

FOOD EDUCATION AS A REGIONAL DEVELOPMENT POLICY FOR ALL -- WITH IMPLICATIONS FROM COMMUNITY DEVELOPMENT IN JAPAN AND THAILAND

Kiyoto Kurokawa

JICA Research Institute, 10-5, Ichigaya Honmura-cho, Shinjuku-ku, Tokyo 162-8433, JAPAN

ABSTRACT: In this paper we examined whether food education for regional community will be an effective solutions for regional development or not. To answer this question, authors conducted field surveys in Thailand and Japan and identified important facts to increase the effectiveness. Firstly, we revealed necessity of food education to increase adding values into the local products and the double impact of the food education; increases community empowerment and reduces future medical burden. Secondly, our findings revealed the effectiveness of educational spending by using a regional input output table. Thirdly, by investing rural communities in Thailand, we revealed that the strong leaders are essential for the endogenous development. And rural food logo is creating new brand market. A public awareness of fostering local culture is required so that local areas can add values to their products. Finally, leadership training and cultural exchange programs can be suggested to scale-up the food education.

1. INTRODUCTION

Healthcare and economic development has a strong linkage. Disease and disability lead to both people's pain and huge financial burden. In developing countries, there are urgent needs to reduce poverty by revitalizing regional economy.

In this paper, we have examined whether food education for regional community will be an effective solutions for regional development or not. To answer this question, we firstly discuss the background of food education for all to create sound regional development by adding values into food related products. Secondly, we investigate the effectiveness of the educational spending by using regional input-output table in Oita prefecture, Japan. This is to understand the effectiveness of the policy shift from infrastructure construction to human resource development in Oita prefecture. The rural development policy called 'One Village One Product' (OVOP) movement, which was originated in Oita prefecture in 1979. Thirdly, we have revealed the most important characteristics; global thinking, creativity and human resource development. The local government facilitated community study groups. It provides an important model of success in regional development policy. As part of the Aid for Trade initiative at WTO Hong Kong Ministerial Conference in 2006, Japanese government initiated the OVOP Campaign. Many developing countries introduced this rural revitalization policy. And the movement became

an international movement.

Finally, we will investigate Thai OVOP. They have upgraded the OVOP movement into Thai original “One Tambon One Product (OTOP) movement”. We have identified three characteristics of the movement. Firstly, the movement is a government policy not an endogenous movement. Secondly, the OTO is widely accepted by the products championship system with five star grading. This brought a new OTO brand. Thirdly, OTO movement is strongly assisted by Information and Communication Technology including web site based marketing.

We have revealed the importance of food related industries in this OTO movement. They have identified six-targeted category such as Food, Beverage, Textile & Fashion, Accessories & Home decoration, Gifts & Arts, Herbs & Spa. And about half of the five-star products were food related products. And by using five-star OTO logo, they have produced new OTO brand markets, which is quite useful to promote local food products. In 2008, The Yokohama Action Plan was designed to provide a road map for the support of African growth and development under the TICAD (Tokyo International Conference on African Development) process. The Government of Japan has taken the initiative to show its strong commitment by announcing doubling ODA to Africa by 2012. (TICAD Yokohama Action Plan, 2008) That is the policy background of why we have to investigate the new rural development mechanism; food education.

2. WHAT IS FOOD EDUCATION

2.1 Today's food education –Background of food education

Today's food education in Japan is a little bit different from traditional food education. In Japan, many reports on the eating habits of youth indicate that they have an unbalanced diet; they prefer western food and dislike vegetables. In developing countries, we can observe same tendency. Past studies have indicated that demand for many foods—especially, meat, poultry, fish, and dairy products—are responsive to income growth.

After the implementation of the Fundamental Law on Nutrition Education in 2005, specific items for “instruction in nutrition” were incorporated in school education; this was the beginning of health and nutrition education in schools.

The objective of the Fundamental law is to stabilize and improve people's lifestyle and to develop the national economy through comprehensively and systematically implementing policies on food, agriculture and rural areas by means of establishing basic principles and basic matters for realizing them and clarifying the responsibilities of the state and local governments. (Article 1, Fundamental Law on Nutrition Education in 2005)

And Ministry of Agriculture, Forestry and Fishery (MAFF) of Japan is working on Shokuiku by setting four specific aims:

- i) Promoting people's understanding on agriculture, forestry, fishery and food industry;
- ii) Helping people to enjoy a health diet of Japanese style eating habits;

- iii) Perpetuation of traditional food culture; and
- iv) Providing information on food safety.

In Japan, food safety and traceability have attracted a great deal of public attention. This is because of continuous scandalous affairs in food safety such as Chinese poisoned frozen jiao-zi dumpling. The Japanese government is trying to conduct strict inspections on the imported food products including bilateral talk to request compliance with Japanese food sanitary regulations, inspection at quarantine stations and field surveys. However, those measures cannot cover all the imported food products.

The Ministry of Health, Labour and Welfare has published the overview of the actual situation as well as the results of inspections on imported foods. For declaration, inspection, and violation in FY2005, the total number was about 1.87 million, and the volume, 31.8 million tons, on a declaration basis in quick estimation. Inspection was conducted for 190 thousand accounting for 10.2 percent of all declared products. (Ministry of Health, Labour and Welfare, 2006)

This food security issues revealed strong necessity of food education for all. According to Ishido ([4] 2006), the importance of “Shokuiku” can be summarized as follows:

- i) To be interested in what we eat.
- ii) Many foods are around us, so we must learn ability to choose good and safe food.
- iii) We must learn the taste and cooking of our local food where we grow, and must hand it down to the next generation.
- iv) We must have firm knowledge through a fieldwork of agriculture that is closely related to eating.

