded that the differences in factors of marketing function contribute to the continuance of silk weaving groups.

From the perspective of financial function, obtaining subsidies from several organizations such as government and NGOs, several ways to collect group funds, financial strategies of the groups i.e. the groups purchased silk products from weavers by cash, and keeping some amount of profit after selling silk products into group funds, contribute to enrich the group fund and drive the re-investment and re-production in the next cycle. The continual groups obtained financial supports from various organizations, while the discontinued groups obtained the support from only two organizations. Therefore, subsidies receiving from organizations are very important for a groups' continuance.

According to the composition of group funding, several ways to collect group funds result in driving the re-investment and re-production activities in the groups. The continual groups collected group funds with many ways, while the two discontinued groups had not. Thus, the adoption of several ways to collect the group funds is one of the reasons to keep the continuance of group activities. About the financial strategies of the groups, the various financial strategies, especially the purchase of silk products from

weavers by cash, contribute to enrich weavers' income and groups' funds. As the continual groups had more liquidity of group funds and the ways of financial strategies than the discontinued groups. Concerning the management of group income which related to the ways to create group funds, especially keeping some amount of profit after selling silk products as group funds, bring about the groups' continuance. On the other hand, dividing the rest of the profits after the sale of silk products to weavers leads to a low creation of the groups' funds. The groups' profits after the sale of silk products will be used for marketing activities such as sellers' wage (sellers are group members/committee members/leaders), transportation costs and kept some of the profits into group funds. Therefore, it is important for the groups to receive a certain amount of profit in order to keep the groups' continuance. In the cases of the discontinued groups, they almost did not keep some of profit after selling silk products into the group funds. Based on the above mention, the groups which kept some profit after the sale of silk products are easy to continue. The groups should keep some amount of profit and should not distribute an excessive payment of the profit for weavers in order to continue operations and activities of the groups for long years. Thus, keeping some amount of profit after the sale of silk products into groups' funds is one way to driving the groups' continuance. It can be concluded that the differences in factors of financial function contribute to the continuance of silk weaving groups.

Above mentioned, subsidies from organizations are very important for the group continuance. However, the dependence only for subsidies is not good for the continuance of the groups. In fact, in case of the discontinued groups, it was a main objective for the establishment of silk weaving groups to receive support from government organizations and NGOs. Therefore, it is guessed that the tendency of the discontinued groups expect subsidies from organizations as a main objective at the establishment stage is also related to the groups' continuance.

By the way, the number of surveyed samples was not much and various. The study results might be insufficient to answer the reasons to keep continuing the overall silk weaving groups in Northeast Thailand well. However, at least, the study could find out important reasons to keep the continuance of the surveyed silk weaving groups in order to enhance further research in future.

6.1.2 Committee characteristics of silk weaving groups and the factors generating their variety in Northeast Thailand

This study underlined the factors generating the variety and characteristics of each committee in silk weaving groups.

These factors are the number of group members, amount of receipts, the number of silk product types, age of the groups, and production or non-production of several silk product types. However, each factor only partially influences the committee characteristics, and there are no factors influencing all aspects of the committees' characteristics. For example, the number of silk product types and the production or non-production of several such types influences only the number and/or the weight of committee members in charge of several types of functions. The aging of the groups influences only the designation of committee members with non-specific functions.

Between the variety of committee characteristics and the factors generating their variety, the following are intervening elements: 1) the possibility of quality differences among group members, 2) the necessity to develop many patterns, 3) the necessary number of group members to whom important information should be shared, 4) the degree of necessity for marketing activities (e.g. the degree of order based production, the degree of procession and fashionableness), 5) the trade-off relationship between functions where there is an increasing percentage of committee members in charge of specific functions, 6) the necessity to make committee members' responsibilities clear, and 7) the characteristics and required level of production skills and marketing activities of each silk product type.

On the other hand, it has become clear that the degree of similarity between any pair of functions varies because of differences in the relational degree between the pair of functions. There are combinations of functions that are relatively easy to be directed by the same committee members and combinations of functions for which it is difficult to do so. However, the degree of similarity is not influenced by the differences in fundamental characteristics such as the number of group members, amount of receipts, the number of silk product types, and the age of the groups.

6.1.3 Factors creating additional income among good and excellent silk weaving groups in Northeast Thailand

The results of multiple regression analysis to find out factors creating additional income showed that the percentage of group members who were younger than 50 years old, traditional knowledge transfer, and sales activities supported by the groups were

important factors that affect additional income creation. Therefore, it can be stated that the measures described below could have a significant effect on additional income creation.

First, it is important for silk weaving groups to endeavor to increase the percentage of younger members. This can be done by promoting the training of young people who are not group members in silk weaving techniques, as this training will also help in the recruitment of new weavers. Second, the activation of traditional knowledge transfer should be practiced by increasing opportunities for skillful members of silk weaving groups to teach younger members to enable them to become masters in producing silk products. Third, the activation of sales activities should be practiced by improving the functions of marketers within the groups, as they are responsible for the sales and for promoting sales activities. Thus, it can be concluded that the percentage of group members who were younger than 50 years old, traditional knowledge transfer, and sales activities supported by the groups have significant influences to the additional income creation.

Concerning the structural factors, I obtained and used data reflecting the present situation. However, as additional income creation is influenced by past situations, originally past data should be adopted. In that sense, there remains a limitation to this study.

However, all findings in this study clarify the conditions for the group continuance, management, and income improvement of silk weaving groups in Khon Kaen province, Northeast Thailand. The number of the respondents might insufficient to provide overview of the establishment of conditions for the group continuance, management, and income improvement of silk weaving groups in macro perspective. At least, the study could find out important factors to keep the continuance of the surveyed silk weaving groups, the management in committee members, and the income improvement. As for, the determinants found out from this study were derived from only the surveyed respondents, therefore finding other factors effecting to improvement in groups' operations and activities are needed for further study. In addition, future research can also undertake a comparative study of different types of businesses in Khon Kaen province or other provinces which are different types of groups to find out the reasons to make the similarity or differences in the factors for other kinds of groups or businesses.

6.2 Relationships among the conditions for continual operations and activities of silk weaving groups, committee characteristics, and income improvement

The conditions for continual operations and activities of silk weaving groups in Chapter 3 are related to committee characteristics, as the committee members take an important role to manage the groups. For example, in the case that the groups could set a higher price of silk products which result from controlling the products' quality well, the groups can consider to designate committee members who are skillful to control the products' quality. Also, having various places and ways of sales are related to marketing activities which managed by committee members (marketers). The skillful committee members could help with the good management and outcome of silk weaving groups. Therefore, adjustment and balance of the number and percentage of committee members in charge of the quality control function and marketing function is important to keep the groups' continuance.

Judging from the stand point of income improvement, conditions for continual operations and activities such as a high price, products' quality, various places and ways of sales, and obtaining subsidies and keeping some profit into group funds are important factors. For instance, good quality of silk products could be sold with high price which help with increase in weavers' income and group funds. Furthermore, Having various places and ways of sales would increase an opportunity to sell silk's products and stable receipts. Obtaining subsidies and keeping some profit into group funds also could drive re-production cycle and help with an increase in income level of weavers and group funds.

Moreover, committee characteristics are also related to income improvement. If there is a large number or percentage of committee members with their good skills and clear responsibility in charge of each function, the possibility to manage the groups would be great, which lead to receive the excellent outcome (income) of the groups. This would assist the income improvement for silk weaving groups. Therefore, all of these three Chapters are related to each other and useful for the further development of silk weaving groups in Thailand.

6.3 Implications of the study

1) The activation of the popularity of silk weaving groups by controlling products' quality and beautiful products' patterns would assist the groups to set the high price of silk products.

2) Having several ways to support groups' weavers (e.g. loan, materials, hiring, and funds) should be emphasized to increase weavers' income which is useful for re-production in the next cycle.

3) The various places and ways of the sale would be helpful for sales alternative and stable receipts which drive the groups keep continuing operations and activities.

4) Obtaining subsidies from several organizations such as government and NGOs is essential to drive the re-investment and re-production in the next cycle.

5) Having several ways to collect group funds is important to driving the re-investment and re-production activities in the groups.

6) The various financial strategies, especially the purchase of silk products from weavers by cash, could enrich weavers' income and groups' funds.

7) Keeping some amount of profit after selling silk products as group funds, should be practiced to activate the groups' operation and its continuance.

8) It is important for silk weaving groups to make committee members' responsibilities clear.

9) It is important for silk weaving groups to endeavor to increase the percentage of younger members. This can be done by promoting the training of young people who are not group members in silk weaving techniques, as this training will also help in the recruitment of new weavers.

10) The activation of traditional knowledge transfer should be practiced by increasing opportunities for skillful members of silk weaving groups to teach younger members to enable them to become masters in producing silk products.

11) The activation of sales activities should be practiced by improving the functions of marketers within the groups, as they are responsible for the sales and for promoting sales activities.

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Appendix

Questionnaires

Questionnaires for Chapter 3

Survey questionnaire titled

Background and characteristics of Community-Based Enterprises (CBEs)
A Case Study on Silk Weaving Groups in Khon Kaen Province, Northeast Thailand

The questionnaire consists of five parts as followed;

Part 1 General information of silk weaving group

Part 2 Organizational management of silk weaving group

Part 3 Objective achievement of silk weaving group

Part 4 Supported organizations of silk weaving group

Part 5 Problem, requirement and other questions of silk weaving group

Date of interview: / August / 2016 Interview Time: ~

The priorities of selected group; only mark two choices please continue interview

1) Form as a group ≥ 3 years (ก่อตั้งเป็นกลุ่มไม่ต่ำกว่า 3 ปี)

2) Active ≥ 3 years (produce and sell products ผลิตและขายสินค้า ไม่ต่ำกว่า 3 ปี)

2) Registered as community enterprise (CBE) before 2016 and/or extend until present

ลงทะเบียนวิสาหกิจชุมชน ก่อนปี 2016 และต่อทะเบียนมาจนถึงปัจจุบัน; Being CBE since เป็นวิสาหกิจตั้งแต่ปี

Besides register CE, does your group being as follow? (can select more than one choice)

กลุ่มประเภทอื่นๆ

1) Women group กลุ่มสตรี/แม่บ้าน

2) OTOP สินค้าหนึ่งตำบลหนึ่งผลิตภัณฑ์

3) Cooperative สหกรณ์

4) Khon Kaen Silk Cluster เครือข่ายอุตสาหกรรมหม่อนไหม

ขอนแก่น

Respondent's name:

Telephone number:

House No., Village No....., Sub-district*....., Chonnabot district, Khon Kaen province

