

**Benefit of Local Material Utilization**  
**A Case of the One Tambon One Product Project in Thailand**

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**Abstract**

In 2001, the Thai government introduced the One Tambon (administration unit in Thai) One Product project (hereafter OTOP) with the intention that the project can encourage villagers to develop items for commercialization by using local resources. This study tries to analyze the project in terms of beneficiaries of the project toward the rural village, by focusing specially on farmers. The OTOP project is assumed to provide benefits to people in the village as a whole and not only the people who participate in the OTOP project. This study focuses especially on farmers who do not directly participate in the project. Field research was conducted during 2008-2009 intermittently in Chanthaburi, a province in eastern Thailand.

The study shows that after the project implementation, villagers repeatedly review their farm products repeatedly and create new products by using them. Therefore, farmers take an important role as suppliers of raw materials. However, the linkage between farmers and OTOP producers was mediated by middlemen that do not allow farmers to get full benefits from the project.

Keywords: One Tambon One Product (OTOP) project, beneficiary, agricultural processing business

**1. Introduction**

Thailand is known as the country with plenty of natural resources. Thai agriculture had never failed to preserve the country's food security (Thaiprasert, 2003). The major source of rural income and revenue from commodities exports are derived from the agricultural sector. It was also a major source of industrial sector's inputs during the beginning of industrialization. However, Thai agriculture is considered as a poor productive sector which is losing its competitiveness to other sectors in the country. The contribution of agricultural sector to GDP is declining. Its contribution to

GDP sank from 38 percent in 1951 to 8.9 percent in 2008 while the contribution of industry rose from 17 percent in 1951 to about 40 percent in 2008 (Thailand's National Economic and Social Development Board). Nevertheless, almost 70 percent of total population is in rural area and the labor force in agricultural sector remains high compared to other sectors.

The economic crisis in 1997 manifested the weak basis of Thai economy that relied on foreign investment with managerial problems in many large enterprises. The country was seriously hit by the crisis and the most affected people were those who were at grass-root level. However, this crisis was considered to have brought several changes to Thai economy. After Thailand experienced the serious economic crisis, the government turned its attention to the agricultural development. In 2001, the Thaksin government came up with many policies aiming to rehabilitate the rural economy. One policy that received nationwide attention was the "One Tambon<sup>1</sup> One Product (hereafter OTOP) project". This is the community business promotion project that aims to strengthen grassroots economy by supporting cottage industries to add values to raw materials. The OTOP project was motivated by the 'One Village One Product' (OVOP) movement, which was originally initiated in Oita prefecture, Japan. The Thai government has adopted and developed it to stabilize the rural Thai economy. The OTOP project is designed to encourage rural people to identify their local resources and culture to add value and produce unique local specialties for marketing both domestically and internationally.

Due to the rapid growth and popularity of this project, many studies were conducted to investigate the project in many aspects (Engprayoon, 2005; Izumi, 2007; Kawamura, 2002; Kaeomanotham, 2008; Kurokawa, 2008; Nanthakitjarmorn, 2003; Pholam, 2005; Takanashi, 2003; Thammaapirom, 2004; Wirudhaphol, 2002). However, among these studies, none of them has examined the benefit of the project to farmers, who are considered as raw material supplier. This study tries to, first, analyze the relationship between OTOP producers and farmers in the rural area and, second, investigate whether benefits from the implementation of this project also reach farmers. The assumption made in this study is that there is a strong linkage between OTOP producers and farmers in the rural area. This is because most of people in the rural area are still engaged in traditional agriculture, and based on the objective of OTOP, local resource use is one of its objectives, and therefore the OTOP producers are encouraged to use local materials. To prove this assumption, the field survey was

conducted in Chanthaburi province in eastern Thailand. The focus of the field survey was food processing business which used agricultural product as raw material.

## **2. Literature review**

### **2.1 Agricultural processing business**

The idea of agricultural processing is an important engine for development. According to Abbott (1988), the agricultural processing enterprises are potent motors for development. They provide job creation, increase new more efficient production techniques, reduce waste, extend the period of availability of traditional foods, and broaden the range of foods offered to consumers. Thus, there is no doubt that without development of the agricultural sector, it is impossible to create sustainable growth and equal society.