In addition, the recent financial crisis has revealed economic burden of health care cost. This has also attracted public attention on preventive measures on chronic diseases and food education for all.

2.2 Health-care cost gap between GM and Toyota

Recent financial crisis revealed General Motors Corp’s (GM) health-care burden. GM spends \$4 billion a year more than its largest global competitor, Toyota Motor Corp., for employee and retiree health care. In other words, no matter how well GM runs its business, it can hardly hope to compete effectively for the long haul with such a huge, health-care cost gap. According to the Detroit News in 2008, GM’s health care costs now account for \$1,400 per vehicle, a severe handicap as the world’s biggest automaker battles to recover market share in an environment of falling vehicle prices.

Risk factors such as obesity, lack of physical activity, and exposure to tobacco smoke greatly increase the risk of developing the most serious chronic diseases. Current health care spending practices in the United States are concentrated on treating chronic diseases, while only a very small portion of expenditures are focused on preventing these diseases. In addition, much of the discussions on health care reform are focused on who pays for health care. However, focusing on prevention and the reduction of risk factors for chronic disease is essential to reducing the burden of disease, improving quality of life,

and decreasing health care costs. (WHO/FAO, 2002) Accordingly, prevention of chronic disease became the most important factor of the economic competitiveness.

2.3 Preventive medicine via food education

Diet has been known for many years to play a key role as a risk factor for chronic diseases. Health education is focused on achieving “Health” targets including nutritional goals and quit smoking. However, it cannot directly play a role in achieving economic development targets such as creates jobs. But health education can add values into traditional foods and medicine.

Traditional Chinese medicine is an integral part of the Chinese health care. The government vigorously advocates and supports the advantage of traditional Chinese medicine, strengthening specialty areas, improving the technology and equipment, and training a large number of specialists. Traditional Chinese herbs are cheap and therefore popular, especially in the rural areas. According to Dr Wang Longde, Ministry of Health, People’s Republic of China, statistics show that 1/3 of the Chinese patients consult doctors practicing traditional Chinese medicine in 2002.

In Japan, the use of foods that are labelled with the nutrient function claims has been increasing. Known as “Tokuho”, short for “tokutei hoken-yo shokuhin” (foods for specified health uses), these government-certified products come in a variety of forms, indicating such as calcium to strengthen bones, dextrin fiber to lower blood-sugar levels, and poly-phenols that are supposed to prevent the accumulation of body fat. The tokuho system is the first attempt in the world by a nation's health authorities to approve the display of information about the health effects of a food product on its label. However, according to Dr. Horinishi, the recognition of and the information about foods with health claims among the medical staff members are still inadequate. (Horinishi et al, 2007) Accordingly they cannot recommend proper Tokuho to potential buyers. This is another reason why we need new food education for all.

2.4 Grow locally, consume locally

Grow locally, consume locally is the most noteworthy concept in recent food education. For the school children, many local governments are trying to introduce this concept to encourage local economy in accordance with “Fundamental Law on Nutrition Education in 2005”.

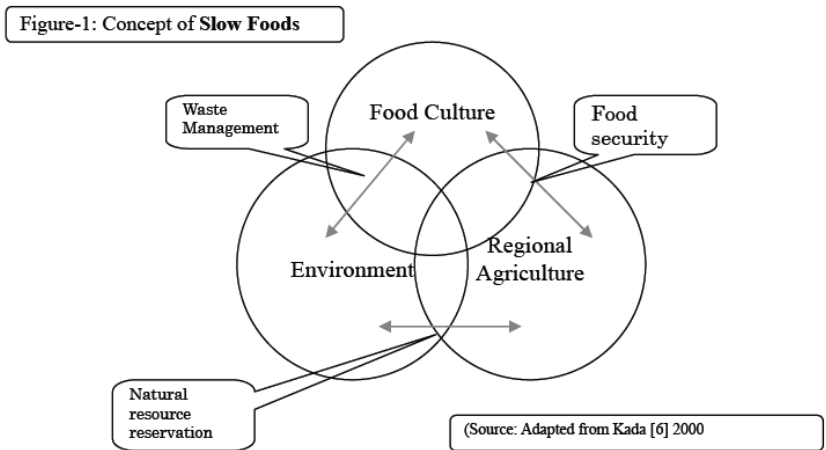
Accordingly, the new school feeding system under grow locally, consume locally is expected to increase;

- i) Proper concern for foods among school children and parents including food safety and over-dependency on food from abroad,
- ii) Concern for traditional food culture in a globalization movement,
- iii) Employment opportunities among village people,
- iv) Knowledge for lifestyle-related diseases

2.5 Slow foods instead of First food.

Slow Food is good, clean and fair food according to “Slow Food”, which is a

non-profit eco-gastronomic member-supported organization that was founded in 1989 to counteract fast food and fast life, the disappearance of local food traditions and people’s dwindling interest in the food they eat, where it comes from, how it tastes and how our food choices affect the rest of the world. They believe that the food we eat should taste good; that it should be produced in a clean way that does not harm the environment, animal welfare or our health; and that food producers should receive fair compensation for their work. (See Figure-1).