Group's name

***Sub-districts:**

1= Por Daeng ปอแดง

4= Huai Khae ห้วยแก

7= Chonnabot ชนบท

2= Sri Boon Rueng ศรีบุญเรือง

5= Kud Pia Khom กุดเพียงหอม

8= Wang Saeng วังแสง

3= Ban Taen บ้านแท่น

6= Non Pa Yom โนนพะยอม

Part 1 General information of silk weaving group

1.1 Information of group leader	
1. Age: years old	
2. Gender	<input type="checkbox"/> 1) Female <input type="checkbox"/> 2) Male
3. Education*	<input type="checkbox"/> 0) No education <input type="checkbox"/> 1) Non formal education (level) <input type="checkbox"/> 2) Elementary school <input type="checkbox"/> 3) Junior high school <input type="checkbox"/> 4) Senior high school <input type="checkbox"/> 5) University <input type="checkbox"/> 6) Others (specify)
4.1 Main job	<input type="checkbox"/> 1) Sericulture <input type="checkbox"/> 2) Producing silk products <input type="checkbox"/> 3) 1) and 2) <input type="checkbox"/> 4) Farmer <input type="checkbox"/> 5) General employee <input type="checkbox"/> 6) Government officer (specify) <input type="checkbox"/> 7) Own business (specify) <input type="checkbox"/> 8) Others (specify)
4.2 Secondary job	<input type="checkbox"/> 0) No secondary job <input type="checkbox"/> 1) Sericulture <input type="checkbox"/> 2) Producing silk products <input type="checkbox"/> 3) 1) and 2) <input type="checkbox"/> 4) Farmer <input type="checkbox"/> 5) General employee <input type="checkbox"/> 6) Government officer (specify)..... <input type="checkbox"/> 7) Own business (specify) <input type="checkbox"/> 8) Others (specify)
5. Does group leader have own business relating to silk products? ท่าน(ประธานกลุ่ม) มีธุรกิจส่วนตัวที่เกี่ยวข้องกับการค้าขายผ้าไหมหรือไม่ <input type="checkbox"/> 0) No <input type="checkbox"/> 1) Yes If answer “yes” please answer below, if “No” please skip to the next questions When did you have a business? (before or after forming group) มีธุรกิจก่อนหรือหลังก่อตั้งกลุ่มทอผ้าไหม <input type="checkbox"/> 1) Before having group <input type="checkbox"/> 2) After having group How do you think silk weaving group contribute to your (silk) products selling? (have or not have) กลุ่มทอผ้าไหมมีผลต่อการค้าขายผ้าไหมของธุรกิจท่านอย่างไร (มีผลหรือไม่มีผล)	

Part 1 General information of silk weaving group (continued)

1.2 Information of group
1. When did silk weaving group establish? ปีที่ก่อตั้งกลุ่ม
2. How many kilometers do your group far from Chonnabot city? ระยะทางจากกลุ่มถึงในตัวเมืองKm.

3. Number of group's members (people) จำนวนสมาชิกในปีที่ก่อตั้งและปัจจุบัน		
	Established year	Present
Number of total group's members จำนวนสมาชิกในกลุ่ม		
Number of weavers จำนวนคนทอ		

4. What kind of product certifications did your group receive?			
	Which highest level? ระดับสูงสุด	Which product? ส่งประกวดประเภทอะไร	When did you get highest level? ปีที่ได้รับรางวัลระดับสูงสุด
<input type="checkbox"/> 1) Stars award ระดับดาวของ OTOP			
<input type="checkbox"/> 2) Thai silk award ตรานกยูง			

***Quality certifications:**

- Levels of stars (One Tambon One Product (OTOP) 1 - 5 stars); 5 stars are the highest standard
- Types of Thai silk; 4= Royal Thai Silk (Gold), 3= Classic Thai Silk (Silver), 2= Thai Silk (Blue), and 1= Thai Silk Blend (Green)

Note:
-The number of households that related with silk weaving in village
-The number of households that does sericulture and/or weaving in village
-The first year that your group got certificate
-Which level? Which product's type?

1.2 Information of group (continued)

5. How much percentage did your group produce and buy from others? (last year) สัดส่วนของสินค้าที่กลุ่มผลิตได้เอง และสินค้าที่กลุ่มรวบรวมหรือซื้อจากที่อื่น

1) Produced by group% 2) Gathered or bought from others using group budget% (who/where?)

6. What types of products did your group produce last year? ประเภทสินค้าที่กลุ่มผลิตปีที่แล้ว

Types of group's products ชนิดสินค้าที่กลุ่มผลิตและขายรอบปีที่แล้ว	Size of products (specify unit afterward)	Total production สินค้าที่ผลิตได้ทั้งหมด (Unit.....)	Selling price ราคาขายต่อหน่วย (Baht/unit)	Cost of each product ราคาค่าต้นทุนต่อหน่วย (Baht/ unit)	Surplus keeping in group ส่วนต่างที่หักเข้า กลุ่ม (Bath/.....)
<input type="checkbox"/> 1) Thread (เส้นไหม) <input type="checkbox"/> 1.1 Weft thread (ไหมพุ่ง) <input type="checkbox"/> 1.2 Warp thread (ไหมยืน)
<input type="checkbox"/> 2) Mudmee (มัดหมี่)
<input type="checkbox"/> 3) Dyed silk (ผ้าพื้น/ผ้าข้อมลิ)
<input type="checkbox"/> 4) Sarong (โสร่ง)
<input type="checkbox"/> 5) Loincloth (ผ้าขาวม้า)
<input type="checkbox"/> 6) Scarf (ผ้าพันคอ)
<input type="checkbox"/> 7) Shawl (ผ้าคลุมไหล่)

1.2 Information of group (continued)

Types of group's products ชนิดสินค้าที่กลุ่มผลิตและขายรอบปีที่แล้ว	Size of products (specify unit afterward)	Total production สินค้าที่ผลิตได้ทั้งหมด (Unit.....)	Selling price ราคาขายต่อหน่วย (Baht/unit)	Cost of each product ราคาต้นทุนต่อหน่วย (Baht/ unit)	Surplus keeping in group ส่วนต่างที่หักเข้ากลุ่ม (Bath/.....)
<input type="checkbox"/> 8) Cloth (เสื้อผ้า)					
<input type="checkbox"/> 8.1 Men cloth (เสื้อผ้าผู้ชาย)
<input type="checkbox"/> 8.2 Women cloth (เสื้อผ้าผู้หญิง)
<input type="checkbox"/> 9) Other (specify)
Total

Note:

-Did your group remain the products (in stock)?

-How long did your group can sell the remained products?

-Last year did a group buy or others ask your group to sell the products on behalf of your group?

ปีที่แล้วกลุ่มได้รับฝากขายหรือซื้อสินค้าจากเครือข่าย (กลุ่มอื่น/คนอื่น) แล้วนำมาขายในนามของกลุ่มหรือไม่

-Did your group keep the surplus of buying and selling prices as a group income?

กลุ่มหักเงินส่วนต่างจากการขายสินค้าจากการฝากขายหรือซื้อจากกลุ่มเครือข่ายเข้ากลุ่มหรือไม่

-How much percentage did your group keep as group income คิดเป็นสัดส่วนเป็นเท่าใด

Part 2 Organizational management of silk weaving group

2.1 What kind of thread did your group buy or produce? How much volume and value of that threads? เส้นไหมประเภทไหนที่กลุ่มซื้อหรือผลิตเอง จำนวนและมูลค่าของเส้นไหม

1) Weft that you produced ผลิตเส้นไหมพุ่งเอง; Produced ผลิตเอง%

Volume unit : value Baht

2) Weft that you bought ซื้อเส้นไหมพุ่ง; Bought ซื้อ%

Bought from where? ซื้อเส้นพุ่งที่ไหน.....

Volume unit : value Baht

What were the constraints affecting thread production?

อะไรคือข้อจำกัดของการผลิตเส้นไหมพุ่งของกลุ่ม

.....
.....
.....

3) Warp that you produced ผลิตเส้นไหมยืนเอง; Produced ผลิตเอง%

Volume unit : value Baht

4) Warp that you bought ซื้อเส้นไหมยืน; Bought ซื้อ%

Bought from where? ซื้อเส้นยืนที่ไหน.....

Volume unit : value Baht

What were the constraints affecting thread production?

อะไรคือข้อจำกัดที่ทำให้กลุ่มผลิตเส้นไหมยืนไม่ได้

.....
.....
.....

Note:

Part 2 Organizational management of silk weaving group (continued)

3. How did your group collect the products and keep as group income (can answer more than one choice) กลุ่มมีรูปแบบการรวบรวม, ขาย และหักกำไรหลังการขายสินค้าเข้ากลุ่มอย่างไร	Percentage? (100%)
<input type="checkbox"/> 1) Group bought members' products after the group sold these products, they kept the surplus as the group profit กลุ่มซื้อผ้าไหมเงินสดจากสมาชิก	
<input type="checkbox"/> 2) Group gathered members' products, after selling the group returned money to members then kept the surplus as the group profit กลุ่มให้เงินสมาชิกหลังจากขายสินค้าได้	
<input type="checkbox"/> 3) Individual selling; members sold their products by themselves and also collected the money (after they sold their products) in group สมาชิกขายเองแล้วหักเงินบางส่วนเข้ากลุ่ม Where did they sell?	
<input type="checkbox"/> 4) Individual sale; members sold their products by themselves สมาชิกผลิตเองขายเอง เป็นรายได้ส่วนตัวที่ไม่ได้หักเข้ากลุ่ม Where did they sell?	

Note:

Part 2 Organizational management of silk weaving group (continued)

2.2 Marketing places (can answer more than one choice)			
กลุ่มขายสินค้าที่ไหน ขายอย่างไร สินค้าประเภทอะไร			
Marketing places Who buys your products?	Where? (Specific places)	How did customers get your products?	Which products?
<input type="checkbox"/> 1) Queen royal shame โครงการหลวง/สวนจิตรลดา			
<input type="checkbox"/> 2) Inside village/group ในหมู่บ้าน/ที่กลุ่มตัวเอง			
<input type="checkbox"/> 3) Nearby areas พื้นที่ใกล้เคียงในตัวจังหวัด			
<input type="checkbox"/> 4) Other provinces จังหวัดอื่นๆ			
<input type="checkbox"/> 5) OTOP, boosts or events ขายในงานต่างๆ หรือตาม OTOP			
<input type="checkbox"/> 6) Own shop of leader ธุรกิจส่วนตัวของประธาน			
<input type="checkbox"/> 7) Others (specify)			

Note:

Part 2 Organizational management of silk weaving group (continued)

2.3 How did your group select the leader? กลุ่มมีวิธีการเลือกประธานอย่างไร

.....

.....

