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著者	Shojima Atsushi, Tomisawa Osamu
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## Regional development and prosperity index – a case of small town in Kochi, Japan

Atsushi Shojima and Osamu Tomisawa  
Kochi University of Technology

Regional re-vitalization is getting important issues in a variety of countries. It is also the case for, specifically, rural area in Japan, which has problems like aging society with fewer children and increase of regional difference in economy.

We have investigated a case of small town “Yusuhara” located in the western mountain region of Kochi prefecture Japan. The forest occupies 91 % of total area of the town. Hence, forestry has been major industry there. It was crucial to utilize sloping land for agriculture, resulting in famous step shaped rice field even if the agricultural productivity was low. The town features plenty of natural resources, Japanese traditional buildings, and cultural heritages, while it has severe drawbacks in infrastructure including transportation, cellular communication, and entertainment facility. The local government has tried a number of programs for re-vitalization of the town. It includes tourism, woody biomass business, and so on. The residents expect the town to be a place where young people come and reside permanently. According to the survey the local government did in order to develop future vision of the town, it was clear that most of the residents evaluate the town highly. This means that even if the town is not in good shape in economical point of view, many people are satisfied living in the town.

Historically, there have been a lot of discussions with respect to defining a level of regional vitalization or prosperity. Prosperity of the area was defined by GDP (gross domestic product) in the past. However, spiritual items have been added in the prosperity index for recent years in addition to actual level of wealth. Typical example is the “Gross National Happiness” defined by Bhutan’s former king. It is the mix of seven kind of wellness including economic, environmental, and political wellness. Legatum Institute for Global Development proposed the prosperity index as a combination of material wealth and quality of life. This paper tries to identify items to define prosperity index as a measure of regional vitalization based on the case study of small rural town Yusuhara.

### 1. Introduction

Regional re-vitalization is getting a crucial issue in Japan. Many local regions have a variety of problems like economic disparity, aging society. Kochi prefecture is a typical example of area which faces these problems. Eighty five percent of land of Kochi is occupied by forests. Major resources of Kochi are agricultural products, forest, and nature. The balance of inter-prefecture payments for Kochi

shows deficit. The ratio of job openings to job seekers in Kochi is the worst in Japan. On the other hand, a small town “Yusuhara”, located in mountain area in Kochi is relatively aggressive town with respect to regional revitalization. Most of the residents in Yusuhara seem to have positive impression to the town. They enjoy beautiful environment, they have rich communication in the community. The objective of this paper is to

introduce the case of Yusuhara and to try to clarify components of indexes for regional revitalization.

## 2. Prosperity index

The ultimate goal of regional re-vitalization is to enhance satisfaction of people who live in the region. Adam Smith defined that the wealth is not money nor treasures but the necessities and conveniences of life. According to his article, the nation is considered to be wealthy if the number of people who can enjoy these necessities and conveniences of life is substantially large [1]. We can expand the definition of wealth as visible wealth and invisible wealth in order to analyze regional re-vitalization in terms of resident satisfaction for the region. Components of the visible wealth are jobs, housing, income, and so on, while the invisible wealth is resident's emotion, something like proudness, feeling of safety, bright future of the region. Resident satisfaction is ratio of recognized wealth level over expected wealth level. If most of the residents feel satisfaction, the area can be considered to be vitalized. So far, several happiness indexes have been proposed. One of the most popular indexes is GNH, Gross National Happiness. This index is defined by nine components which include living standards, emotional well-being, education, eco-system, good governance, cultural diversity, health, time-use, and community vitality [2]. Another index called HPI (happy planet index) was proposed by the New Economics Foundation in 2006 [3]. This index features combination of environment impact with well-being. The Legatum prosperity index was proposed by the Legatum Institute. This index uses a definition of prosperity to include both material wealth and quality of life [4]. It has nine building blocks of prosperity. The blocks can be categorized into four groups, a) factors to drive economic growth, b) factors to support economic growth, c) humanity factors, and d) human