3. REGIONAL INPUT-OUTPUT ANALYSIS

3.1 Which sector should we invest?

We investigate the effectiveness of the educational spending by using regional Input Output table in Oita prefecture. The aim is to understand the effectiveness of the policy shift from infrastructure construction to human resource development in Oita prefecture. The rural development policy called ‘One Village One Product’ (OVOP) movement was originated in Oita prefecture in 1979. The government allocated a significant budget to facilitate activities of the local community. For instance, the 1st Food festival, “Grow locally, consume locally” movement started in 2000 by formulating study groups among community. They sought local resources to create new values. The effect of social investment is different in each region and there are local differences and uniqueness. To measure the influence of this type of public investment, regional input-output analysis tables can be employed. In this study, we have conducted a

simple comparative study between Oita and Osaka prefecture using the regional input-output tables relating 2000. Oita is located in southern part of Japan and it is a typical rural area in Japan and has 1.2 million populations. On the other hand, Osaka is the biggest urban city of west Japan. It has 8.8 million populations. (See-Map-1).



Map-1 Osaka and Oita

In our study, we have calculated the impact of the additional investment by the local government for one hundred million yen (about one million dollars) to some category of businesses. Generally speaking, in Japan, the economic impact in the region is quite high for the construction sector. This is mainly because of the higher regional procurement in this sector. On the other hand, to reduce the economic gap between urban and rural area, agricultural investment is often claimed to be effective. Another good investment can focus on fully utilizing a regional agglomerated industry such as medicine in Osaka prefecture.

Former governor of Oita prefecture, Dr. Hiramatsu had different ideas. He invested significantly in the field of human resource development. Accordingly, we have calculated the potential economic impact of five different categories of investment agriculture, food industry, construction, education and medicine.

Leontief models calculate the sum of the direct, indirect and induced effects of increases in final demand. The direct effect of final demand increases is the higher output that is elicited from different sectors of the domestic economy, and higher domestic output comprises an increase in value added, and higher intermediate consumption of goods and services from other sectors. The indirect effect is the increase in output in sectors supplying intermediate inputs required to make the outputs needed to satisfy the increase in final demand. The induced

effect arises from expenditure in the domestic economy of increases of income generated by the direct and indirect effects of the initial increases in final demand, mainly by households.

3.2 Calculation method

The general method can be explained as follows. The direct and indirect effects are conventionally summarised as follows:

$$\Delta Y = (I-A)^{-1}\Delta X$$

where ΔY is the vector of increases in the value of output, A is the matrix of coefficients of domestically supplied intermediate consumptions, and ΔX is the vector of autonomous increases in final demand. (Direct effects). Consequential increases in value added can be represented by:

$$\Delta V = v(I-A)^{-1}\Delta X$$

where v is the vector of value added coefficients, and ΔV is the vector of sectoral increases in value added. A proportion of the increases in value added is either saved or removed through direct taxation. The remainder is spent, mainly in the form of consumers' expenditure, thus provoking a further round of direct and indirect expansionary effects. The first round of induced effects generates output of:

$$Y' = c\Delta V [(I-A)^{-1}\kappa]$$

where c is the share of value added spent on household consumption, and κ is the vector of sector shares in households' consumption in final demand. First round induced effects on value added are:

$$V' = v(c\Delta V [(I-A)^{-1}\kappa]).$$

There is an income multiplier effect, as the first round of induced effects produces further increases in value added, and thus subsequent increases in consumers' expenditure

3.3 Results

The following were identified (See Table 1):

- The economic impact of investment in the field of construction is relatively high in both Osaka (333.926 million yen) and Oita (291.788 million yen).
- As we expected, the investment in medical industry was the highest impact in Osaka. (346.769 million yen)
- In Oita prefecture, the highest economic impact was education sector (336.857 million yen), which includes spending for the community study groups.
- The impacts of food industry were relatively small. This is because of the larger out flow toward the highly agglomerated region instead of domestic inflow.

When former governor Dr. Hiramatsu started One Village One Product movement in Oita, he changed the local government spending priority from an exogenous category such as construction to an endogenous category, mainly trainings for the community. That was the right solution.

Table-1 A comparative study on the economic effect among Osaka and Oita prefecture.

City	Investment contents	① Increases in final demand	② Shares in regional supply	③ Direct effects	④ Indirect effects	⑤ 1st round of induced demand effects	⑥ 1st round of induced income(Ho usehold)	⑦ 1st round of induced vale added
				①×②	⑤-③	Leontief inverse×③	⑤× Labour share	⑤×value added coefficient
Osaka	Agriculture	100	0.063	6.275	1.860	8.135	1.686	4.617
	Construction	100	0.997	99.748	44.255	144.003	52.174	74.954
	Food industry	100	0.228	22.762	8.980	31.743	6.809	13.799
	Education	100	0.899	89.915	15.898	105.813	69.833	84.533
	Medicine	100	1.000	99.998	31.394	131.392	60.956	81.056
Oita	Agriculture	100	0.671	67.069	23.458	90.527	10.702	47.550
	Construction	100	1.000	100.000	40.158	140.158	43.520	66.765
	Food industry	100	0.268	26.758	9.036	35.794	4.942	19.447
	Education	100	0.977	97.735	15.156	112.892	70.296	86.889
	Medicine	100	0.996	99.563	27.989	127.552	47.915	76.696

(Calculated by the author from Regional I/O Table in Osaka and Oita prefecture in 2000)