In which order were you taken a position of leader? เป็นประธานคนที่เท่าไร

.....

How many years to take a position of leader? ประธานมีวาระการดำรงตำแหน่งกี่ปี

.....

2.4 Patterns of decision making;

2.4.1 How does your group make a decision?

1) Gather opinions, make decision and agreement together ตัดสินใจร่วมกัน

How does your group gather opinions and make the decision together?

รวบรวมความคิดเห็นและตัดสินใจอย่างไร

.....

.....

2) Other ways (specify)

.....

.....

2.4.2 How often does your group meeting? กลุ่มประชุมบ่อยเท่าใดtime(s)/year

.....

What topics does your group discuss? หัวข้อหรือเนื้อหาที่กลุ่มประชุมกันมีอะไรบ้าง

.....

.....

2.5 What are the roles of committees and members relating group activities?

บทบาทหน้าที่ของคณะกรรมการและสมาชิกในกลุ่มมีอะไรบ้าง

.....

.....

.....

Part 2 Organizational management of silk weaving group (continued)

2.6 How much is group fund? จำนวนเงินทุนกลุ่มBaht
How does your group accumulate group fund? มีการระดมเงินทุนภายในกลุ่มอย่างไร
How does your group use or allocate this group fund? กลุ่มใช้เงินทุนอย่างไร/ใช้ทำอะไรบ้าง

2.7 What kind of systems does your group have? ประเภทของการระดมเงินทุนในกลุ่ม
<input type="checkbox"/> 2.7.1 Saving system การออมทรัพย์ในกลุ่ม
Does your group based on saving group when establishment? เป็นกลุ่มออมทรัพย์ก่อนตั้งกลุ่มทอผ้าไหมหรือไม่
<input type="checkbox"/> 0) No <input type="checkbox"/> 1) Yes
Describe the reasons why your group based on saving group when establishment. อธิบายเหตุผล
.....
.....
What are the purposes? วัตถุประสงค์ที่มีการออมทรัพย์ในกลุ่ม (ใช้เงินออมทรัพย์ทำอะไรบ้าง)
.....
.....
How did your group implement? (มีวิธีการระดมทุนออมทรัพย์อย่างไร)
.....
.....
How often did your group accumulate? ออมบ่อยเท่าใด time/month
.....
How much?baht/time/person ออมคนละเท่าไรต่อเดือน
.....

Part 2 Organizational management of silk weaving group (continued)

2.7.2 Share system การระดมหุ้นกลุ่ม

What are the purposes? วัตถุประสงค์ที่มีการระดมหุ้นในกลุ่มคืออะไร (ใช้เงินหุ้นทำอะไรบ้าง)

.....
.....
.....

How do your group implement? (กลุ่มมีวิธีการระดมหุ้นอย่างไร)

.....
.....
.....

2.7.3 Loan system การกู้ยืมเงินผ่านกลุ่ม

What is the purpose? วัตถุประสงค์ที่มีการให้สมาชิกกู้ยืมเงินในกลุ่มคืออะไร (ให้กู้ยืมเพื่อทำอะไรบ้าง)

.....
.....
.....

How did your group implement? (มีวิธีการให้สมาชิกกู้ยืมอย่างไร)

.....
.....
.....

Note:

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

Part 2 Organizational management of silk weaving group (continued)

2.8 Debt, profit and loss statement of group (or ask balance sheet) หนี้สิน และกำไรของกลุ่ม

2.8.1 Does your group have **debt**? 0) No 1) Yes
 If answer “Yes” how much?Baht
 Where? When?

2.8.2 Does your group have **profit**? 0) No 1) Yes
 (fill out the detail in table 2.8.2-A)
 If answer “Yes” how much? Baht

2.8.2-A Profit allocation การจัดสรรกำไรของกลุ่ม	Percentage
1. Member dividend เงินปันผลกลุ่ม	
2. Manager allowance ค่าตอบแทนคณะกรรมการ	
3. Group fund เงินทุนกลุ่ม	
4. Implementing expense ค่าดำเนินงานกลุ่ม/ค่าใช้จ่ายอื่นๆ ภายในกลุ่ม	
5. Member welfareสวัสดิการสมาชิก	
6. Community welfare สวัสดิการชุมชน/สาธารณประโยชน์	
7. Other (specify).....	
Total profit last year	100%

Note:

- Duration of dividend distribution ช่วงเดือนที่ปันผล
- History of group debt ประวัติการกู้ยืมเงินของกลุ่ม

Part 3 Objective achievement of silk weaving group การบรรลุวัตถุประสงค์ของกลุ่ม

3.1 What are your group's objectives วัตถุประสงค์ของกลุ่มมีอะไรบ้าง	Level of achievement กลุ่มบรรลุระดับไหน				Remarks/reasons ตัวอย่าง/เหตุผล
	3	2	1	0	
<input type="checkbox"/> 1					
<input type="checkbox"/> 2					
<input type="checkbox"/> 3					
<input type="checkbox"/> 4					
<input type="checkbox"/> 5					
3.2 Which level of your group implementation is successful? การดำเนินงานของกลุ่มประสบความสำเร็จระดับไหน					

* Levels of objective achievement: 3= good, 2= moderate, 1= low, 0 = not achieve

Note:

What makes your group can be successful or can continue the implementation until present? อะไรเป็นสิ่งสำคัญที่ทำให้กลุ่มของท่านประสบผลสำเร็จ และดำเนินงานมาได้ถึงทุกวันนี้

Part 4 Support of silk weaving group

4.1 Supported organizations since established year (can answer more than one choice)	What did they support? When? สนับสนุนอะไร เมื่อไร (Budget งบประมาณที่เป็นเงินสด /Materials วัสดุดิบ-อุปกรณ์-โรงเรือน/Training ความรู้ /PR ประชาสัมพันธ์-ประสานงาน)
<input type="checkbox"/> 1) Office of Chonnabot district Community Development (พัฒนาชุมชน อำเภอชนบท)	
<input type="checkbox"/> 2) Office of Chonnabot district Agricultural Extension (สำนักงานเกษตรอำเภอชนบท)	
<input type="checkbox"/> 3) Khon Kaen Industrial Extension Center (ศูนย์อุตสาหกรรมขอนแก่น ภาคที่ 5)	
<input type="checkbox"/> 4) Office for Agriculture and Cooperatives Khon Kaen(สหกรณ์การเกษตรขอนแก่น)	
<input type="checkbox"/> 5) Queen Sirikit Sericulture Center (Khon Kaen) (ศูนย์หม่อนไหมเฉลิมพระเกียรติ)	
<input type="checkbox"/> 6) Office of Commercial Affairs Khon Kaen (สำนักงานพาณิชย์ขอนแก่น)	
<input type="checkbox"/> 7) Sub-district Administrative Organization (SAO) (อบต)	

4.1 Supported organizations since established year (can answer more than one choice)	What did they support? When? สนับสนุนอะไร เมื่อไร (Budget งบประมาณที่เป็นเงินสด /Materials วัสดุคิบ-อุปกรณ์-โรงเรียน/Training ความรู้ /PR ประชาสัมพันธ์-ประสานงาน)
<input type="checkbox"/> 8) Provincial Administrative Organization (PAO) (อบจ.)	
<input type="checkbox"/> 9) Non-formal Education of Chonnabot district (กศน.)	
<input type="checkbox"/> 10) Collage/University (วิทยาลัย/มหาวิทยาลัย) Collage /ศูนย์ศิลปอาชีพ/ วิทยาลัยการอาชีพขอนแก่น University (specify).....	
<input type="checkbox"/> 11) NGOs i.e. Tiang Jiratiwat Central department store (มูลนิธิหรือหน่วยงานที่ไม่ได้อยู่ภายใต้ภาครัฐ)	
<input type="checkbox"/> 12) Other (specify).....	

Part 5 Problems, requirements and other questions) ปัญหา, สิ่งที่กลุ่มต้องการปรับปรุง และคำถามอื่นๆ

<p>5.1 What are the problems of group implementation? การดำเนินงานกลุ่มติดขัดหรือมีปัญหาอะไรหรือไม่</p>	
<p>5.2 What do you need to improve more? กลุ่มต้องการอะไร หรืออยากจะทำอะไรให้ดีขึ้น</p>	

<p>5.3 Other questions</p>	
<p>1) How did your group control standard of silk products? Who is the one who check the quality? กลุ่มมีการควบคุมคุณภาพเส้นไหม/ผ้าทอให้ได้มาตรฐานอย่างไร ใครคือผู้ตรวจสอบคุณภาพผ้าทอ</p>	
<p>2) Please describe the method making famous of group products (well known). อธิบายวิธีการที่ทำให้ชื่อของกลุ่มเราติดตลาด ทำให้ลูกค้ารู้จัก</p>	
<p>3) Please describe the method to access supporters. อธิบายวิธีการเข้าถึงผู้สนับสนุน เพื่อให้กลุ่มได้รับการสนับสนุน</p>	
<p>4) Did your group produce for only order from customers or produce free style they want? How much percentage? กลุ่มผลิตตาม order อย่างเดียวหรือผลิตตามใจ (ขายได้หรือไม่) สัดส่วนเท่าใด</p>	

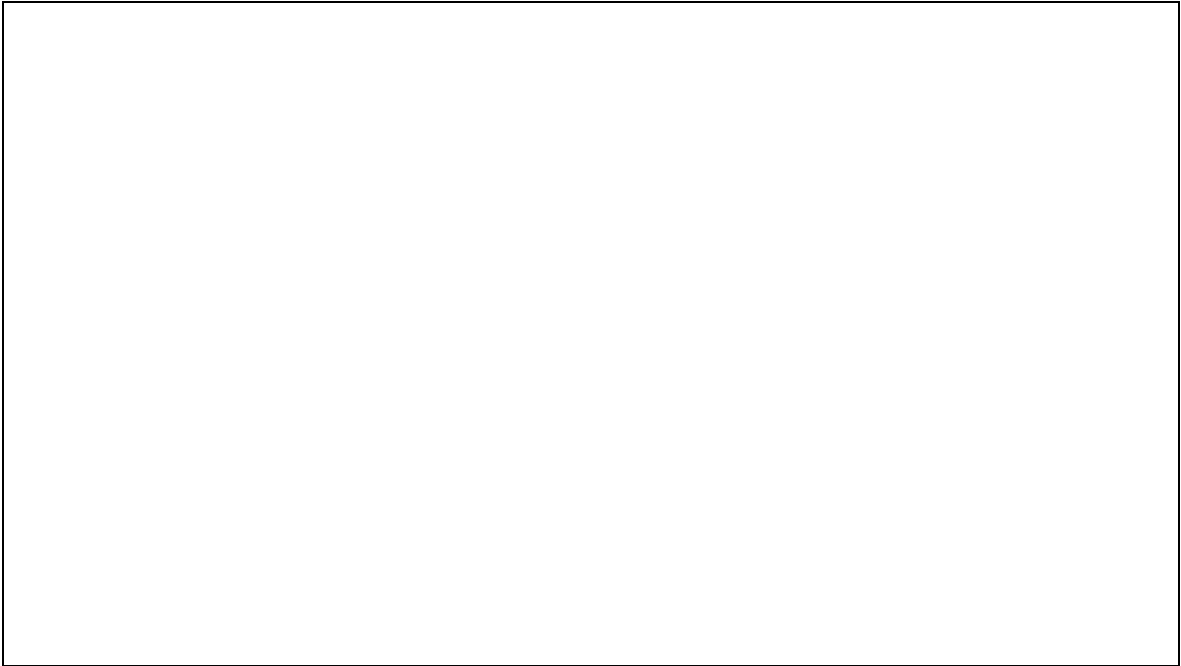
Thank you very much for your cooperation