There is one study that supported the notion above. The study pointed out that compared to the manufacturing industrial sector, these agricultural and agricultural-processing sectors have high potential to increase domestic production, generate more income to many households, create better income distribution and induce more saving in the country through linkage or multiplier effects of the role of the agricultural sector in Thailand (Thaiprasert, 2003). This study also suggested that the government or policy makers should think more carefully when creating new economic and social development policies and plans. This is due to national development policies that are usually biased against agriculture. Another suggestion is from Abbott (1988) who argued that positive government policies toward agricultural-processing enterprise should provide 1) financial, fiscal and other facilities for their establishment; 2) assistance in developing physical and social infrastructure needed for successful operation; and 3) ongoing public service that complement the activities of the processor.

### **2.2 The impact of OTOP project**

Thailand introduced the OTOP project in 2001. The government's effort and success to revitalize rural area that induces grassroots people to get into business in only 3 years should be appraised (Takanashi, 2003). Because of its popularity, OTOP project received attention from many researchers. Takanashi (2003) and Izumi (2007) studied about the impact of the OTOP project on rural areas. In Takanashi's (2003) study, he investigated the impact by applying the idea of backward linkage and using

an inter-industry relations table of 19 provinces in the northeastern Thailand. The study of Izumi (2007) was more descriptive and at micro level by investigating the impact on rural household and economy of a basketry village as a case of success village of OTOP. According to their results, while Takanashi's (2003) study shows that it is difficult to conclude that the OTOP project has economic impacts since the share of OTOP product in country's GDP is very small, Izumi (2007) shows that the OTOP project has an impact on OTOP producers in terms of income generation and job creation. He emphasized that this project provided jobs for non-farm people.

Kieomanotham (2008) studied the impact of the OTOP project on handicraft village in the tourism sector. The study concluded that the implementation of the OTOP project brought more job and employment to the village. In addition to the previous two studies, she found that the OTOP project had an effect on the higher education of young people. However, according to the study, the higher education caused problems of brain drain of young people and project successors. Moreover, the OTOP project also brought a high competition to the village as well. The villagers tended to be more concerned about their own profit and lack of mutual help for each other.

The study on factors affecting the achievement of the OTOP project was conducted by Sura (2008). It concluded that management capacity, leadership, source of capital, and development were internal factors that influenced achievement of OTOP producers. Business advisement and network support were considered as external factors.

Among these studies, none of them has taken up the impact on villagers outside the OTOP group. This study tries to focus on this issue and focus especially on farmer.

### **3. Background of the OTOP project in Thailand**

#### **3-1 Economic and Social Background of OTOP project**

Thailand is known for long for its abundant natural resources, various kinds of agricultural produce, and its strong comparative advantage in agriculture. Since the 1960s, Thailand's economy depended heavily on agricultural products such as rice, maize and rubber. About three quarters of the Thai population derived their income from agriculture activities (Perkins et al., 2001). The promotion of agricultural sector

was prioritized as stated in the 1<sup>st</sup> National Economic and Social Development Plan (NESD) in 1961. The promotion of agricultural sector was mentioned in every national plan, but specific action has hardly been taken. Eventually, the country later decided to promote industrialization to become a Newly Industrializing Country (NICs) rather than Newly Agro-industrialized Country (NAICs). Beginning in the 1970s, the government began to remove trade barriers and promote the production of labor-intensive manufactured exports. Japan's economic boom and the flood of Foreign Direct Investment (FDI) in the 1980s also contributed to steady economic growth. Between the mid-1960s and the mid-1990s, GDP growth averaged 6-7 percent per year. Because of this sound economic management and relatively favorable external environment, Thailand has enjoyed its stable growth for 30 years. Through the strategy of urban-industrialization, the structure of Thai economy also changed significantly during this period. By mid-1990s, the share of manufacturing was over 30 percent, up from 14 percent in 1960, while agricultural production fell commensurately as demonstrated in Table 1. In addition to the gap among sectors, the regional differential has been widening.

Thailand is considered a country of high urban-rural gap (Takanashi, 2003). Most enterprises are located in Bangkok and the vicinity area. The per capita GDP in Bangkok and the vicinity are almost 4 times of that in the northeastern area where the population of the poor is the highest (JBIC, 2001). Moreover, even within the rural area, there is a gap between the municipal and non-municipal areas as well. In every local area, the rural area in non-municipal area has income 10 percent lower than municipal area. This demonstrates that the rural area in the non-municipal area is the poorest.