⑧ 2nd round of induced final demand	⑨ 2nd round of induced regional demand	⑩ 2nd round of induced effects	⑪ 2nd round of induced income(Ho usehold)	⑫ 2nd round of induced vale added	⑬ Induced demand effects Total	⑭ Induced income(Ho usehold) Total	⑮ Induced vale added Total	⑯ Total impact
⑥× Consumption ratio	⑧× regional supply	Leontief inverse×⑨	⑩× Labour share	⑫×value added coefficient	⑤+⑩	⑥+⑪	⑦+⑫	⑬+⑭+⑮
1.012	0.764	1.036	0.328	0.665	9.171	2.014	5.281	16.467
31.304	23.641	32.074	10.150	20.571	176.077	62.324	95.524	333.926
4.085	3.085	4.186	1.325	2.685	35.929	8.134	16.484	60.546
41.900	31.643	42.931	13.586	27.533	148.744	83.419	112.066	344.230
36.573	27.621	37.473	11.859	24.033	168.865	72.815	105.089	346.769
6.421	4.215	5.201	1.439	3.527	95.728	12.142	51.077	158.947
26.112	17.140	21.151	5.852	14.342	161.308	49.373	81.107	291.788
2.965	1.946	2.402	0.665	1.629	38.195	5.607	21.075	64.877
42.177	27.685	34.163	9.453	23.166	147.055	79.748	110.054	336.857
28.749	18.871	23.286	6.443	15.790	150.839	54.358	92.486	297.683

4 WHAT IS OVOP?

4.1 Origin of OVOP movement

Former governor of Oita Prefecture, Dr. Morihiko Hiramatsu, initiated the OVOP movement in 1979. "As early as in 1980, Dr. Hiramatsu visited Tokyo meat wholesale market and advertised local beef in front of the middlemen. No local governor has ever visited the market to promote the sales of local products before." (Adachi, 2005) OVOP requires people to take up a product or industry

distinctive to their region and cultivate it into a nationally, or even globally, accepted one. The impetus for the OVOP movement in Oita was threefold (JICA-ODI, 2008):

(i) "Think Globally, Act Locally": With our distinct local flavors and cultures, we create product, which can be marketed throughout Japan and the rest of the world.

(ii) "Independence / Creativity": It is up to the people who live in the local areas to decide which products they wish to produce.

(iii) "Human Resources Development": The ultimate goal is to foster visionary local leaders with creativity as well as challenging spirit.

In this regional development approach, the government is a moderator of the movement. Subsequently, OVOP movement was introduced to many Asian countries. But those were slightly different from the Oita's OVOP. It is an endogenous movement by the local people. It can be traced back to the NPC (New Plum and Chestnut) movement in Oyama town, Oita. Mr. Yahata, town headman of Oyama, declared NPC strategy in 1961. According to the strategy, local farmers were advised to transform their agriculture from rice cultivation to more diversified one by means of planting plum and chestnut trees. Against the rice farming promotion strategy of Japanese national policy at that time, they promoted to grow identical local products under the campaign 'Let's plant plums and chestnuts to go to Hawaii!' They believed only they know the most proper development plan for them, because their land is quite mountainous and not suitable for rice farming. In OVOP, "Self reliance and creativity" corresponds to this concept.

4.2 What is Thai OTOP?

The OTOP Development Policy was initiated by the Royal Thai Government in 2000, under the strong leadership of Dr. Thaksin Shinawatra, the Prime Minister. The principal aim was to encourage the development of rural economy by utilizing local resources with the participation of the community population. In Thailand, the roles of governments were clearly mentioned.

"The Government plays a supporting role, assisting on supply chain issues, giving advice, networking, and opening up new markets. The benefits of OTOP have not only been economic. Local community leadership and pride have also grown as a result." (Wattanasiri, 2005)

For rural farmers, the OTOP approach was very easy to understand and useful to utilize complicated government assistance programs. "Agency integration" is the slogan to coordinate the power of governments support to the local projects.

The local government structure of Thailand can be divided into 4 grades such as; 76 Provinces, 876 Districts, 7,255 Sub-Districts (= Tambon) and 79,830 Villages. The movement has started at the sub-districts level, "Tambon". In Thailand, the local governance was very limited. And under the decentralization programme in 1990s, Tambon got the central function of local governance. Tambon is composed of a number of villages. Rural area and agricultural sector of Thailand in 1980s was in 'critical situation'. For farming, there were only

poor physical features.

The economic potentials were quite low. Accordingly, the products were cheaply priced. (Wattanasiri, 2005) The gap between rural and cities were expanding during 1980s. Before the OTOP movement, the governments' rural development plans were not worked very well. Value adding processes were badly needed on their cheaply priced products.

5. IMPLICATIONS FROM NORTHEAST THAILAND

5.1 What is Isan?

The Northeast region, called "Isan", said to be the "Kingdom's heartland", incorporates 19 provinces. In addition, it has a unique culture and history. By the late 1980s, migrants accounted for about 30 percent of the population of Bangkok, and most originated from the Northeast. That is why we selected Isan as a study area.

In Isan, modernization began in the reign of King Chulalongkorn of the Chakri dynasty through centralized bureaucratic-administrative reform in 1892. Similar to many parts of the country, Isan was incorporated into the Siamese Kingdom and subjected to the ruling power in Bangkok by the early twentieth century. (Boonmathya, 2003) Thus, a specific development plan for Isan from 1962–66 was set up. This unique history could be very close to the NPC movement, which is the origin of Japanese OVOP. In addition, Isan has a unique food culture.