2. What are products of the group in 2016? Is it different from establishment year? How? Does the group increase kind or number of products? Why? ปี 2559 กลุ่มผลิตสินค้าอะไรบ้าง ประเภทสินค้าที่กลุ่มผลิตแตกต่างจากปีก่อนหรือไม่ แตกต่างอย่างไร กลุ่มผลิตสินค้าในจำนวนเท่าเดิมหรือเพิ่มขึ้น หรือไม่ เพราะอะไร

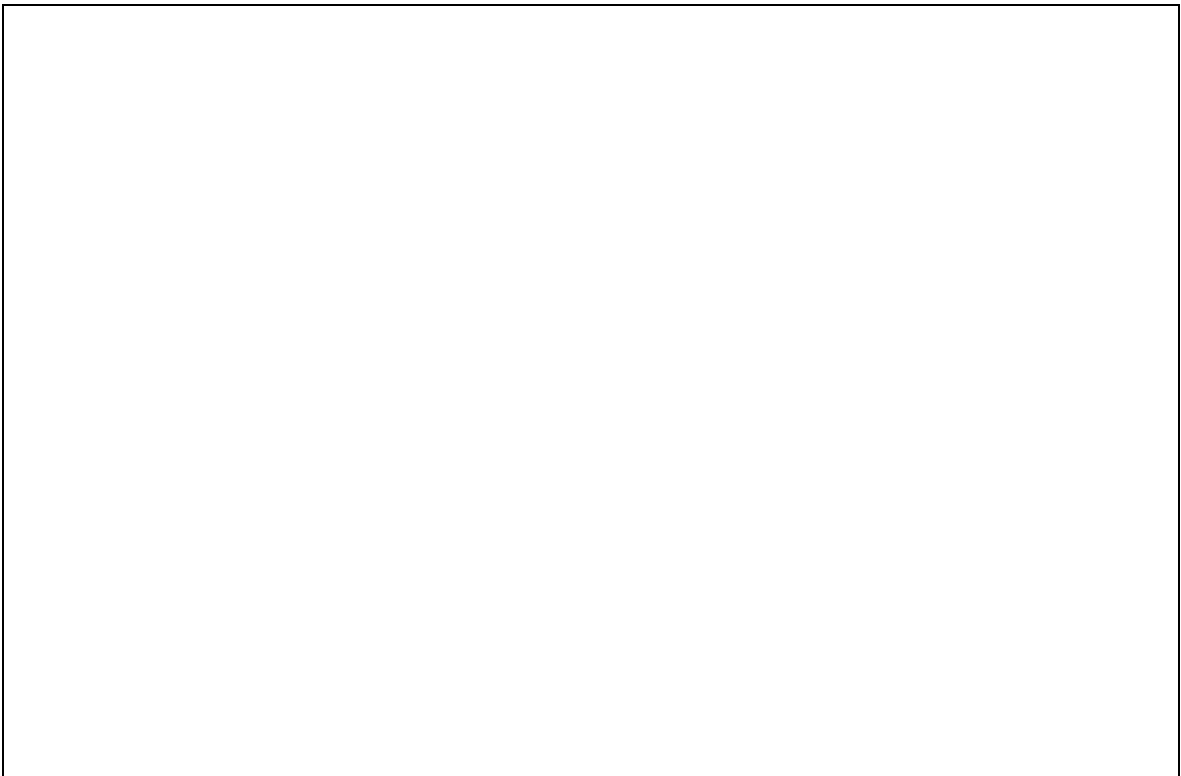
Financing

1. In 2016, what dose group funds consist of? Where are sources of the funds? When did the group get the funds? ปี 2559 เงินทุนกลุ่มประกอบด้วยอะไรบ้าง เงินเหล่านี้มาจากไหน เมื่อไรที่กลุ่มได้รับเงินทุนนี้

2. When did the group have stable or well operation? How the group financing at that time? ปีไหนที่กลุ่มเริ่มดำเนินการราบรื่นหรือดีขึ้น กลุ่มมีการจัดหาเงินทุนอย่างไรในช่วงดังกล่าว



3. How did the group get grants and other supports to operate in the group? กลุ่มทำอะไรเพื่อให้ได้รับเงินสนับสนุน หรือการสนับสนุนอื่นๆ

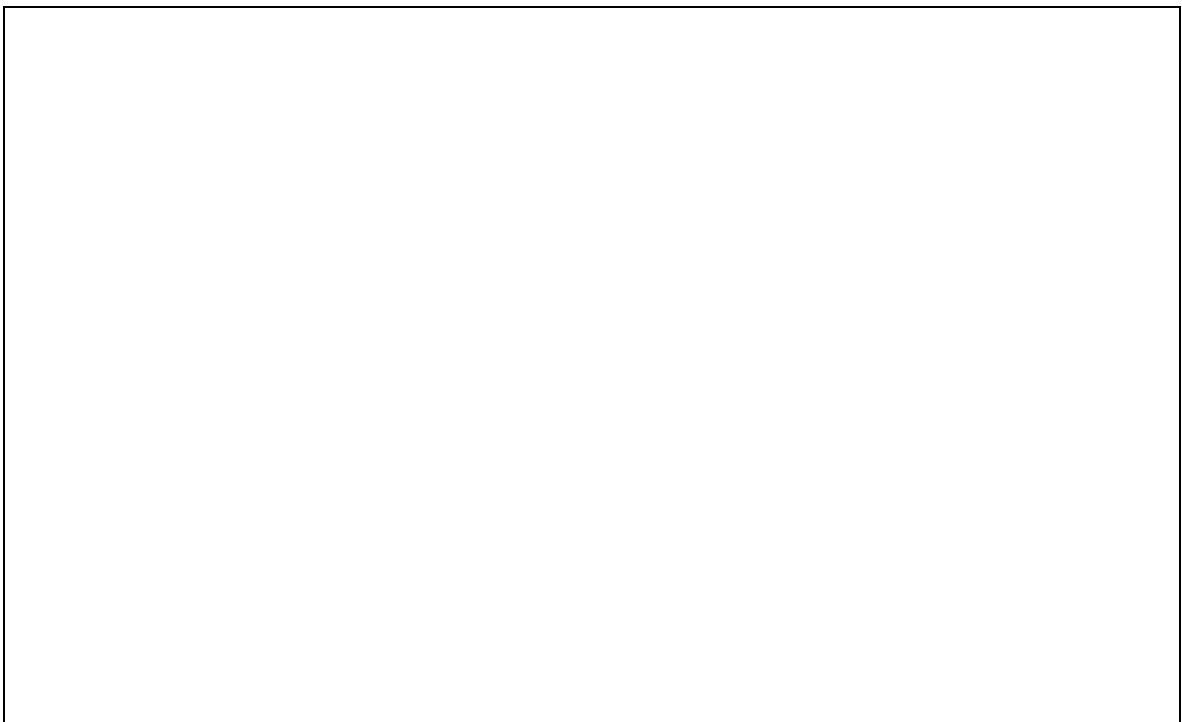


4. Did the group borrow money to invest in the group? Why? Where? When? How did the group manage this loan? กลุ่มได้กู้เงินเพื่อมาลงทุนหรือไม่ เพราะอะไร จากที่ไหน เมื่อไร กลุ่มบริหารเงินกู้นี้อย่างไร

