



The Establishment and Management of Indigo Weaving Groups in Sakon Nakhon Province of Thailand

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ABSTRACT

Objective - The objectives of this research are to study the establishment and management of indigo weaving groups in Sakon Nakhon Province.

Methodology/Technique – The study is comprised of qualitative research. The data was collected from focus group discussions with participants from the District Community Development Office of Sakon Nakhon Province and an in-depth interview with the villagers and members of indigo weaving groups. The data was analyzed using content analysis and descriptive analysis.

Finding - The results indicate that indigo weaving groups have been established in a variety of ways such as the informal gathering of indigo-dyed weavers, more formal groups on the advice of local administrative organizations and on the recommendation of governmental organizations. The indigo weaving groups' management consisted of many aspects including the group administration, production planning, producing, product development, marketing, public relations, financing, and accounting.

Novelty - To reduce the fixed-cost of buying indigo dyes and to increase the depth of the colour, an indigo weaving group dyed its fabric by mixing indigo dye with *Marsdenia tinctoria* R. Br.. The study also found that traditional beliefs complicated the weavers' decision making about the dyeing, especially the belief that colour does not bind to the fabric if the dyeing is performed on Buddhist Holy Days.

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1. Introduction

The community economy is an economic system focusing on both social and economic dimensions. The system applies capital (resources) in the village to produce products for consumption or sale at the individual, familial, and communal levels so that the villagers are able to be self-reliant.

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At the same time, the system also aims to develop the economy and society in order to restore natural resources and the environment, preserve the culture and local wisdom together with the growth of the capital system used to improve products and services, which reflect local context and create supplemental income to families and communities (Grisanaputi, 2016). Thailand prioritizes self-reliance and reduces dependence on outsiders by applying the concept of community enterprise to develop the country under the capitalism of globalization (Steger, 2009). The concept is a crucial tool to strengthen community economic systems and villagers' perception of the value of individuals' local wisdom.

In Thailand, the concept of community enterprise is used to drive a system of community economy through a project called 'One Tambon One Product' (OTOP). In 2001, the Thai government began a policy on the reduction of dependence on outsiders through encouraging self-reliance and strengthening communities by using their community capital creatively to design products with identity to their local context. The project also provided expertise concerning management, public relations, application of technology to standardize products, as well as domestic and global marketing (Department of Community Development Ministry of Interior, 2018). The purpose of the project was to enhance and stimulate community economy of each village to provide jobs and income, to alleviate labor migration, and to bring strength to the community, which is crucial to the Thai economy.

Each province broadly applied the project of OTOP to improve its community economy system. Sakon Nakhon Province also used the project to enhance its local product, which is an indigo fabric generating income for the community of approximately 1,137,788,903 Baht annually (Sakon Nakhon Provincial Statistical Office, 2019). At present, there are roughly 600 groups located in 18 cities of the province, making fabric, garments, purses, and souvenirs (Sakon Nakhon Provincial Community Development Department, 2018). Sakon Nakhon Province was announced to be the World Craft City for Natural Indigo from The World Crafts Council-Asia Pacific Region (WCC APR) in 2017 (Matichon News Online, 2018). In order to encourage indigo fabric businesses to have higher quality and standards, Sakon Nakhon Province has developed a strategic plan, provided a fiscal budget, and offered a variety of projects to benefit indigo fabric improvement. In 2012, other organizations outside the province, like the Kenan Institution Asia, also supported the indigo weaving groups by providing funds to Biodiversity-based Economic Development Office (Public Organization) under the project of improving the indigo weaving group of Sakon Nakhon province. The project's objective was to improve the production process and the design to suit the desires of the market and the demand of its' customers (Biodiversity-based Economy Development Office (Public Organization), 2018).