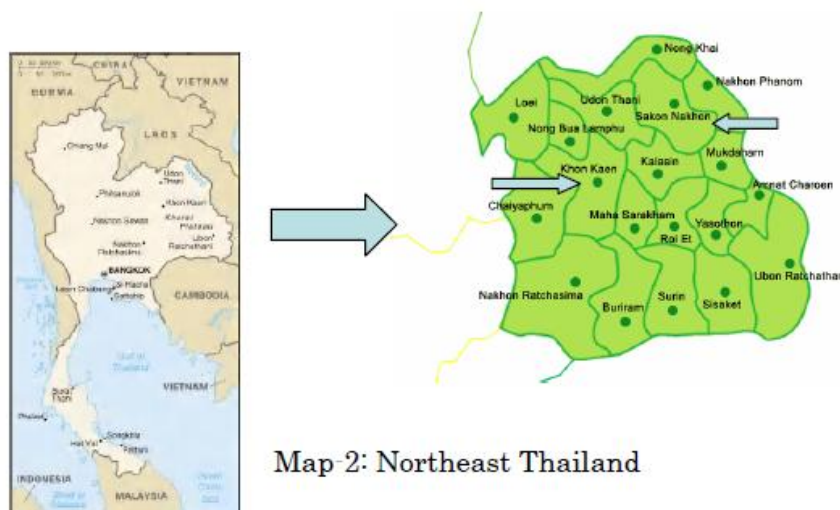
Many people in Isan eat a wide variety of creatures, such as lizards, frogs and fried insects such as grasshoppers, crickets, silkworms and beetles. Very typical is the use of sticky rice that accompanies almost every meal rather than plain rice. According to Walker (1996), the Northeast is the region most unlike Bangkok in every way as the poorest and least developed region in Thailand with the lowest standard of living but with the most distinctive cuisine.

5.2 Khon Kaen province

The population of Khon Kaen is 1.75 million, of which 20 percent reside in the capital city, making this the third largest province. It has a large labour force of 880,000 persons, and the minimum wage is 144 baht per day, or 20 percent less than in Bangkok (184 baht).

5.3 Sakhon Nakhon province

Sakhon Nakhon is in the upper Northeast. It is on the Phu Phan mountain range and has many forest temple retreats for meditation. The population of Sakhon Nakhon is 1,040,766 (2000) at an average height of 172 meters above mean sea level, with a rich heritage in history, archaeology and folklore. Sakhon Nakhon is 647 kilometers from Bangkok and has an area of 9,605 square kilometers. (See Map-2)



Map-2: Northeast Thailand

5.4 Outline of the field survey

The objective for the survey is to understand general activities of OTOP producers in Northeast Thailand. We have tried to identify total 90-100 sample producers in Khon Kaen and Sakon Nakhon province. The main objective of this paper is to understand food related cottage industries. The basic information of the sample OTOP groups are summarised in Table 2.

Table 2. Basic Information on OTOP Producers in Northeast Thailand

	Number of observations	Average age	Sex (Female)	Education P4 level (Primary school)	Family number	Total annual income (Thai Baht)	OTOP income (%)	Non-Agricultural income	Agricultural income
Khon Kaen Province	251	50.03	96%	52%	4.47	121.648	28.63%	44.43%	28.14%
Sakon Nakhon	141	49.62	89%	52%	4.17	81.688	23.13%	38.13%	38.76%

Source: JICA-ODI Joint Field Survey in North East Thailand in November 2008.

From this observation, OTOP groups can be described as follows:

- Most OTOP members are elder people and women,
- Family number is around four, probably this means grandfather, grandmother, mother and one or two child and
- Agricultural income is quite small.,

There are six categories in OTOP product championship. We have classified our sample data into six groups by using this category. (See Figure 2) The textile related OTOP is the dominant group in this region

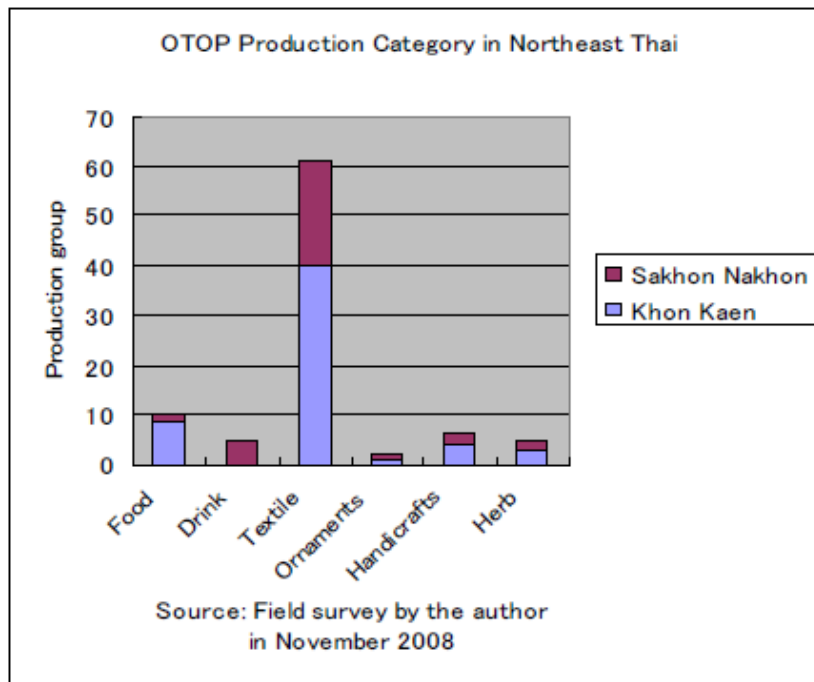


Figure 2. OTOP Production Category

This is because of traditional ‘Mudmee’ technique especially for silk. For drink, grape juice and wine are very famous in Sakhon Nakhon. And we have identified 15 food related OTOP groups among 89 surveyed groups from this classification. For man/women ratio, we have identified as follows. See Figure 3.

Comparing to other groups, food related OTOP group accepts more men. Because 70 percent (40/57) and 66 percent (21/32) of the OTOP groups in Khon Kaen and Sakhon Nakhon respectively are textile OTOP. For silk weave, traditionally women are dominant.