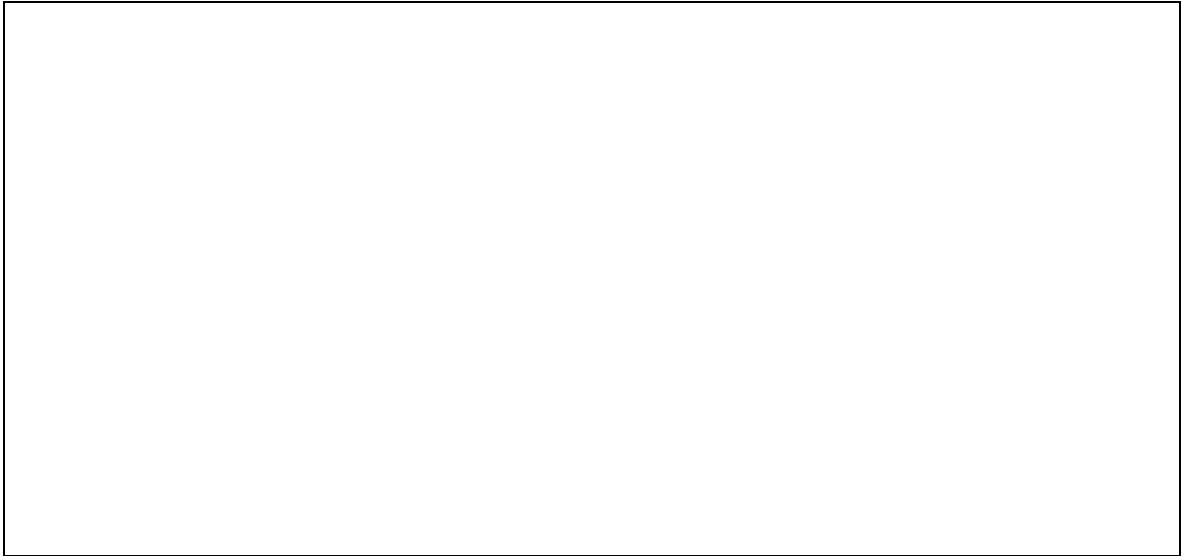


Dividend

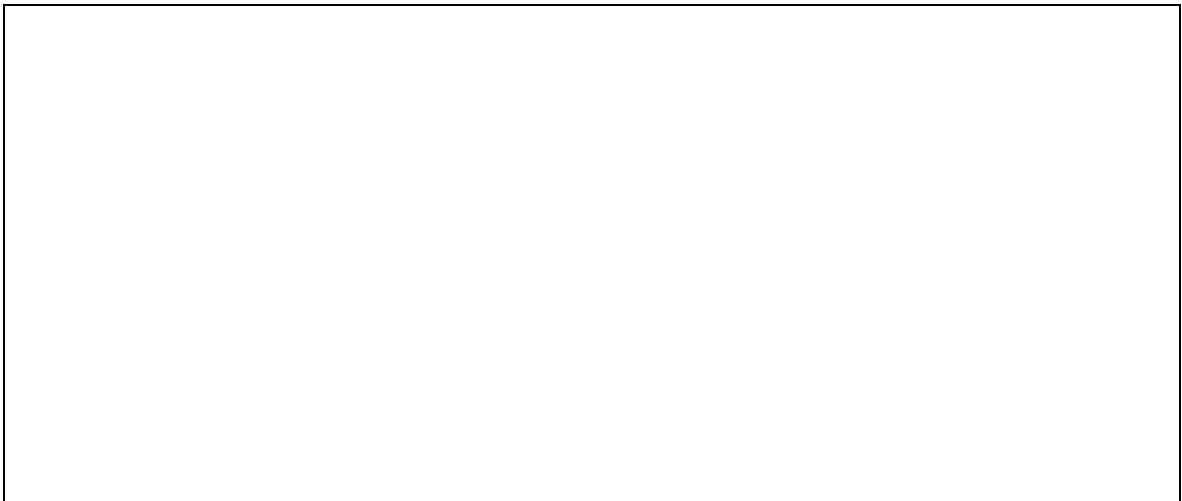
1. How much profit of the group in 2016? How did the group allocate the profit? Why? กลุ่มมีกำไรเท่าไรในปี 2559 กลุ่มมีการจัดสรรกำไรอย่างไรบ้าง ทำไมถึงจัดสรรแบบนี้



2. How did the group decide to allocate profit on reinvestment? กลุ่มตัดสินใจจัดสรรกำไรเพื่อลงทุนต่อไปอย่างไร

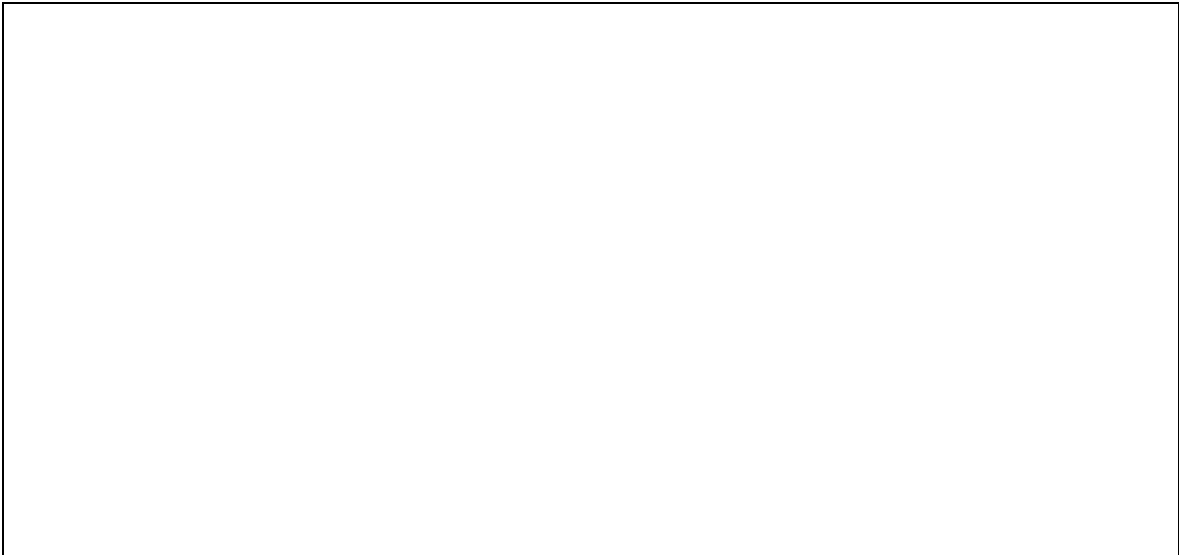


3. When is the group operating stable or well? How does the group allocate group profits or dividend in that time? ปีไหนที่กลุ่มเริ่มดำเนินการราบรื่นและดีขึ้น กลุ่มมีการจัดสรรกำไรกลุ่มหรือปันผลอย่างไรในช่วงกลุ่มเริ่มดำเนินไปได้ดี



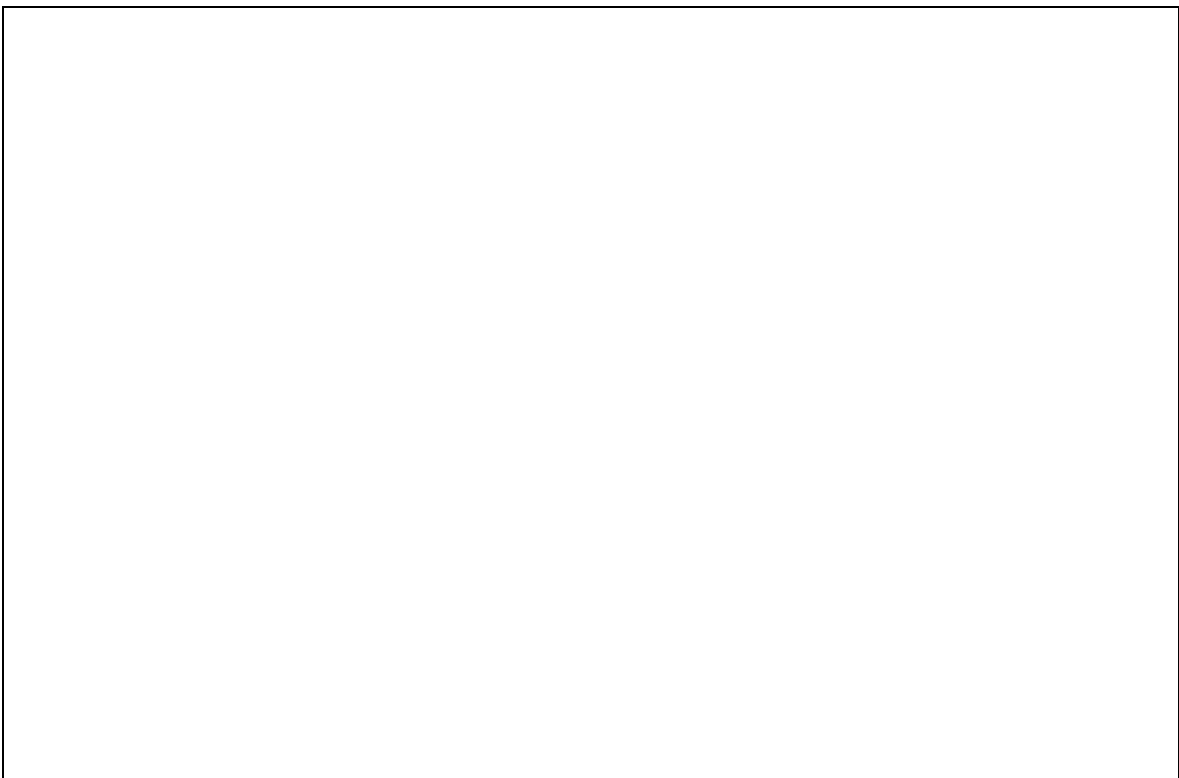
Satisfaction

1. Do you satisfy what your group has done so far? Is it better than initial year? Why do you think like that? คุณรู้สึกพึงพอใจในสิ่งที่กลุ่มได้ดำเนินการมาจนถึงทุกวันนี้หรือไม่ ดีขึ้นหรือไม่ เพราะอะไรถึงคิดแบบนั้น