As mentioned above, there were around 600 indigo weaving groups in Sakon Nakhon province, scattering across 18 cities. They formed their groups differently. However, they had similar goals of creating jobs and increasing income to the villagers as well as building good relationships among them by practicing the concept of community enterprise. These groups also had different means of group management in terms of general management, production planning, producing, product development, marketing, public relations, finance, and accounting. Therefore, learning about the establishment and management of indigo weaving groups in Sakon Nakhon Province is the objective of this study and will be used as a model for others to learn from. Further, it will fill the gap of knowledge regarding effective and successful group management, which eventually led the villages to have strong community economies and sustainable development.

This article presents a literature review on indigo-dyed fabric and community enterprise, which will be used to construct a conceptual framework and help to understand the topic. Then, a qualitative research methodology including information on the informants, data collection, research tools, and data analysis will be discussed. Later, the results and discussion will be presented. Finally, the conclusion will be presented.

2. Literature Review

2.1 Indigo Dyed Fabric

The researchers studied the history of indigo dyeing to learn about the dyeing process and found that the most important aspect of the process is the production of Indigo dye. Indigo is a natural color obtained from indigo trees (Genus: *Indigofera*), which is significant to the cultures of the Tai Lao, Phu Tai, Ka Ling, So and Yo peoples. It is most commonly used on cotton fabric to obtain blue or blue tones, in traditional styles passed down through generations. Mattapha and Chantaranonthai (2015) indicate there are 3 varieties of indigo: *Indigofera Tinctoria* (with hair), *Indigofera Tinctoria* (without hair) and *Indigofera Suffruticosa* are commonly used in dyeing the cotton with natural indigo color. The cotton and indigo are important parts of the indigo dyeing process that increases income for the community and entrepreneurs. Indigo dyed cloth can be processed into clothes, bags, shoes, jewelry and household decorative items. In addition, the OTOP project creates economic value and strengthens the community economy.

Previous studies have investigated the medicinal properties of indigo trees (Thiengburanathum, 1999), product processing from indigo-dyed fabric, the effectiveness of indigo dyed fabrics as natural UV protection (Pupatana, 2009), the development techniques for weaving and suitable processing of indigo fabric products (Teerakulchaikit, 2014), and product development of indigo-dyed fabric as a commercial business (Somprajob & Somprajob, 2008). In this regard, the researcher has conducted a study on the entire indigo-dyed fabric production process which is important to the management of professional groups in Sakon Nakhon Province.

2.2 Community Enterprise

Local economic and social development is important to strengthen the economy and sustainability of Thailand by promoting the use of community resources, such as biological capital (natural resources), social capital (labor) and cultural capital (local knowledge), to create their products and services. The application of community resources is useful for villagers to increase the income of their families and community, which is the crucial goal of the community enterprise concept. It helps to enhance the village's economic base and strengthen the community. The important goal of community enterprise is to create "sufficiency" composed of 3 operation levels (household, community and network) (Grisanaputi, 2016). These comprise the process of community enterprise to develop businesses and products into an advanced sufficiency economy (Nilsri, 2002). The steps for group management following the concept of community enterprise consists of 9 categories, including:

1. group establishment;
2. group management;
3. production planning;
4. production management;
5. product development;
6. marketing;
7. public relations;
8. finance; and
9. accounting.

(Grisanaputi, 2010)

Previous research has found that the concept of community enterprise focuses on solving problems of job creation and income distribution equitably. For example, a Study of Community Enterprise Development

Under The Sufficiency Economy Philosophy in Sakon Nakhon Province (Kittilertphaisan, Katiwat & Kittilertphaisan, 2012), Knowledge Management of Indigo Dyed Fabric Community Business Group (Songleknok, Loipha & Vongprasert, 2015) and on Success Factors of Different Types of Community Enterprise Operations by Domestic Community Enterprises and Foreign Community Enterprises (Sangayotin, 2017). In this article, the researcher uses the concept of community enterprise to explain and understand the management system of indigo dyeing groups, especially studying the conditions of management of indigo-dyed weaving groups into 9 issues (a group established, group management, production planning, production management, product development, marketing, public relations, finance, and accounting).