Table 1 Gross Domestic Product at 1988 Prices by Industry Origin (%)

Year	Agriculture	Industry	Manufacturing (included in Industry)	Services
1960	31	20	(14)	49
1970	27	24	(17)	49
1980	20	30	(23)	50
1990	13	38	(28)	49
1995	11	41	(31)	48
2000	10	41	(32)	49
2006	11	44	(35)	45

Source: The author, using data from Thailand's National Economic and Social Development Board(NESDB) and Bank of Thailand.

However, the current share of agricultural sector represents about 10 percent of GDP, but it still absorbs more than 40 percent of the labor force. Currently, Thailand has a total population of roughly 62 million people and about 34 million people are in the labor force. This means that 14 million of the total workers are in the agricultural sector (Table 2). Moreover, during the crisis, when the industrial and service sectors did not function, it was the agricultural sector that helped mitigate unemployment, although the agricultural sector and related industries also suffered from the crisis. This is the reason why after the crisis, agricultural development and the quality of growth received more attention from the public and the academic community. It can be considered that from the very beginning, the OTOP project was put in action to: 1) increase income for farmers by encouraging them to create new product; 2) at the same time the project is aiming to provide job for people outside agricultural sector; and 3) mitigate unemployment in rural areas and reduce the migration to urban areas.

Table 2 Employment Share by Sector

(Percent of Total Employment)	1990	1996	1997	1998	1999
Agriculture	59.5	45.4	45.1	45.7	45.3
Manufacturing	11.5	14.9	14.6	14.8	14.9
Wholesale and Retail Trade	10.2	13.1	13.3	13.8	14.3
Service	8.4	10.1	10.8	11.6	12.3
Others	10.4	16.4	16.1	14.1	13.2

Source: The author, using data from Thailand's National Economic and Social Development Board (NESDB)

The project was put in practice and spread in the country in a short time. One reason behind this phenomenon was that the OTOP project was introduced after the transformation of Thai administrative structure that has gradually changed since the end of the 1990s. The turning point is an enactment of "Tambon Autonomy Law" in 1997. According to this law, every district has a status as a corporate executive and local form of government. It means the district has its own decisive authority. Therefore, the process of OTOP project could be implemented rapidly.

### **3-2 Present situation of OTOP project**

The OTOP project was influenced by the One Village One Product (OVOP) movement which started in 1979 in Oita Prefecture, Japan. This movement was initiated by the then Prefectural Governor Morihiko Hiramatsu as a way to advocate the issue of depopulation and foster a spirit of self-reliance and pride of the local

people. One of the main purposes was to eradicate the heavy dependency on central government, and to promote autonomy and willingness amongst regional people (Kurokawa, 2008). This movement has three basic principles: “Think Globally, Act Locally”; “Independent/Creativity”; and “Human Resources Development”. Based on these three principles, the Oita prefectural government encouraged people by providing supports like establishment of research and guidance organization, human development program, trade promotion program for sales channel expansion and award to honor people’s achievement. As a result, people actively participated in the movement and this action increased the number of both product and sale amount during 20 years of the implementation (Kawamura, 2002).

It is said One Village One Product movement was introduced to Thailand in 1984 by Mr. Yasushi Yasuda dispatched to Thailand by the Japanese Economic Planning Agency. He submitted a paper on the One Village One Product movement to concerned people in the Thai Government. At that time, many institutions paid attention to this movement, especially the Ministry of Industry and Ministry of Labor of Thailand. They sent groups to Oita Prefecture to investigate. However, there were three reasons at that time the investigation found that this project did not suit Thai people. Firstly, the Thai are considered to lack teamwork. Secondly, taping new market was too difficult for Thai people. And finally, relationship among Thai people was not strong so they might not be able to continue the project (Kawamura, 2002). After that, the One Village One Product Movement was publicized by many groups such as Japanese NGO groups in Thailand, Japanese consultant companies and even through the exchange of Oita’s One Village One Product group members themselves. Although many institutions were interested in the One Village One Product movement, it was not put in to practice seriously. Until Prime Minister Taksin’s government, it was announced that the new government would attach top priority to the issue of poverty in local area. Therefore, the establishment of the One Village One Product Movement became a part of national policy and was announced officially as One Tambon One Product Project in October 2001.