development. The structure of the Legatum prosperity index is shown in Fig.1

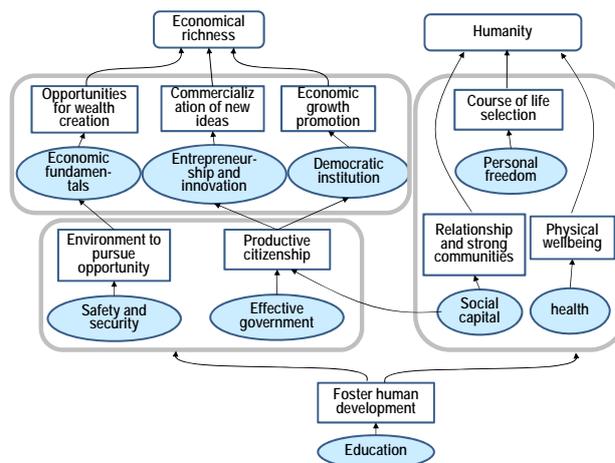


Fig.1 Structure of prosperity index proposed by Legatum

We will use this structure of Legatum prosperity index to evaluate a regional small town in Japan.

## 3. Case of Yusuhara

### (1) The situation of Yusuhara

Yusuhara is a small town located in the Midwest in Kochi Prefecture. Yusuhara had long history, and it started, after Tsuno Tsunetaka settled in 913. The name of Yusuhara originates in this place having had many "Yusu" trees. There were six villages in Yusuhara at the Edo period. Six villages merged in 1889 and it was called Nishi Tsuno-mura village. Nishi tsuno-mura changed the name to "Yusuhara-mura" in 1912 and "Yusuhara-cho" in 1966.

The greatest feature of Yusuhara is grand nature. Yusuhara located in the upper stream of the Shimanto River which is famous as one of the most beautiful rivers in Japan. In the northern part of the town, there is a plateau "Shikoku Karst" whose geological features is a limestone, and the length is about 23 km from the east to the west. Altitude ranges from 1,455 meters at northern part to 220 meters at southern part. Geographical feature has many slopes and, moreover, is steep. The area of a

town is 236.51 square kilometers and the forest occupies 91%. The weather is comparatively warm, but there is heavy snow during the winter season since it's elevation is relatively high. Since Yusuhara is located in a high elevation, it is called "the town on clouds."

The main industries of Yusuhara are agriculture and forestry. The rate of the worker of these fields in the town accounts for about 40 percent. Major agricultural products are paddy rice, eggplant and Japanese ginger. Those are produced utilizing narrow, sloping land between mountains. In forestry, woods with added value are produced in order to utilize abundant forest resources. There are many actions taken for environment. A program to expand forest which received FSC (Forest Stewardship Council) authentication is being executed. Utilization of timber from forest thinning is also promoted. The program encourages wood produced in Yusuhara to be used to public facility and housing in Yusuhara.

However, the serious problem of Yusuhara is progress of decrease in population and an aging society. Although the town had a population of 7,011 in 1970, it became 5,020 people in 1990 and decreased down to 3,931 persons in 2010. The rate of people over 65 years old increased from 22.9% in 1990 to 41.1% in 2010. Kochi is one of the most aged prefectures in Japan, but the ratio of Yusuhara is higher than the average of Kochi prefecture. The forestry was a key industry to support economic foundation of Yusuhara in the past, especially, decades of 1960s and 1970s. However, the forestry of Yusuhara declined as lumber and the wood for pulp shifted from domestic timber to cheap imported material. Accordingly, it had become an urgent problem to revitalize the area.

## (2)Regional vitalization of Yusuhara

### i) Collaboration of the government and citizen

The local government developed a comprehensive promotion plan in 1970 to revitalize the town. The plan was revised every year. During 1990s, the plan was implemented actively focusing on public infrastructure including sewer and road. Intention of the government and residents are synchronized by a slogan of "making attractive town". In order to renew downtown Yusuhara, administration tried to hear a local resident's opinion. Various opinions gathered from residents showed that there are variety of requests on main street which runs the center of the town. They are width expansion of the trunk road to two lanes, making pedestrian, and arranging shops and offices along the street. Other objective of this program was to increase tourist to the beautiful town landscape.