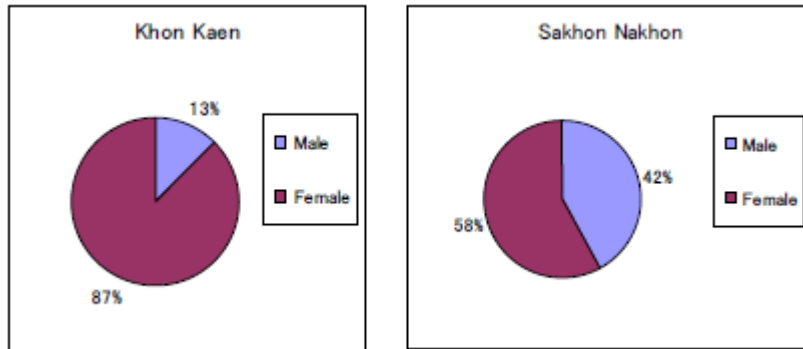


Figure 3. Gender Differences in Food Related OTOP

5.5 Income structure of OTOP group

Income of the households can be divided into three components; Agricultural, Non-agricultural and OTOP income. In the rural area of Thailand, it is very common to see village women who produce processed agricultural goods and handicrafts as a group activity in their spare time between farming duties. These activities now scaled up into OTOP movement.

According to our survey, agricultural income in Khon Kaen is under 30 percent. This is because of urbanization of the region and many people in Khon Kaen are working for industrial zone. (e.g Khon Kaen Industrial Estate). On the contrary, about 60 percent of the income comes from agriculture in Sakhon Nakhon. See Figure 4.

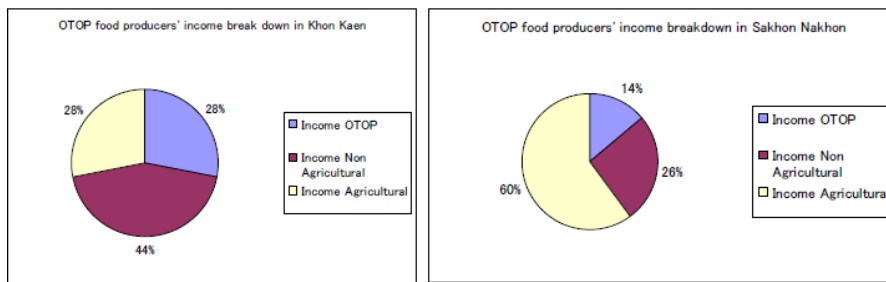


Figure 4. Income Breakdown in Food Related OTOP

5.6 How to spend the earnings

We have also asked how to spend their money. For Kohn Kaen, half of them will work for OTOP just to earn money for their daily life. But about one fourth are working for family's educational expenditures etc. And as far as we

understand their financial burden is not so serious. For Sakhon Nakhon, the reason for women's work is slightly different from Khon Kaen. Their OTOP activities are still under developing stage and they are eager to expand their operations. About 30 percent is working for their investment and the answer for the family use such as higher education is slightly small. See Figure 5.

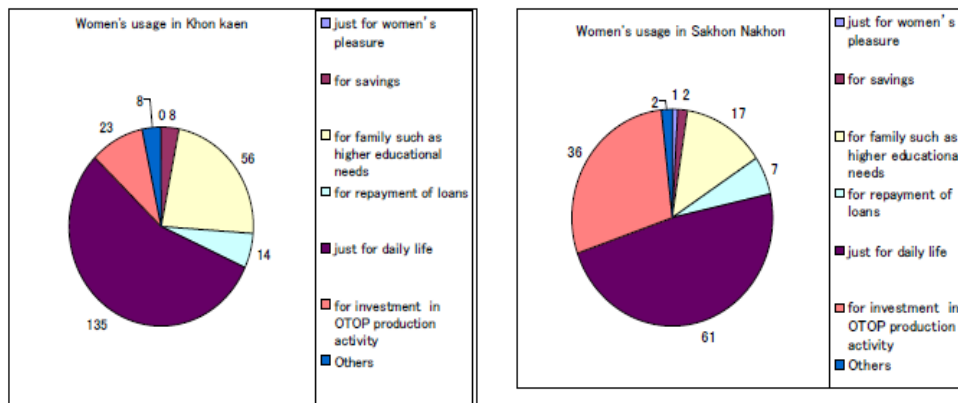


Figure 5. Women's Usage in Khon Kaen and Sakhon Nakhon

5.7 Reasons for working at OTOP groups

We have also asked their motivation for working at OTOP groups. Our question is just asking "which is your concern, making money or working with community?" See Figure 6.

To our surprise, most of the answer is to make money in both provinces. The wealthier producers tend to work for the community; however most of them work for making money. In Japan, it is often said that OVOP producers are working for their community, not for making money.

Obviously, it is not easy to say "We are working for the community." Therefore, in addition to pre-coded questions, we have prepared some open-ended questions. For making money group, we can understand that they struggle for stable operations including quality control, marketing and production techniques. See Box 1. Apparently, they need more technical and marketing assistance. They are still on the halfway stage. Accordingly their main concern is to make money.

And for "Work for community" group, we have got similar reply. As far as we understand, they are trying to add value by OTOP five stars, quality control and comparative studies etc. And they are also trying to increase their members and partners. See Box 2. For the "Others" group, we have got two specific answers. See Box 3.