OTOP has 3 types of producers: re community group; individual owner; and SME. The product is sorted into five categories: 1) food product, 2) beverage product, 3) garment, 4) appliance, furniture and souvenir, and 5) non-food herbs. The product registered in OTOP project will have OTOP mark as a guarantee from the government. Having OTOP brand, producers can differentiate their product from the

others and ensure the product quality which will attract consumers to buy their products. In 2006, 37,840 producers and 75,628 items are registered in the OTOP project. The total sale amount of the OTOP products increased from 16,714 million baht in 2002 to 54,558 million baht in 2005 (Office of SME Promotion, 2006).

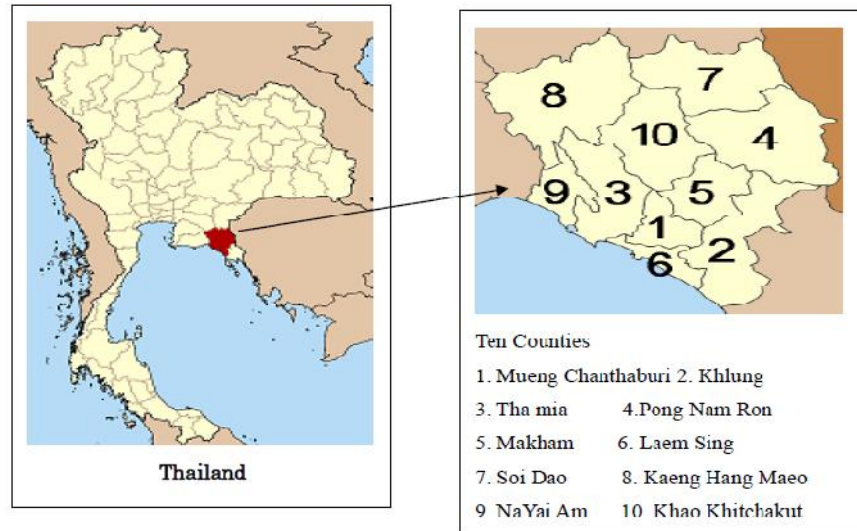
#### **4. Overview of the Research site and Methodology**

##### **4-1 Overview of the study site**

To investigate the benefit of the OTOP project to farmers in the rural area, the field survey was conducted in the eastern province of Thailand, Chanthaburi. This province is located in the east, 245 km. from Bangkok. The total population is 511,587(2009). This province consists of 10 counties, 76 districts and 721 villages. The north and east part are forest and mountainous areas, the south is coastal area. Because of its geographical condition, this province is wealthy and rich in natural resources particularly gems in addition to the plentiful field of tropical fruits including rambutan, Durian, and mangosteen. Products from the seas are also extensive. Over 50% of the population are engaged in the agricultural sector. In 2000, it produced nearly 380,000 tons of durian, which was 45.57 percent of Thailand's durian production and approximately 27 percent of the world production of this fruit. The reason for choosing this area as research site is because this study focuses on the benefit of the OTOP project on farmers and, as mentioned before, half of the people in the province are engaged in agriculture and there are various agricultural products. Therefore, many kinds of OTOP products are also produced. In 2006, there were 314 producers registered in OTOP project. Among 485 OTOP items in this province, 172 items are food product.



**Figure 1 Research site: Chanthaburi Province, Thailand**



Source: Wikipedia ([http://en.wikipedia.org/wiki/File:Thailand\\_Chanthaburi.png](http://en.wikipedia.org/wiki/File:Thailand_Chanthaburi.png))

#### **4-2 Sample survey**

The study is descriptive and focuses on farmers in the area where the OTOP project has been implemented. The field survey was conducted intermittently during 2008-2009, by applying interview and questionnaire. An interview was held with 12 community group leaders, the village chief and one middleman in the village to obtain the data on the raw material used in the project and the flow of farm product in the village. The study also applied questionnaire, consisted of closed and open-ended questions. Questionnaires were distributed to 130 farmers who belong to the production group in the OTOP project and another 145 sets were distributed to farmers who did not participating in the OTOP project. The questions asked about farmers' general information and about their farm. The questions are also about how the OTOP project affects their life and their opinion toward the project. 82 sets from 130 and 103 sets from 145 questionnaires could be collected.