While the government executes the town development plan, the residents organized "the Yusuhara-cho renewal committee. The committee played a role of mediation between local residents and administration. They listened to residents requests, and proposed to administration after they discussed in the committee. Occasionally they asked for the opinion of the specialist outside town. As a result of collaboration work with administration and residents, the width of the road was expanded, the power lines were undergrounded, and the building along the street changed to the attractive one.

Furthermore, a special store which sells local products opened. On the first floor of this building, agricultural products and the special product of Yusuhara are sold. Hotel rooms were provided on the second and the third floor so that tourist can stay. This building became a

symbol of collaboration between government and residents. As a result of the development, the residents of Yusuhara are proud of their town now.

#### ii) Activities of Yusuhara resident

As mentioned earlier, Yusuhara is historically originated from six small villages, thus six communities exist in current Yusuhara controlling themselves. This constructs double layer administration structure by the local government and by residents. This is the reason that Yusuhara residents have actively contributed to town re-vitalization. The leaders of six communities play an important role. In Matsubara, one of the community, there is a tourism spot called "therapy road" of 3 km in total length. It exploits the waterway used for rice fields and other farm products. Local residents maintain the road by cutting bushes along the promenade, and also built the rest house. The therapy road is for people who want forest therapy which uses healing effect provided by a forest. The Matsubara's therapy road was received authorization from the Forest Therapy Society formally in 2007. The residents are promoting tourism by this therapy road. They are expecting revitalization of the area by expanding business to guest houses, restaurant and so on. In Hatsuse, there is a unique restaurant "Takatori no ie" which means a house in Takatori.

They serve typical Korean cuisine including Korean pickles "kimchi" made here. More than ten years ago, Korean college students visited this place as fieldwork. The friendship between local resident and them began from that time.

When an elementary school was closed down in 2002, the building was reformed as Korean pickles factory called Takatori-no-ie.

They invited Korean people who live in the prefecture to learn tacit knowledge to produce pickles which has real Korean taste. The "Takatori Korean pickles" is not only sold at local supermarkets within the prefecture, but also is widely sold by the mail order through the internet. The restaurant started in 2008 opens three days a week. It has many customers coming from out of the prefecture.

In addition to these, "bean paste" and "rice flower products" are in production in other places.

The local government of Yusuhara believes that activity of each "ward" with initiative and autonomy are key factors for revitalization of total Yusuhara. Hence, it has supported these activities financially. The local residents also prefer "independence" and they are performing that they can do by themselves. This resulted in local resident's strong sense of togetherness.

Another interesting thing relating to revitalization of the town is that a person from Nederland resides in the town and works as a handmade Japanese paper craftsman. Yusuhara is famous as a place of Japanese paper raw material production because of high altitude, clean water and environment suitable for Japanese paper production. He creates original Japanese paper there, and manages a private house "Kamikoya" providing bed and meals. Visitors can have a class of making Japanese paper there. The owner of Kamikoya says that the history and culture of Yusuhara were one of the major reasons for having chosen Yusuhara.

Currently farmhouses strive for the safe vegetable cultivation by organic technology under the concept of "local production for local consumption". They expect it leads to green tourism including the farmhouse inn and

agricultural experience. On forestry, people strive for effective use of the forest resource with a goal of resource recycling society. Furthermore, they are developing new business, such as woody biomass in cooperation with local companies.

The objective of the future regional vitalization of Yusuhara was set to “Regional revitalization which utilizes abundant nature and which is full of attractiveness with calmness and a cordial reception”. They have three basic concept for concrete policy as follows: (1) Improvement of traffic safety and comfort for pedestrian by streets maintenance. (2) Activation of shopping street by providing charming and peaceful business space utilizing nature and history of the town. (3) Regional activation by tourism promotion exploiting rich environmental resources.