3. Research Conceptual Framework

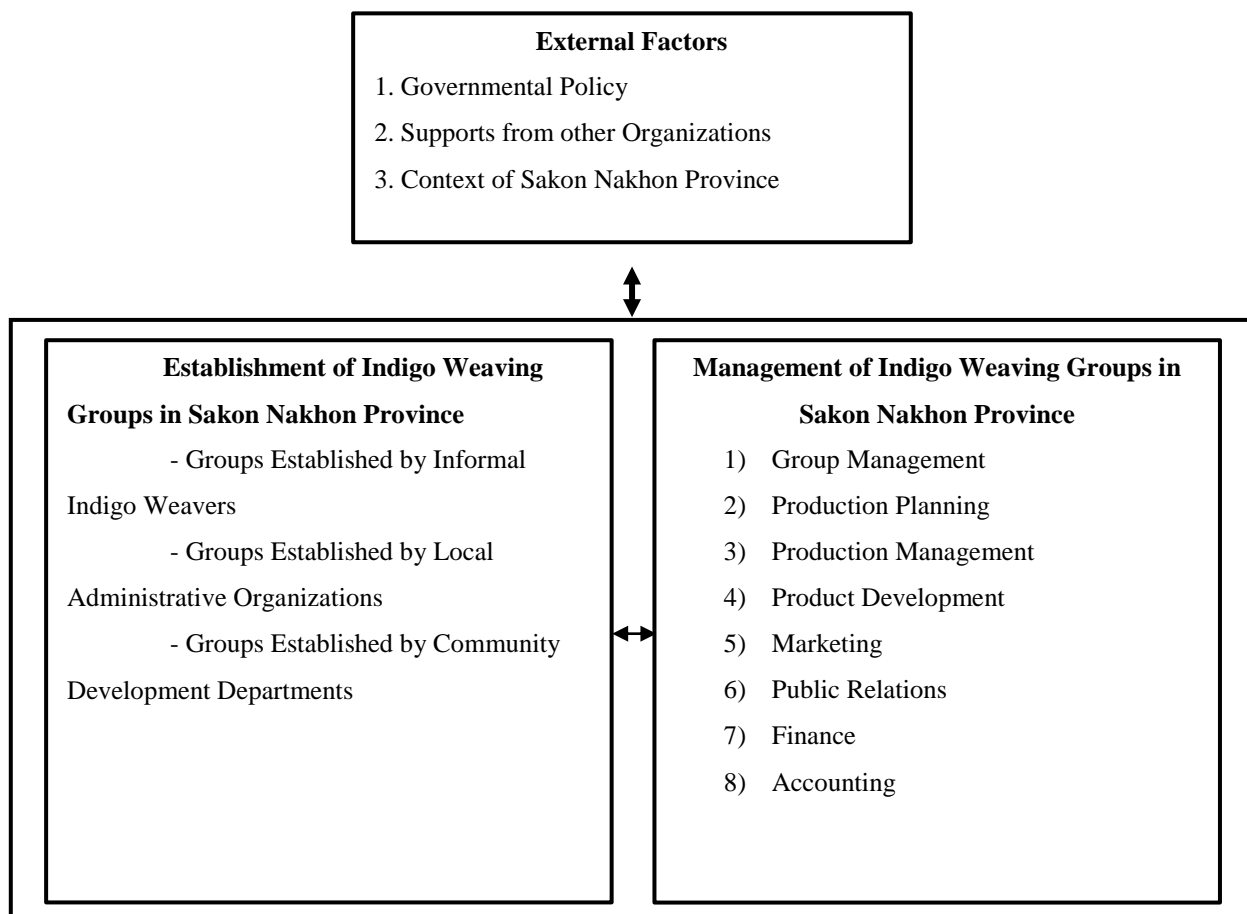


Figure 1. Research Conceptual Framework

4. Research Methodology

This is a qualitative study. The key Informants were officers supporting the indigo weaving groups from the 18 districts of the Department of Community Development of Sakon Nakhon Province. They were 3 district development heads, an acting district development head, 4 community development specialist officers and 3 operational level community development specialists to participate in a focus group discussion on the establishment and management of the indigo weaving groups in Sakon Nakhon Province. There were 29 participants from indigo weaving groups (4 group presidents, 9 committee members and 5 members of indigo