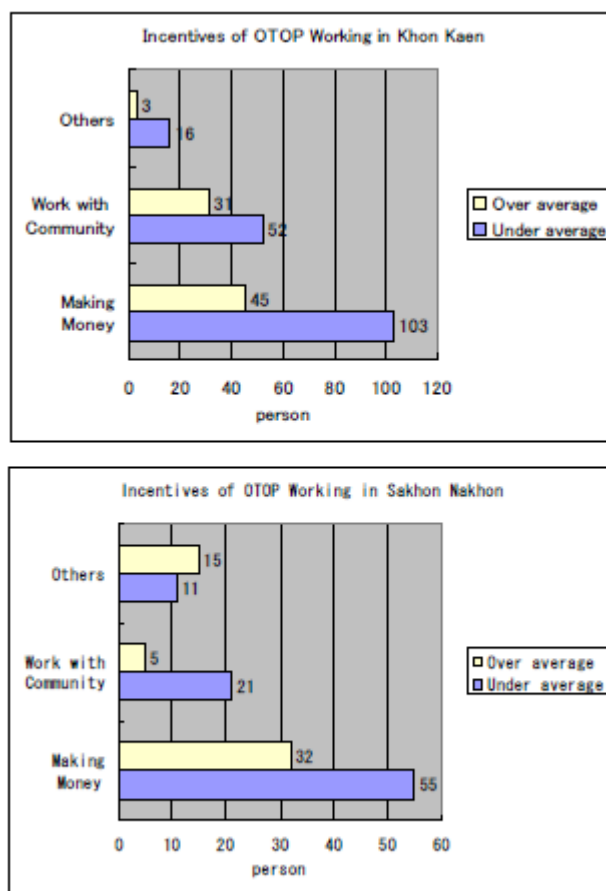


Figure 6. Reasons for Work in OTOP Groups

Box-1: Please state your dreams for OTOP (1. Making money groups)

1. To have more products and someone to **help** out with **marketing**.(KK*)
2. For organizations, to **support more** seriously and reduce the amount of chemical used for growing corn significantly.(KK)
3. To have a better preservation **technique** for a longer expiration period, need a better packing machine.(KK)
4. To have **better quality** product so that people would accept the product more. (But most of the members are seniors; it would be hard to keep up with the work without younger people joining the group.) (SN**) (*KK=Khon Kaen, SN**= Sakhon Nakhon)

Most of the OTOP producers participated in some OTOP training programs, offered by various government agencies, and their main programs were quality control and marketing. This training brought higher concerns to the OTOP producers.

Box-2: Please state your dreams for OTOP (2. Work with community groups.)

1. Need electric oven (get free support) , want to have excursion to **compare** Thai OTOP with other countries.(KK)
2. For the group to become learning centre of the community and those interested can come to visit and learn.(KK)
3. More places to sell.(KK)
4. The group sustains...
5. Villagers have better alternatives to consume the local products and they can be the group members.(KK)
6. Improve the quality to get the **five stars** level. (KK)
7. Process into porridge and other sweets which can be then eaten at the learning centre and sell. Accept **more members** to increase the output, planning to grow rice all year. To set a standard and **control the quality** of the product.(SN)
8. The four necessities in life, for the community to have enough, Self-Sufficiency Economy and feel satisfied.(SN)
9. To have a reasonable market share (good sales) and hope that young people would be interested to continue the work.(SN)

Box-3 Others:

1. To be able to buy raw material in the community and to **have a job** in the community.
2. To become **stronger group** and more well known with public.

5.8 Villagers view to OTOP

To understand OTOP producers' evaluation for OTOP movement, we have asked their evaluation. As a whole, OTOP food producers think highly of OTOP approach. Comparing traditional handicraft products, food products were well benefited by the OTOP logo mark. There are many brands marketing structure in the world. However, small production groups like OTOP cannot participate in the brand markets. See Figure-6.

Figure-7 shows OTOP evaluation of the food producers. OTOP incomes can be determined by other income; Agricultural income and Non-agricultural income. And it depends on skills; quality control and marketing skills. Family numbers, age and training experiences can be the main factors as well. Local government is also trying to reduce migrant workers by activating OTOP movement.

Simple regression analysis revealed the strong correlation between OTOP income level, member's age and existence of strong leader. (Note:FN=FamilyNumber SL=StrongLeader)

$$\log \text{Income} = +10.39592 - 0.0784554\text{FN}^* - 0.0195123\text{Age}^{***} + 0.3774333 \text{SL}^{**}$$

$$t\text{-value} \quad \quad \quad (-1.78) \quad \quad \quad (-2.55), \quad \quad \quad (2.38)$$

$$R\text{-squared} = 0.0596 \quad \quad \quad (*=\text{Significant at } 10\%, **=\text{Significant at } 5\%)$$

Number of Observations=242 households in Khon Kaen province

(Source: JICA-ODI field survey, conducted by the author in Thailand in November 2008)