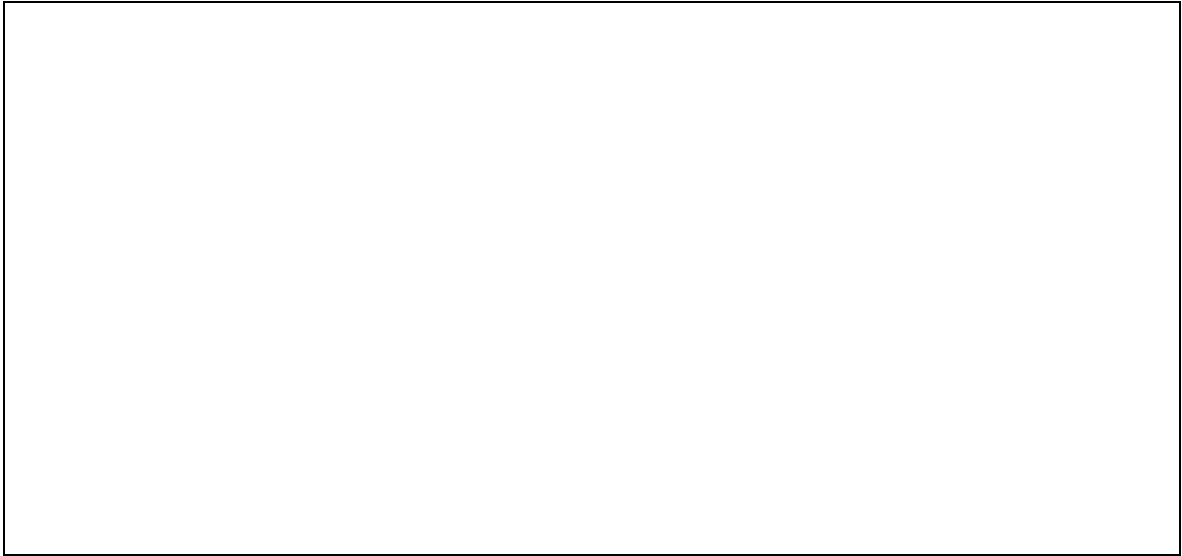


Organizational structure

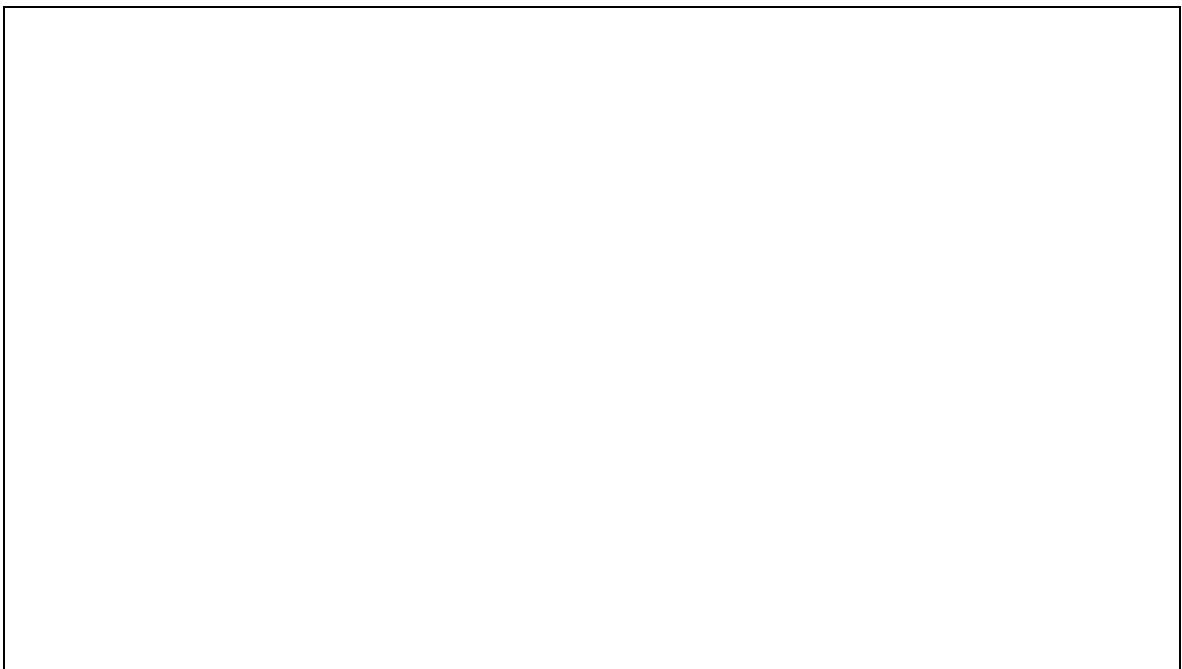
1. What are committees' position and their responsibilities? ตำแหน่งของคณะกรรมการมีอะไรบ้างและมีหน้าที่รับผิดชอบอย่างไรบ้าง



2. What kind of products in the establishment years? Why did you decide to produce these kinds of products? ประเภทสินค้าของกลุ่มในปีก่อตั้งมีอะไรบ้าง เพราะอะไรจึงตัดสินใจผลิตสินค้าเหล่านี้



3. What kind of products in 2016? Why did you decide to produce these kinds of products? ประเภทสินค้าของกลุ่มในปี 2559 มีอะไรบ้าง เพราะอะไรจึงตัดสินใจผลิตสินค้าเหล่านี้



4. What is the percentage between tread producers and weavers in 2016 and establishment year? ระบุสัดส่วนของสมาชิก และชาวบ้าน ที่ผลิตเส้นไหมและผ้าไหมปี 2016 และปีก่อตั้ง

	(Group) Threads : Weaving	(Village) Threads : Weaving
2016 :	_____ : _____	_____ : _____
Establishment :	_____ : _____	_____ : _____
*Note		

Financial information and profit allocation (confirms and adds some more data from previous questionnaires)

1. Finance

Internal financial sources - <u>Stocks</u>	Year				
					2016
(1) How many stocks in the group? (numbers of stocks)					
(2) How much stock? (THB/stock)					
(3) What was an average number of stocks per a member? (stock/member)					
(4) What was the minimum and maximum of stocks per a member? (.....to))					
(5) How many stock holders in the group? (people)					
(6) Did all members have to hold stocks? (No/Yes)					
(7) What was the difference between who is holder and not holders of stocks?					
(8) How often did the group accumulate stocks? (Only one time for being a new member/ More than one time based on group rules)					
(9) Is the price of a stock same since an initial year so far? (No/Yes) why?					

Memo:

Internal financial sources - <u>Savings</u>	Year				
					2016
(1) When does the group start savings? (Which year?)					
(2) How much savings in the group? (THB)					
(3) How many saving members in the group? (people)					
(4) What was the minimum and maximum of savings per a member? (.....to))					
(5) What was the average of savings per a member? (THB/members who save)					
(6) How many stock holders in the group? (people)					
(7) Do all members have to hold stocks? (No/Yes)					
(8) How often did the group accumulate money for savings? (Only one time for being a new member/ More than one time based on group rules)					
(9) Was the price of a stock same since an initial year so far? (No/Yes) Why?					

Memo:

Internal financial sources - <u>Loan interest (maybe more than one source)</u> <u>1. Getting from group</u>	Year				
					2016
(1) When did the group start giving loan for members? (Which year?)					
(2) How much loan provided from the group? (THB)					
(3) How much percentage of interest per month or year? (% per month or year)					
(4) Were the rules different from the initial year so far? (yes/no) why?					
(5) How many members who borrowed from the group? (people)					
(6) What was an average amount of loan for a member? (THB/member)					
(7) What was the minimum and maximum of loan for a member? (.....to.....)					
(8) Was the amount of loan for a member same since an initial year so far? (yes/no) why?					

Memo:

Internal financial sources – <u>Loan interest</u> <u>2. Margin of loan interest (some interest getting from borrowers when returning loan to financial organizations) (maybe more than one source)</u>	Year				
					2016
(1) When did the group start provide loan for members? (Which year?)					
(2) How much loan? (THB)					
(3) Where did you get this loan?					
(4) How much percentage of interest per month or year? (% per month or year)					
(5) How much margin percentage of the loan interest saved in the group? (% per borrower)					
(7) Why did the group decide to keep this amount of loan margin?					
(8) How many borrowers in the group? (people)					
(9) What was an average amount of loan for a member? (THB/member)					
(10) What was the minimum and maximum of loan for a member? (.....to.....)					
(11) Was the amount of loan for a member same since an initial year so far? (yes/no) why?					

Memo:

External financial sources – <u>Grants (maybe more than one sources)</u>	Year				
					2016
(1) How much grants in the group? (THB)					
(2) Where did the group get these grants?					
(3) What were the general conditions of grants?					
(4) How often did the group get the grants?					
(5) Were the rules different from the initial year so far? (yes/no) why?					
(6) How much margin percentage of the loan interest saved in the group? (% per borrower)					
(7) Why did the group decide to keep this amount of loan margin?					
(8) How many borrowers in the group? (people)					
(9) What was an average amount of loan for a member? (THB/member)					
(10) What was the minimum and maximum of loan for a member? (.....to.....)					
(11) Was the amount of loan for a member same since an initial year so far? (yes/no) why?					

Memo:

2. Profit allocation

Profits allocation	Amount (THB)	%
1. Member dividend ปีผลสมาชิก		
-Stock ปีกำไรหุ้นกลุ่มผ้าไหม		
-Savings ปีกำไรเงินออมทรัพย์		
-Loan ปีกำไรเงินกู้		
2. Committees' allowance ค่าตอบแทนกรรมการ		
3. Associated group fund สมทบทุนกลุ่ม		
4. Reinvestment ลงทุนรอบต่อไป		
5. Members' welfareสวัสดิการสมาชิก What kind of the welfare?		
6. Community welfareสวัสดิการชุมชน What kind of the welfare?		
7. Operating expenses ค่าใช้จ่ายดำเนินงานกลุ่ม What kind of the expenses?		
Total profit		

Main objectives of group establishment (can answer more than 1 choice)

- To increase additional income
- To be a market for thread producers or weavers
- To promote harmoniousness by working as a group
- To provide investment for silk production
- To conserve and inherit local wisdom
- Other

General information of respondents in 2016

Information of group leader

1. First name Last name
2. Age years
3. Education years (level)
4. Tel.
5. Main occupation
6. Supplementary occupation
7. Silk production is your main income supplementary income
8. Number of family labors helping in the main occupationpeople
9. Number of family labors helping in supplementary occupationpeople

Information of group treasurer or another committee (in case of different person from leader)

1. First name Last name
2. Age years
3. Education year (level)
4. Tel.
5. Main occupation
6. Supplementary occupation
7. Silk production is your main income supplementary income
8. Number of family labors helping in the main occupationpeople
9. Number of family labors helping in supplementary occupationpeople

Characteristics of group in 2016

1. What is the establishment year of the group?
2. Production cycle (month to month) to
3. The month of dividend distribution (month)
4. How many members in the group?people
5. How many thread producers in the group?people
6. How many weavers in the group?people
7. How many members who produce both threads and fabrics in the group? people
8. How many thread producers selling threads through the group? people
9. How many weavers selling fabrics through the group? people
10. What are main products of the group? (can answer more than 1 choices)
 - Mudmee Dyed silk Scarf Weft Sarong
 - Loincloth Shawl Warp Soap Other
11. What are product selling methods of the group? (can answer more than 1 choices)
 - Thread producers or weavers get cash from group immediately
 - Thread producers or weavers get cash after products are sold by group
 - Thread producers or weavers sell their products then give some amount of profit for group
 - Thread producers or weavers sell their products individually that not give any money for group
 - Thread producers or weavers sell their products individually that not give any money for group

Buying silk threads (weft and warp) in one-year production

Group bought from shop in city

How much weft per kg? ราคาเส้นไหมพุ่งต่อกิโลกรัม.....THB/Kg NumberKg

How much warp per kg? ราคาเส้นไหมยืนต่อกิโลกรัม.....THB/Kg NumberKg

Which month did the group buy a lot or a few of threads?

ช่วงการซื้อเส้นไหมพุ่งและยืนมากและน้อยของกลุ่ม

Month		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

Which month could the group sell a lot or a few of products? ช่วงการขายสินค้าได้มากและน้อยของกลุ่ม

Month		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

Questionnaire for Chapter 4

Group No.

Questionnaire “Fundamental information and attitude of silk weaving group towards the situation of production and marketing activities”

Date (DD/MM/YYYY): / / 2020	Time: : ~ :
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	Percentage (%)	If only sold followed by orders 1. What is the reason?
1. How much percentage of silk products is sold followed by orders from consumers?		
2. How much percentage of silk products is sold followed by production plans of the group?		

1. Group information

1.1 How many number of committee members taking charge in marketing in present?	Persons
1.2 How much money is spent for marketing activity in last year round (2018/2019)?	Baht
1.3 How much total amount of receipts earned from selling all silk product types in last year round?	Baht
1.3.1 How much percentage earned for each silk product type from the total amount of receipts (1.3)?	
1. Mudmee	%
2. Dyed silk	%
3. Sarong	%
4. Loincloth	%
5. Scarf	%
6. Shawl	%
7. Clothing	%
8. Small item	%

2. Reasons to produce and not produce each silk product type

2.1 What are silk product types that the group produces? (Circle) What is the reason why the group decides to produce these silk product types?