weaving groups), which received 5 stars from OTOP Product Champion (OPC) in the year of 2016 and were selected to join an in-depth interview. The interview concerned the establishment and management of groups, product planning, managing and improving, marketing, advertising, financing and accounting.

Research tools were an interview guideline for a focus group discussion, an interview guideline for an in-depth interview, observation guideline, and field note. Data were validated using a triangulation method and were then categorized into topics and objectives. The data was analyzed using content analysis and descriptive analysis.

5. Results

5.1 The Establishment of Indigo Weaving Groups in Sakon Nakhon Province

5.1.1 Informal Indigo Weaving Group

This type of weaving group started from using Pu Tai's local wisdom concerning local natural resource management to create handicrafts by making cotton yarn and dyeing with indigo to make garments for daily use and as souvenirs for elderly guests attending marriage ceremonies. This experience made the weavers proficient at hand spinning cotton, indigo dyeing, mudmee tied-dyeing and weaving, which are crucial skills for the indigo dyeing and weaving process on Sakon Nakhon Province. As a result, villagers were inspired to gather as an informal group for indigo dyeing and weaving after harvest season.

5.1.2 Group Formed by Local Administrative Organizations

The Local Administrative Organizations played an important role in establishing groups in the villages. The organizations cooperated with the local leaders to set up public hearings with villagers in order to solicit local wisdom gurus in various fields such as arts and culture, native music, herbal, illness treatment, basketry, and indigo dyed weaving with local leaders. Then, the indigo weaving groups were established with their main objective to be a learning center for transferring knowledge (local wisdom) to villagers. Moreover, indigo-dyeing is the inheritance of local wisdom of weaving to the younger generation, creating income to villagers and helping to prevent the fading away of knowledge of indigo weaving, which has been solely taught among family members.

5.1.3 Group Formed by Governmental Organizations

The city community development departments encouraged villagers to set up weaving groups. The community development officers explained the benefits of gathering as a weaving group, which received broad support from the departments such as financial aid for group operation, materials and equipment needed for indigo weaving, obtaining expertise on group management, product design and development as well as marketing. Therefore, villagers with and without skills in indigo weaving were interested in and formed groups.

5.2 The Management of Indigo Weaving Groups in Sakon Nakhon Province

The management of indigo weaving groups in Sakon Nakhon Province is explained below.

5.2.1 Group Management

The weaving groups managed their groups by assigning roles and duties to group members. After the groups were formed, they began collecting group entry fees from the group members, which reflected participation among group members. The group entry fees could be used for investment in activities such as

buying materials for weaving (cotton yarn and indigo dye), and necessary equipment. The next step was to set up a group meeting in order to form a committee. The results found that the majority of the groups elected a board and designed a committee structure. The structure was typically composed of a president, vice president, advisor, secretary, treasurer, quality assurer, accountant, production planner and maker, marketing manager, public relations manager, as well as board members. Then, rules and regulations for the groups were drafted to navigate the group management clearly. They set group objectives, collected money from group members (used for revolving funds within the group) obtained loans for investment, set up qualifications for group members, got group members enrolled, set terms, set position resignation rules, set fees for group entry, set a savings plan, managed the group, and assigned duties and responsibilities of the board. This information was used as the rules and regulations of the groups.