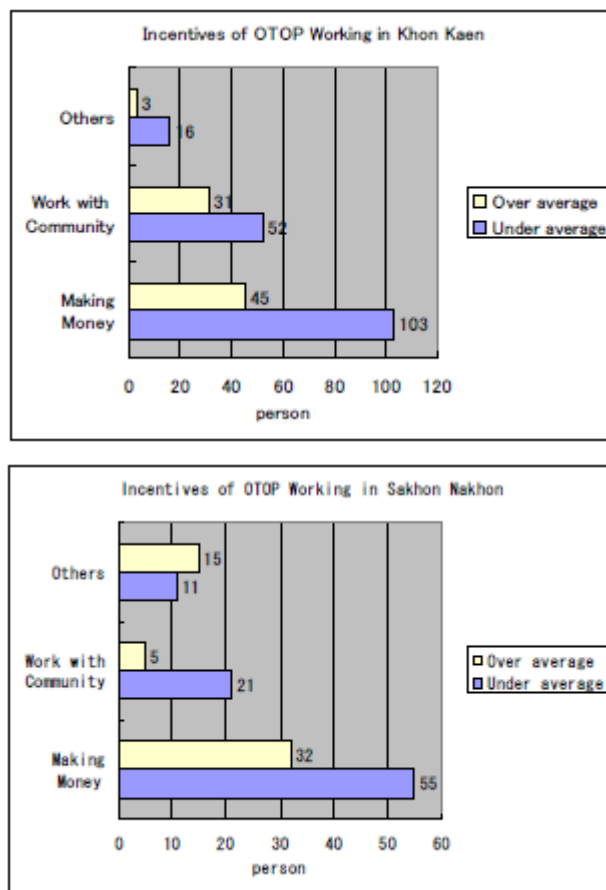


Figure 6. Reasons for Working at OTOP

Accordingly, the determinants for the higher OTOP evaluation by the food producers can be summarised as in Figure 8.

6. CONCLUSION

In this paper we have examined whether food education for regional community will be an effective solutions for regional development or not. To answer this question, authors conducted field surveys in Thailand and Japan and identified important facts to increase the effectiveness of food education. The following policy implications are identified.

Firstly, we revealed necessity of food education to increase adding values into the local products. And we understand the double impact of the food education; increase community empowerment and reduces future medical burden by preventing non communicable disease.

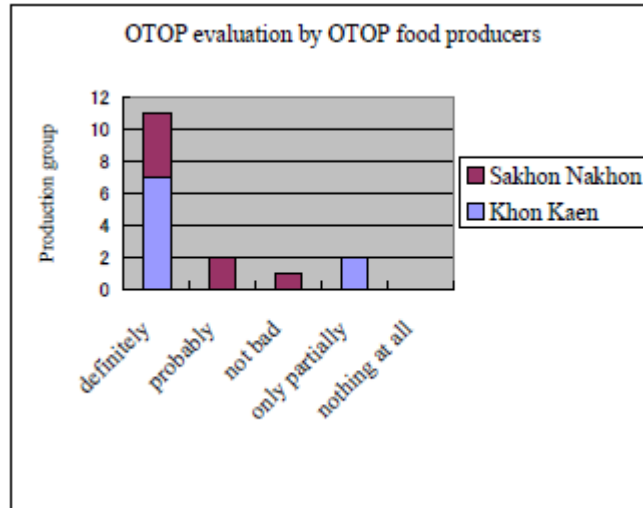


Figure 7. Food Producers' OTOF Evaluation

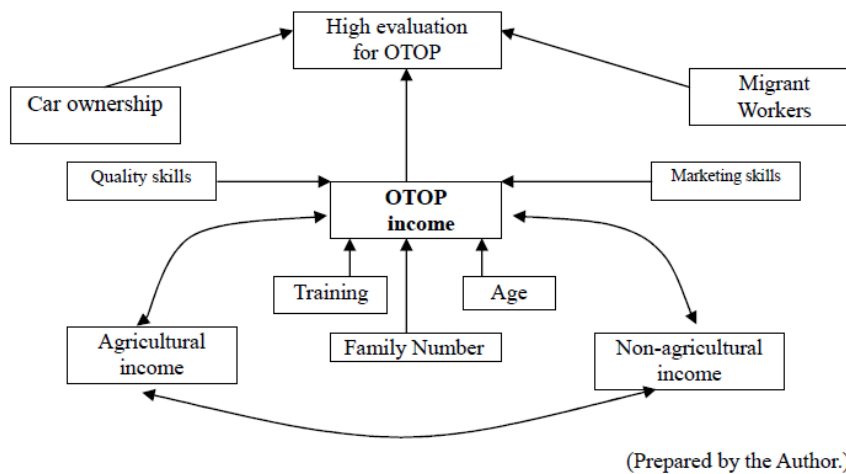


Figure 8. Pass Analysis for OTOF Evaluation

Secondly, our findings revealed the effectiveness of educational spending in Oita by using regional input output analysis. The impacts of construction industry were relatively large in both Osaka and Oita prefecture. However, there are significant differences in the multiplier effects. For Oita, the highest impact was investment in educational sector. On the other hand, the impacts of food industry itself were relatively small. This is because of the larger out flow toward the highly agglomerated region instead of domestic inflow.

Thirdly, by investing Thai OTOP, to active the community activity, the strong leaders are essential for the endogenous community. And OTOP logo, which is widely recognized as a reliable local product is creating new brand market. And we revealed cultural aspects of the food education. A public awareness of the importance of fostering local culture, traditions and way of thinking is required so that local areas can add values to their products. "Food is central to Thai culture and plays an integral part in Thai social relations." (Walker, 1996)

Finally, global awareness for healthy food will bring both new values into local food products and less medical burden. That is the double merit of the food education for community development. Following measures can be suggested to scale-up the food education as an international cooperation programme.

(i) Leadership training programs

The training programs for food education especially, quality control and marketing skills are very important components. However, leadership training for innovative community is the most important. The cooperation between the community leaders from Thailand and Japan will provide new partnership.

(ii) Cultural exchange programs

Cultural exchange program to increase awareness of local food value is essential. In Thailand, OTOP product championship is working as a cultural exchange program. Foods culture and potential markets of ethnic foods will bring endogenous regional development.

Moreover, our food education study has revealed one possible answer to the difficult question of how Japanese government can add value to its ODA operations.

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