#### **5. Result from the field survey**

Interview was conducted with 12 community groups. Almost all producers had been engaging in production before the OTOP project. Products of all producers are mainly processed farm product, especially fruit, shown in Table 3.

As Chanthaburi province can produce large amount of durian, there are many products using durian as raw material. Durian chip became a popular product among

producers and consumers in only for the past ten years, just right before OTOP project was introduced. Before, because of low price of farm product and surplus production of durian, people could not sell and had nothing to do but dump the large quantity of durian. Farmers and people in the agricultural department considered adding value to it and came up with durian chip product. When OTOP was introduced, many community groups actively joined the project and many of them chose durian chip as their product. This production is still carried on so far. Currently, this product is still produced and it has become popular not only within the country but also internationally. The reason for product's popularity for a long time is that the raw material itself is still available in the area. Raw materials for durian chip are mostly left over from the size selection. Normally, markets do not prefer oversize durian because of its thick skin that makes it difficult to eat and export. The case of using leftover material can be used in mangosteen product as well. Recently, the farm product that cannot sell at good price is used as raw material. Even with bruise producers can use the content inside. From the interview, it was found out that after the OTOP project implementation, villagers have reviewed their farm products repeatedly and tried to initiate a new product by using them. It is plausible to argue that the support in facility in the beginning of the project is considered an important factor inducing villagers to eagerly participate in the project.

In terms of local raw material utilization, the result from the interview showed that all community group producers use and prioritize the local material. Since they have order from customers all year, it is necessary for them to save sufficient material for the whole year production. For those who have enough local material, they will keep it frozen for the production, and for those who do not, they will purchase raw material from other area (from the southern area). However, they seem they do not want to utilize raw materials from other sources because of the difference in material quality.

**Table 3 General Characteristics of community and SME producer**

Name	Year of establishment	Year of OTOP registration	No. of member	Product
1.Kombang Women Group	1995	2003	50	Durian Chip, processed pork, processed fruit
2. Sueng Durian development Group	2000	2003	50	Stirred durian, durian chip, durian candy,
3.Nong Khon farmer Group	1998	2002	15	Stirred durian, durian chip, durian candy,
4.Plai Klong food Processing Group	1999	2005	41	Stirred durian, durian chip, durian candy,
5.Pongrad samakkee Women Group	1982	2003	70	Rose apple product
6.Tharamasamakkee Woman Farmer Group	1989	2006	40	Fruit and vegetable processed Product
7.Samet Phosri Woman Farmer Group	1994	2004	32	Cider processed product
8.Nong Kla Processing Group	2000	2003	50	Durian processed product and cookie
9.Khao Baaisri Woman Group	2000	2003	45	Durian processed product and cookie
10.Muangrea Women Group	2001	2003	32	Cashew nut product
11.Farm Product Processing Group	2004	2004	25	Banana processed product
12.Tambon Bo Woman Group	1997	2003	15	Cashew nut product

Source: The author. Based on the data in the field survey

To investigate the linkage between farmer and OTOP producers, questionnaire was distributed to get information from farmers. The demographic characteristic of the study participants is summarized in Table 4. Of 103 farmers, 43.69 % were male and 55.34% were female, 3.88% of them were under 20-29 years old, 15.53% were between 30-39, 33.01% were between 40-49, 33.01% were between 50-59, and 14.56% were over 60 years old. 10.68% of 103 farmers were single, 71.84% were married and 16.50% were divorced. In terms of education, 52.43% had received primary education, 10.68% had finished junior high school, 14.56% had received high school education, 6.80% had graduated from technical college and 14.56% had higher education. This table also showed that 62.14% had 1-4 people family members, 33.98% had family members of 5-8 people and 2.91% had family members between 9-12 people.