5.2.2 Production Planning

Writing a business plan was a method to plan their production process and was used for getting product certification from relevant organizations. Practically, their production process was not guided by the business plan. This was because they had to meet demand for special occasions (Thai and western special occasions) and special events for local and national fairs such as Sakon Nakhon Red Cross fair, Indigo street of Sakon Nakhon province, Worship Festival for Phra That Choeng Chum and Luang Por Ong Saen and OTOP City. As a result, they had little time to improve their business plan regularly. Moreover, they did not have stock pile materials for special occasions and special events. Instead, they just ordered materials as needed.

5.2.3 Production Process Management

The production process management was the management of materials, which relied on a supply chain to make quality products. Materials for indigo weaving were cotton and indigo dye. Both were major materials, which were always prepared to be sufficient for producing indigo cloth to meet the demand of the customers. Many groups encouraged members to grow cotton and indigo plants in their rice fields or orchards in order to use as materials and help to reduce production costs from ordering material from outside the communities.

The groups obtained materials in 2 ways. The groups provided materials for group members to weave and returned products back to the group to sell to customers. The groups paid labor fees to the members. This way was beneficial to the members by saving the time spent travelling outside the village to get materials. The other way was that the group members found their materials. In this case, the members grew their cotton plants, spun cotton yarn (by hand), or grew indigo plants. These were local materials planted in the communities, which helped to reduce the cost of obtaining materials from outside the villages.

5.2.3.1 Product Design and Indigo Dyed

5.2.3.2 Indigo Dyes

The majority of indigo weaving groups used natural indigo from 3 species including *Indigofera Tinctoria* (with hair), *Indigofera Tinctoria* (without hair) and *Indigofera Suffruticosa* to produce natural indigo dye. Only a few groups used chemical indigo dye, which could be bought from markets. Those chemical dyes were acid blue, imitation indigo set, chemical dye under Sampao and Singto Hits Drum brands (gave dark indigo shade). To reduce fixed-cost of buying indigo dyes and increase the depth of the color, an indigo weaving group dyed its fabric by mixing indigo dye with *Marsdenia tinctoria* R. Br. The study also found that traditional beliefs complicated the weavers' decision making about the dyeing, especially the belief that color does not bind to the fabric if the dyeing is performed on Buddhist Holy Days.

5.2.3.3 Pattern Design

Mudmee pattern is popular pattern used among indigo weaving groups. The pattern was a traditional tie-dyeing technique to make pattern on the yarn before the yarn was dyed and woven. The process started with designing pattern by using straw rope to tie tightly around cotton yarn. Then, the cotton yarn was dyed. The Mudmee indigo fabric was popular for making sarongs and other garments.

5.2.3.4 Indigo Dyed Weaving

Each group had its own weaving technique depending on the weavers' experience, skills and technique. Moreover, weaving patterns such as those ancient Pikul Flower and Look Kaew patterns were delicate and difficult to weave, so the weavers must have a high level of skill and patience. Additionally, there was a technique of switching the colors of yarn woven into fabric.

5.2.3.5 Storing Products

The majority of the weaving groups did not store their products because they were all sold as soon as they were finished. The groups sent products to customers via the post office or set up appointments to deliver the products.

5.2.4 Product Development (Improvement)

5.2.4.1 Product Development

The majority of indigo weaving groups in Sakon Nakhon Province did not sew any fabric because they lacked of knowledge of designing and sewing and did not have sewing machines. Some group sewed indigo fabric into charming items such as dolls, purses, shoes, shirts, skirts, dresses, pants, hats, shawls, table cloths, and curtains. All of these mainly utilized a hand-made process.

5.2.4.2 Packaging Design

Packaging design was very crucial for adding value to the products. Most of the indigo weaving groups used paper or plastic bags as the package handled to customers because they were cheap and easy to get from markets. Some groups received financial aid from several organizations to make and design packaging. Interestingly, they had only used one box for presenting to the competition of OTOP Product Champion.