1. Mudmee	2. Dyed silk	3. Sarong	4. Loincloth	5. Scarf	6. Shawl	7. Clothing	8. Small item

2.2 What are silk product types that the group does not produce? (Circle) What is the reason why the group does not decide to produce these silk product types?

1. Mudmee	2. Dyed silk	3. Sarong	4. Loincloth	5. Scarf	6. Shawl	7. Clothing	8. Small item

2.3 If the group receives any orders from consumers which the group cannot produce or is unsatisfied to produce following the orders, how does the group reply to the consumers?

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3. Attitude evaluation for production activity (excluding silk thread production)

Circle only one response that you agree with and give reasons

Attitude	Responses	
3.1 How do you think about present situation of production activity?	Good	Not good
Why do you select this response? /What are indicators?		
3.2 If you think that the present situation of production activity is “Not good”, do you have intention to improve or change the production activity in future?	Change	No change
If Yes, how do you change? If No, why don't you change? What is the difficulty or restriction?		

4. Attitude evaluation for marketing activity

Circle only one response that you agree with and give reasons

Attitude	Responses	
4.1 How do you think about present situation of marketing activity?	Good	Not good
Why do you select this response? /What are indicators?		
4.2 If you think that the present situation of marketing activity is “Not good”, do you have intention to improve or change the marketing activity in future?	Change	No change
If Yes, how do you change? If No, why don't you change? What is the difficulty or restriction?		

Analysis about Relationship between the Allocations of Committee Member Functions and the Development Stage of Silk Weaving Groups**I. General information**

Items	Questions	Answers
1. Total number of group members	1.1 How many total number of group members in the present year (2019)?	Persons
	1.2 How many total number of group members in the setting up year (.....)?	Persons
2. Number of group committee members	2.1 How many number of group committee members in the present year?	Persons
	2.2 How many number of group committee members in the setting up year?	Persons
3. Number of executive committee members (If have)	3.1 How many number of executive committee members in the present year?	Persons
	3.2 How many number of executive committee members in the setting up year?	Persons
4. Number of general committee members (If have)	4.1 How many number of general committee members in the present year?	Persons
	4.2 How many number of general committee members in the setting up year?	Persons
5. Number of silk product type that the group produce	5.1 How many number of silk product type that the group produce in the present year?	Types
	5.2 How many number of silk product type that the group produce in the setting up year?	Types

II. How to select committee members among the group members? Is the selected way the same or different from the setting up to the present year? How?

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1. Name, position and functions of each committee member take charge in present year 2018/2019 (Write name, position and mark O in the table)

	Name/ Position	Functions										
		Overall governance	Administration	Coordination	Group information recording	Financial /loan management	Pattern design and development	Quality control	Production & operation management	Marketing management	Preparing for welcoming	Other
Executive Committee Members												
General Committee Members												

- 1) If a committee member take charge more than one function, could you please give the reasons?
- 2) If there any function that does not take charge from any committee member, could you please give the reasons?

2. The important trends of the groups from setting up year to present year

2.1 Could you please explain the important trend about increase or decrease in total amount of receipts that group weavers receive from the setting up to the present year?

2.2 Could you please explain the important trend about increase or decrease in the total number of group members from the setting up to the present year?

2.3 Could you please explain the important trend about increase or decrease in the number of committee members from the setting up to the present year?

2.4 Could you please explain the important trend about increase or decrease in the number of silk product types from the setting up to the present year?

3. Please explain the important trends following these questions

3.1 Could you please explain the important changes about committee functions after the setting up year until the present year?

3.2 Could you please explain the important changes about committee system (adoption of hierarchal system) after the setting up year until the present year?

3.3 Why the changes happen in the important changing stage?

3.4 What are characteristics or factors of the committee system in the important changing stage?

Questionnaire for Chapter 5

Group number

Questionnaire entitled
“Factors affecting performance of silk weaving groups and income improvement”

Date of interview:/...../..... Interview time: ~

Part 1 General information of respondent and group

1. Respondent's name: Position in group.....		
Telephone number: Age years old		
2. Gender	<input type="radio"/> 1) Female	<input type="radio"/> 2) Male
3. Education	<input type="radio"/> 1) No education	<input type="radio"/> 2) Non formal education (level
	<input type="radio"/> 3) Elementary school	<input type="radio"/> 4) Junior high school <input type="radio"/> 5) Senior high school
	<input type="radio"/> 6) University	<input type="radio"/> 7) Others
4. Main job	<input type="radio"/> 1) Farmer	<input type="radio"/> 2) Others
5. Secondary job	<input type="radio"/> 1) No secondary job	<input type="radio"/> 2) Farmer <input type="radio"/> 3) Others
6. Name of village Moo.....Sub-district.....District..... Khon Kaen		
7. Name of group		
8. Establishment year		
9. Number of group members: recent yearpeople, 5 years agopeople		
10. Number of group committees: recent yearpeople, 5 years ago people		
11. Number of weavers: recent yearpeople, 5 years agopeople		
12. What kind of your group? Fill ✓ for recent being or fill × for used to be		
<input type="radio"/> 1) Women group	<input type="radio"/> 2) OTOP group	<input type="radio"/> 3) Community enterprise
<input type="radio"/> 4) Cooperatives	<input type="radio"/> 5) SME	<input type="radio"/> 6) Silk cluster
<input type="radio"/> 7) Others		
13. What kind of group products and percentage of selling the products in latest year (2017)?		
<input type="radio"/> 1) Mudmee (.....%)	<input type="radio"/> 2) Dyed silk (.....%)	<input type="radio"/> 3) Sarong (.....%)
<input type="radio"/> 4) Loincloth (.....%)	<input type="radio"/> 5) Scarf (.....%)	<input type="radio"/> 6) Shawl (.....%)
<input type="radio"/> 7) Weft (.....%)	<input type="radio"/> 8) Warp (.....%)	<input type="radio"/> 9) (.....%)

Part 2 Degree achievement and importance of each group objective

Group objectives	Questions for achievement indicators	Degrees of achievement		Actual information	Importance of each objective*
1) Create additional income for members	How is the change of the average net income that silk weavers received by selling silk products in recent year (2017) compared to 5 years ago (2012)?	+10 0 -10	Increase very much No change Decrease very much	2017THB/year 2012THB/year	
2) Promote good relationship among members	How is the change of the relationship degree among group members in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much		
3) Procure materials and equipment for members	How is the change of the value of materials and equipment that the group procures to the members in recent year compared to 5 years ago? (acquire from some organizations or use group fund)	+10 0 -10	Increase very much No change Decrease very much	2017THB/year 2012THB/year	
4) Support investment for members	How is the change of the investment (loan in cash) that the group supports the members in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	2017THB/year 2012THB/year	

Note: * Importance of each objective; please give scores from 0 to 10 based on the emphasizing in each objective of your group (0= not focus on, ..., 10=strongly focus on)

Group objectives	Questions for achievement indicators	Degrees of achievement		Actual information	Importance of each objective*
5) Inherit traditional knowledge	How is the change of the transferring traditional knowledge about silk weaving techniques through new generation in recent year compared to 5 years ago? (teach children)	+10 0 -10	— Increase very much — No change — Decrease very much		
6) Acquire supports from government or NGOs	How is the change of the amount of subsidies that acquired from government or other organizations in recent year compared to 5 years ago? (loans, grants, money from competition, donation, value of materials, equipment, buildings and others)	+10 0 -10	— Increase very much — No change — Decrease very much	2017THB/year 2012THB/year	
7) Develop quality of group products	How is the change of the silk product quality in recent year compared to 5 years ago?	+10 0 -10	— Increase very much — No change — Decrease very much		
8) Support product sale producing by the group members	How is the change of sale volume of silk products that the group assists the members in recent year compared to 5 years ago? (purchase using group fund or consignment)	+10 0 -10	— Increase very much — No change — Decrease very much	Increase% Decrease%	

Note: * Importance of each objective; please give scores from 0 to 10 based on the emphasizing in each objective of your group (0= not focus on, ..., 10=strongly focus on)

Group objectives	Questions for achievement indicators	Degrees of achievement		Actual information	Importance of each objective*
9) Earn higher product prices	How is the change of the total price of silk products that the group produce in recent year compared to 5 years ago?	+10 — 0 — -10 —	Increase very much No change Decrease very much	Increase% Decrease%	
10) Encourage job opportunity for group members and others	How is the change of the average number of laborers (group members or others) that the group or members hire to produce silk products in recent year compared to 5 years ago?	+10 — 0 — -10 —	Increase very much No change Decrease very much	Increase% Decrease%	

Note: * Importance of each objective; please give scores from 0 to 10 based on the emphasizing in each objective of your group (0= not focus on, ..., 10=strongly focus on)

Part 3 Factors affecting the different degrees among ongoing silk weaving groups

Performance indicators	Evaluation degrees		Actual information
1) How is the changing rate in average number of the members who participate each group meeting in recent year compared to 5 years ago?	+10 — 0 — -10 —	Increase very much No change Decrease very much	2017 Group meeting.....times/year Participants%/time 2012 Group meeting.....times/year Participants%/time
2) How is the change in compliance of group agreement among the members in recent year compared to 5 years ago?	+10 — 0 — -10 —	Increase very much No change Decrease very much	

Performance indicators	Evaluation degrees		Actual information
3) How is the change in showing the opinions or exchanging ideas among the members in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Every having meeting or often than that
4) How is the change in informing the group situation about production, sales, supports and financial conditions in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Every having meeting or often than that
5) How is the change of group committees' reliability in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	
6) How is the change of group fund use to purchase silk threads for the weavers in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	2017THB/year 2012THB/year
7) How is the change of total value of materials and equipment that the group received from external organizations in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	2017THB/year 2012THB/year
8) How is the change of the amount of loans (cash exclude value of materials etc.) that the group received from external organizations in recent year compared to 5 years ago? (have interest or do not have)	+10 0 -10	Increase very much No change Decrease very much	2017THB/year 2012THB/year

Performance indicators	Evaluation degrees		Actual information
9) How is the change of the amount of grants (cash exclude value of materials etc.) that the group received from external organizations in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	2017THB/year 2012THB/year
10) How is the change of the amount of donation (cash exclude value of materials etc.) that the group received from external organizations in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	2017THB/year 2012THB/year
11) How is the change of interest rate for loan activity (any purpose) that borrowers have to repay to the group in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	% / (month/period/year/others.....) 2017..... 2012.....
12) How is the change of interest rate for loan activity (only purchase silk threads) that members have to repay to the group in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	% / (month/period/year/others.....) 2017..... 2012.....
13) How is the change of the attention of young people on silk production activities in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	