**Table 4 Demography of farmer outside OTOP project**

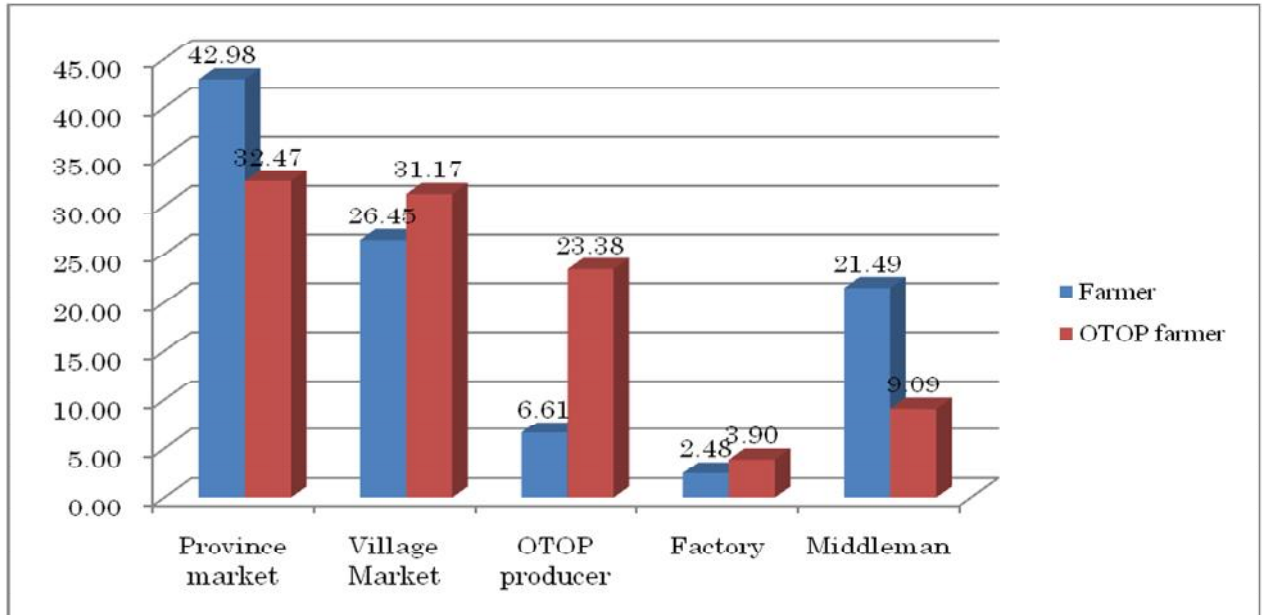
N=103

<b>Characteristics</b>	<b>Number of person</b>	<b>Percent</b>
<b>Gender:</b>		
Male	45	43.69
Female	57	55.34
N/A	1	0.97
<b>Age:</b>		
Under 20-29	4	3.88
30-39	16	15.53
40-49	34	33.01
50-59	34	33.01
Over 60	15	14.56
<b>Marital Status:</b>		
Single	11	10.68
Married	74	71.84
Divorce	17	16.50
N/A	1	0.97
<b>Education:</b>		
Primary School	54	52.43
Junior high school	11	10.68
High school	15	14.56
Technical college	7	6.80
Graduate	15	14.56
N/A	1	0.97
<b>Number of family member:</b>		
1-4 persons	64	62.14
5-8 persons	35	33.98
9-12 persons	3	2.91
N/A	1	0.97

The study also tried to examine farmers' main market. Responses from participants are illustrated in Figure 3. For farmers who do not belong to OTOP, 42.98% sell their product at province market<sup>2</sup>, 26.45% sell at village's central market<sup>3</sup>, 21.49% sell to middleman<sup>4</sup>, and 6.61% to OTOP producer and 2.48% to factories.

For farmers who belong to community group in the OTOP project, 32.47% and 31.17% sell their farm product at province market and village market respectively. 23.38% sell to OTOP producers, 9.09% sell to middlemen and 3.90 to factories.

**Figure 2 Main market for farmers**



Note: Multiple answers.