5.2.4.3 Product Storytelling

The weaving groups had product storytelling on local wisdom of Phu Tai and indigo dyeing process, which was only presented for the competition of OTOP Product Champion. However, the groups did not present their story on their ordinary packaging. Their package showed only the name of the groups, contacts, indigo dyeing process and product care information.

5.2.5 Marketing

There were 4 components of marketing mix (4 Ps): product, price, place and promotion. The results are discussed below.

5.2.5.1 Product

The results of the products are discussed above.

5.2.5.2 Price

There are 2 methods of setting the price. One was that the group leader and group members set the price by researching price on the market. Then, they set up a meeting to discuss price and money returned to the members. The other was that the weavers set the price based on the difficulty of producing the fabric (designing patterns and weaving fabric).

5.2.5.3 Place

There were many channels of product distribution starting from selling at the group office to overseas. Products were distributed at the local markets such as community markets in sub-district, district, and indigo street fair in front of Phra That Cheong Chum of Sakon Nakhon Province. The products were also sold at the annual fairs and festival of the province such as Wax Castle and Long Boat Race Festival, Worship Festival for Phra That Choeng Chum and Luang Por Ong Saen, Red Cross festival and Moon Mung Esan Fair. The products were also sold at the domestic markets including OTOP Midyear and OTOP City. At the overseas markets, the results found that only 2 groups exported their products such as shawls, shirts, blouses, pants, skirts, dresses and souvenirs. These items were exported to the United Kingdom, France, Japan, Laos, and India.

5.2.5.4 Promotion

The 2 groups used methods of promotion including reducing price (between 10-15%), and giving free small products (coin purse or handkerchief).

5.2.6 Public Relations

Most of the indigo weaving groups used “Word of Mouth”, which was very informal and did not have any standards resulting in small/narrow public relations. The group knew how to use many types of Social Media such as Facebook, Instagram, and LINE to communicate with customers. Most weaving groups did not have a group brochure because they thought that it was costly and not needed. Some groups used a business card to advertise their products and communicate with customers.

5.2.7 Finance

There were two types of revolving funds. The first type of revolving fund was a revolving fund within the community, which was derived from group entry fees and monthly share payments. This fund was saved for production expenses. The revolving fund within the community also included a savings group for production. The objective of this savings group was to encourage group members to have savings and provide loans for production investment or spending in daily life. This reflected mutual aid among villagers. The rules and conditions of savings group in terms of savings, getting loans, interest, and dividends varied from one group to another according to the group context. The revolving fund within the community received additional financial aid from local governmental organizations such as sub-district administrative organizations, and municipality offices. They played an important role in supporting career groups in the community by providing budget for projects of supporting and developing career groups. The second type of revolving fund was derived from outside the community, mainly the Bank for Agriculture and Agricultural Cooperatives.

5.2.8 Accounting

Most of the weaving groups did not have systematic accounting ledgers because most of the members were elderly, had low education, did not have knowledge of accounting, and did not understand how to make

a standard accounting. As a result, they jotted down only a list of expenses (materials, equipment, wages, and group management) and a list of fixed costs as well as income.

6. Discussion

Community enterprise is the concept of using community capital to enhance community economy (both social and economic aspects) by encouraging villagers to work as a group. Therefore, there are a large number of groups of villagers in every province. Each of them use their local wisdom and materials (natural resources) in the community to produce goods and services. The methods to establish the groups are different depending on each community context. However, previous studies (Noicham, Tarasansombat & Sangjindavong, 2018) classified these into 3 categories including groups set up by villagers themselves (informal groups), groups arranged by the local administrative organizations and the city community development departments. These findings are similar to how the indigo weaving groups in Sakon Nakhon Province were established. However, \ Grisanaputi (2010) added method of group establishment; formation by Non-Governmental Organizations (NGOs).