Performance indicators	Evaluation degrees		Actual information
14) How many members who are less than 50 years old in recent year? people		Age rangeyears old
15) How is the change of possibility to have a successor (the next group leader) in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Have or do not have?
16) How is the change of teaching or training the silk production to other people in recent year compared to 5 years ago? (lecture or teach at school or at other groups or at the group or teach for competition events)	+10 0 -10	Increase very much No change Decrease very much	Have taught or have not (where/when/who)
17) How many years that the group expect to continue the recent activities?years		
18) How is the change of relationship between the group and external supporters or officers in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Good or not good?
19) How is the change of clearness in recording and updating group financial information in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	

Performance indicators	Evaluation degrees		Actual information
20) How is the change of the frequency in participating in training programs setting by some organizations in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	2017times/year 2012times/year
21) How is the change of committees' ability to transfer and explain information acquiring toward group members understandably in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	
22) How is the change of the amount of group fund (total cash and saving in banks, including stocks and loan) in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	2017 THB 2012 THB
23) How is changing rate in purchasing silk products from the members by the group (using group fund) in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Increase % Decrease %
24) How is the changing rate in gathering silk products from the members before selling them by the group in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Increase % Decrease %

Performance indicators	Evaluation degrees		Actual information
25) How is the changing rate in volume of average silk products that the group can sell after purchasing or gathering from the members in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Increase % Decrease %
26) How is the changing rate in number of customers in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Increase % Decrease %
27) How is the change of frequency of participating in events or promoting group products in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	2017times/year 2012 times/year
28) How is the change of quality control of silk products by the group in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Control or do not control? (how)
29) How is the changing rate in number of skillful laborers (who are not the members, inside or outside the village) that the group hires (private or on behalf of group) in recent year compared to 5 years ago?	+10 0 -10	Increase very much No change Decrease very much	Increase % Decrease %

Performance indicators	Evaluation degrees		Actual information
30) How is the changing rate in number of markets that underline the group products in recent year compared to 5 years ago?	+10 — 0 — -10 —	Increase very much No change Decrease very much	Increase % Decrease %
31) How is the change of number of group activities (introduce new activities) to support silk production for group members (dye, tie silk threads etc.) in recent year compared to 5 years ago?	What kind of group activities are created? (no.of created activities)		What kind of group activities were stopped? (no. of stopped activities)

English summary

Recently, improvement of community business groups such as silk weaving groups has become an important issue to realize together with economic and social development which have been raised in the Thai National Economic and Social Development Plans. A silk weaving activity is well-known and can generate supplementary income and create jobs/employment for farmers and people in rural areas, especially in Northeast Thailand. Although the number of silk weaving groups has been increasing, most silk weaving groups could not show high performance and the implementation of group activities was not good, eventually some of the groups quit group activities. The low performance and discontinuance of the groups might be caused by several reasons or factors. Improvement in the additional income level is also vital from the economic aspect for the weavers. Therefore, this study emphasizes on making clear the important factors which contribute to the continuance of group operations and activities, committee characteristics and functions of the silk weaving groups, and additional income creation for further improvement of the groups.

This study was conducted in Khon Kaen province, Northeast Thailand. I purposively visited silk weaving groups several times from 2016 to 2020 and interviewed key informants (group leaders or committee members) using questionnaires. All of the surveyed silk weaving groups were introduced by officers from the Khon Kaen provincial Agricultural Extension Office and the Community Development Department. I used descriptive statistics and/or multiple regression analysis to analyze the data depending on each chapter.

The findings from Chapter 3 showed that factors related to production, marketing, and financial functions contribute to a groups' continuance, excluding organizational function. From the perspective of production function, the popularity of the continual groups, the high price of silk products and products' quality, and several ways to support weavers, i.e. such as loans, materials, hiring, and funds, contribute to the groups' continuance. From the perspective of marketing function, providing various places and ways of sales for weavers contributes to stable receipts which drive the groups continuing operations and activities. From the perspective of financial function, obtaining subsidies from several organizations such as government and NGOs, several ways to collect group funds, financial strategies of the groups i.e. the groups purchased silk products from weavers via cash, and keeping some of the profit

in group funds after selling silk products, contribute to enriching the group fund and driving re–investment and re–production in the next cycle.

The results of the multiple regression analysis shown in Chapter 4 revealed the number of group members, amount of receipts, the number of silk product types, age of the groups, and production or non–production of several silk product types are the factors generating variety in committee characteristics. However, each factor only partially influences the committee characteristics, and there are no factors influencing all aspects of the committees’ characteristics. Between the variety of committee characteristics and the factors generating their variety, the following are intervening elements: 1) the possibility of quality differences among group members, 2) the necessity to develop many patterns, 3) the necessary number of group members to whom important information should be shared, 4) the degree of necessity for marketing activities (e.g. the degree of order based production, the degree of procession and fashionableness), 5) the trade–off relationship between functions where there is an increasing percentage of committee members in charge of specific functions, 6) the necessity to make committee members’ responsibilities clear, and 7) the characteristics and required level of production skills and marketing activities of each silk product type. On the other hand, it has become clear that the degree of similarity between any pair of functions varies because of differences in the relational degree between the pair of functions. However, the degree of similarity is not influenced by the differences in fundamental characteristics.

The results of multiple regression analysis shown in Chapter 5 presented factors creating additional income which are the percentage of group members who were younger than 50 years old, traditional knowledge transfer, and sales activities supported by the groups having significant influence on additional income creation. It is important for silk weaving groups to endeavor to increase the percentage of younger members. This can be done by promoting the training of young people who are not group members in silk weaving techniques, as this training will also help in the recruitment of new weavers. The activation of traditional knowledge transfer should be practiced by increasing opportunities for skillful members of silk weaving groups to teach younger members to enable them to become masters in producing silk products. Finally, the activation of sales activities should be practiced by improving the functions of marketers (committee members in charge of marketing) within the groups, as they are responsible for sales and for promoting sales activities.

和文要約

最近、絹織グループのようなコミュニティビジネスグループの改善は、タイ国民経済社会発展計画のなかで取り上げられてきた経済社会発展とともに、実現すべき重要な問題となった。絹織は、特にタイ東北地方においてよく知られているとともに、農村地域の農業者や住民に対して補完的な所得や雇用を生み出すことができる。絹織グループ数は増加してきたが、その大部分は高い成果を示すことができず、グループ活動の遂行は良好なものではなかった。そして、最終的にはその活動を停止する絹織グループも存在している。絹織グループの低い成果や活動中止は、いくつかの理由や要因によって引き起こされたものと考えられる。さらに、追加所得水準の向上も、絹織職工の経済的側面からみて、きわめて重要な問題である。したがって、本研究は絹織グループの運営と活動の継続、絹織グループの委員会特性と機能、および絹織グループのさらなる発展のための追加所得の創出に役立つ重要な要因の解明に焦点を当てることにする。

本研究はタイ東北部のコンケン地方を対象とした。著者は2016年から2020年にかけて数回、目的をもって絹織グループを訪問し、重要な被調査者（グループリーダーまたは委員会構成員）に対して、調査票を用いた聞き取り調査を行った。すべての調査対象絹織グループは、コンケン地方農業普及事務所やコミュニティ開発局の職員から紹介されたものである。著者は、各章で扱うデータを分析するために、記述統計や重回帰分析を利用した。

第3章では、生産機能、マーケティング機能、財務機能に関連した要因が絹織グループの継続に役立つことが明らかになった。生産機能の観点からみると、グループの人気度、絹製品の価格・品質、ローン、資材、雇用、基金等の絹織職工を支援する諸方法が絹織グループの継続に役立っている。マーケティング機能の観点からみると、絹織職工に対する絹織グループによるさまざまな販売場所や方法の提供は、絹織グループの運営・活動の継続を促進するための安定的な収入獲得に役立つ。財務機能の観点からみると、政府やNGOなどの諸組織からの補助金獲得、グループ基金を集めるための方法、財務戦略（たとえば、絹織グループの絹織職工から現金での絹製品の購

入、絹製品販売後のある程度の収益のグループ基金としての維持)は、グループ基金を潤して、再投資や再生産の推進に貢献する。

第4章の重回帰分析結果は、絹製品タイプ数、グループ年齢、いくつかのタイプの絹製品の生産の有無が、絹織グループの委員会特性の多様性の生起要因であることを明らかにした。しかし、各要因は部分的に委員会特性に影響を与えており、委員会特性のすべての側面に影響を与える要因は存在していない。なお、委員会特性の多様性とその多様性に影響を与える要因との間には、つぎの要素が介在している。1) グループ構成員間での絹製品の品質格差の可能性、2) 絹製品の模様(パターン)開発の必要性、3) 重要な情報が共有されるべきグループ構成員の必要人数、4) マーケティング活動の必要性(たとえば、注文に基づいた生産の程度、加工やファッション性の程度)、5) 特定機能を担当する委員会構成員の委員会構成員全体に占める割合が増加していく機能間でのトレードオフ関係、6) 委員会構成員の責任を明確にする必要性、7) 各絹製品タイプに求められる生産技能とマーケティング活動の特性と求められる水準。他方、委員会機能のどの組合せについても、対象とする両機能間の関係性の程度に相違がみられることから、当該両機能をともに担当する委員会構成員の類似度は異なることが明らかになった。しかしながら、その機能間の類似度は、グループの基本的な特徴によって影響を受けていない。

第5章の重回帰分析結果は、50歳未満のグループ構成員割合、伝統技術の継承、グループが支援する販売活動が統計的にみて有意に追加所得の創出に影響することを示した。絹織グループが若いグループ構成員割合の向上に努力することが重要である。絹織技術のトレーニングは新しい絹織職員の補充にも役立つことから、若いグループ構成員割合の向上は、グループ構成員ではない若い人に対する絹織技術のトレーニングの促進によって行うことができる。また、伝統技術継承の活性化は、絹織グループの熟練構成員が、絹製品生産方法の習得を可能とするように、若い構成員を教育する機会を増やすことによって実践すべきである。最後に、販売活動の活性化は、販売担当者(マーケティング機能を担当する委員会構成員)が販売および販売促進活動に責任を持っていることから、グループ内でマーケティング担当者の機能を改善することによって実行されるべきである。

List of Publications

1. Vianmana, S. & Nohmi, M. (2020). Study on Factors Creating Additional Income among Good and Excellent Silk Weaving Groups in Northeast Thailand. *Journal of Rural Problems*, 56(1), 19-25. (Publication year: March 25th, 2020)

The contents of the paper are presented in Chapter 5

2. Vianmana, S. & Nohmi, M. (2021). Committee Characteristics of Silk Weaving Groups and the Factors Generating their Variety: A Case Study in Northeastern Thailand. *Food, Agriculture and Environment*, 27, (Publication year: March 2021)

The contents of the paper are presented in Chapter 4