Source: The author. Based on the data in the field survey

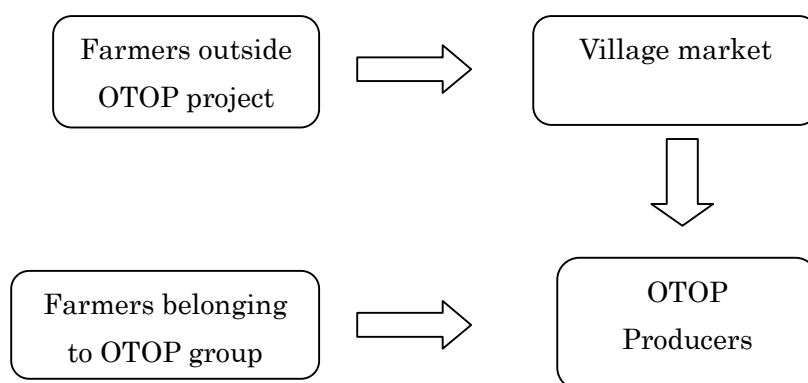
### **5.1 Discussion**

This study examined the benefit of agricultural processing business to farmers in rural area by using the OTOP project as a case study. It was find out that all OTOP producers made the most of their local resource by using it in the production. Additionally, after OTOP implementation, they created new product that can be made from local materials. The OTOP producers preferred local material to outside one because of its quality and low cost of transportation. These community groups may be considered as a new market for farmers in rural area. In Figure 3, it is demonstrated that farmers who belong to community group in the OTOP project could sell their farm product to the producer groups they belong to. This shows that they have one more market for their product. The advantage of being member group is that they certainly have a place to absorb their farm products with an assured price since, normally, the price of irregular product will be decreased and farmers had hardly any negotiation power. Moreover, farmers who belong to community group can also earn more income by working in community as employee in the production.

This advantage, however, seems to benefit farmers who belong to the community group only. Although farmers who do not join community group still have SME

producers as one of their market, this market will not ensure buying farm products. The research outcome also showed that the relationship between farmers outside community group and OTOP producer, both community and SME, is very weak. As demonstrated in Figure 3, only few farmers directly sell farm product to community group or SME. The same figure emphasizes that most farmers still rely on the province market, village market and middleman. In the case of province market, farmers prefer this big market because they could sell farm products rapidly and have the cash money. The middleman will go directly to the farm and cut the farm product themselves (depends on the dealing). Farmers can get the money easily. The case of village market is different from the previous 2 cases. This market is favorable for farmers because it is in the village so farmers can go and sell it anytime. However, this market seldom allows farmers any negotiation. This kind of market is usually owned by private individuals. From the interview with a buyer in village market, he said that the purchase price is determined by broker in the central market in Bangkok. He did not and could not decide the price himself. In reality, when the crop came out to the market at the same time, farmers cannot negotiate and sometime have to sell it not knowing the purchase price. As illustrating in Figure 4, there is a linkage between farmers and OTOP producers, but the linkage is mediated by middlemen in the village market. Although, the OTOP producers use and purchase raw material in local area, but the benefit from doing the project does not reach people in the village as it should be.

**Figure 3 The flow of farm products between farmers inside and outside OTOP group**



## 6. Conclusion and Policy Recommendation

In 2001, the Thai government has introduced the OTOP aiming to revitalize rural areas. This study tried to understand the beneficiaries of the OTOP project toward farmers in the village. From the field survey, this study found that recent OTOP producers can rely on themselves. The reason behind is during the beginning of the project implementation, the government provided financial support and business training for producers, so now they have adequate knowledge to run the business by themselves. This study suggests that continuous support to business and marketing knowledge will help OTOP producers to improve their business.

Moreover, the study showed that after the project implementation, villager revised their local product and used it to create new product. Farmers, as suppliers in the village, therefore, can sell their farm product to OTOP producers, and these producers can be considered a new market in village. However, besides farmers participating in community group, very few farmers could sell farm product directly to the producers. Most of the farmers sell farm product to village's central market and then OTOP producers buy product from the market again. This kind of linkage did not provide full benefit to farmers. The suggestion on this issue is that the function of cooperative should be strengthened. In actual situation, farmers still cannot rely on cooperative in the village. The well-functioning of cooperative will protect farmers from unfair trade and increase their negotiation power.

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<sup>1</sup> "Tambon" is one of administrative unit. To be precisely, Tambon consists of several villages so it is bigger than village but smaller than county. In this research Tambon is equivalent to district.

<sup>2</sup> "Province's central market" is the biggest farm product (especially, fruit) market. There are 2 central markets in the province which locate on the national road that connect to neighboring provinces.

<sup>3</sup> "Village's central market" means to a market owned by private person. This market works like a middleman. The market will buy farm product and sell it to another market or export it.

<sup>4</sup> "Middleman" in this study refers to person who directly goes to buy farm product at the farm area. Some middleman has to cut farm product themselves. This depends on how they negotiate with farmers.

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