Considering group management, the study found that each group had its own management method depending on its context. This is normal practice among community enterprise groups as found in other studies (Saithong, Thienklam, Wanruangrong, & Lasopha, 2011; Hanwiwat, 2011). However, this study and previous studies have something in common. For example, they had a business plan and used it solely for getting product certification from relevant organizations. Practically, their production process was not thoroughly planned. They produced to meet demand for special occasions and special events. Moreover, they had little time to revise and update their business plan regularly and they did not realize the importance of the plan, which might have helped them to be more successful. One of the most interesting issues that community enterprise groups have to face to is a lack of knowledge and skills to develop products. In other words, they did not design and develop products creatively resulting in low price and little variety. They might be similar to other groups' products. Further, these groups are less likely to add value to their products such as unimagative packages (used regular paper or plastic bags) and a lack of product storytelling. Romesri and Kheokao (2019) suggest a story presenting the natural production process of indigo-dyed fabric and hand weaving would be one way to add value to the product. The use of "Word of Mouth" and providing business cards were popular ways to communicate with customers resulting in narrow public relations. Finally, they did not have systematic accounting ledgers. They made only an easy list of expenses, fixed costs and income.

Interestingly, in order to reduce the fixed-costs of buying indigo dyes and to increase the depth of the color, an indigo weaving group dyed its fabric by mixing indigo dye with *Marsdenia tinctoria* R. Br., which was not commonly used among indigo weaving groups in Sakon Nakhon Province. However, it was widely used in Nakhon Panom Province according to the study of Teangluma, Teangluma and Saithong (2013) which found that traditional beliefs complicated the weavers' decision making about the dyeing, especially the belief that color does not bind to the fabric if the dyeing is performed on Buddhist Holy Days.

7. Conclusion

Indigo weaving groups in Sakon Nakhon Province established their group differently and could be categorized into 3 types of groups: informal indigo weaving groups, groups formed by Local Administrative Organizations and groups formed by governmental organizations. The groups were managed by assigning roles and duties to group members after establishment. A business plan was prepared and used to govern their production processes and to obtain product certifications from relevant organizations. Practically, they did not use their business plan. Instead, they produced to meet demand for special occasions and special events. The groups obtained materials in 2 ways. The groups provided materials for group members to weave and returned products back to the group to sell to customers. The groups paid labor fees to the members.

Alternatively, the members grew their cotton plants, spun cotton yarn (by hand), or grew indigo plants helping to reduce the costs of obtaining materials from outside the villages.

The majority of indigo weaving groups used natural indigo from three species including *Indigofera Tinctoria* (with hair), *Indigofera Tinctoria* (without hair) and *Indigofera Suffruticosa* to produce natural indigo dye. Only a few groups bought chemical indigo dye from markets. Mudmee pattern - a traditional tie-dyeing technique to make pattern on the yarn before the yarn was dyed and woven - is a popular pattern used among indigo weaving groups. Each group had its own weaving technique depending on the weavers' experience, skills and technique. The more delicate and difficult the patterns were to weave required weavers with high level of skill and patience. The majority of the weaving groups did not store their products because they were sold as soon as they were finished. The majority of indigo weaving groups did not sew any fabric because they lacked of knowledge to design and sew and did not have sewing machines. Most of the groups used paper or plastic bags as the package handed to customers because they were cheap and easy to get from markets. The weaving groups did not present their story on the normal packaging, showing only name of the groups, contacts, the indigo dyeing process and product care information.

There were 2 methods of price setting: prices set by the group leader and group members as well as price set by the weavers. Products were distributed at the local markets and at the overseas markets. The groups used methods of promotion including reducing the price (by 10-15%), and giving free small products (coin purse or handkerchief). Most of the groups used "Word of Mouth" and provided business cards as a way to communicate with their customers. There were 2 types of revolving funds: a revolving fund within the community and a revolving fund outside the community, mainly the Bank for Agriculture and Agricultural Cooperatives. Most of the groups did not have systematic accounting ledgers. They jotted down only a list of expenses (materials, equipment, wages, and group management) and a list of fixed costs as well as income.

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