#### 4. Result of survey

Last year, the local government of Yusuhara developed a new comprehensive promotion program. The basic concept is "thought of symbiosis and circulation" (living together with nature), and "bonds" (relationship of people) and indicates six keywords, "environment", "health", "education", "industry", "culture", and "a life." Concretely, people try to make Yusuhara the ideal society with such six features as enrich welfare, robustness against disaster, stable living, good education, strong community network, and resident high satisfaction.

The government and residents of Yusuhara are jointly doing tremendous effort to build better society. This will create attractiveness to people out of town or prefecture, which will result in regional revitalization.

The government of Yusuhara created a pamphlet and distributed it to residents. After

then, local government of Yusuhara performed a comprehensive survey to investigate opinions of residents in Yusuhara. This includes evaluation of current situation of Yusuhara, performance of local government operation, problem for living in Yusuhara, key element to achieve population of 4000 , and so on.

Fig.2 shows histogram of overall evaluation results from the worst, worse, fair, better to the best. Most

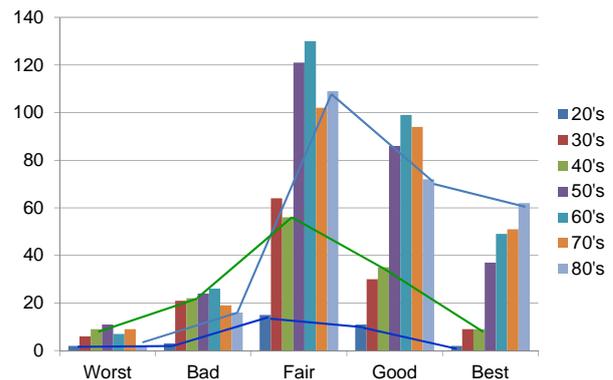


Fig.2 histogram of overall evaluation results by residents

of the people evaluated “fair”, but there is an interesting tendency depending on generation. Older generation qualified the town relatively better than young generations. Resident’s opinions for their

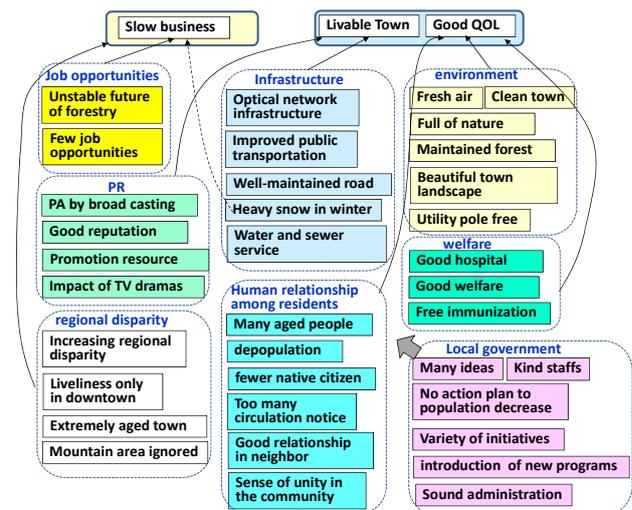


Fig.3 Structure of residents opinions to revitalization

evaluation were also collected. These opinions were categorized into eight groups. Positive opinions on

environment, welfare, and human relationship relate to good quality of life. Established infrastructure and public relationship relate to image of livable town. However, negative opinion on job opportunities and regional disparity relate to slow business in Yusuhara. Figure 3 shows the structure of resident's opinion.

From the case of Yusuhara, we can tell that key factors for regional revitalization are closely connected triangles of proactive residents, leaders in each community or ward, and local government.

It is clear that most of the people in Yusuhara qualified the town highly not because of economic growth but from the point of QOL. This comes from rich communication, good welfare and wonderful environment.

#### **4. CONCLUSION**

A small local town called Yusuhara was investigated from the point of regional revitalization. Most of the residents enjoyed QOL in Yusuhara and satisfied to live there from the point of human relationship and welfare, environment and infrastructure, even if the economic situation is not so good. The activeness of the town arises from closely coupled links among proactive people, local area leaders and local government supports. Autonomous and proactive activities of residents enhance self-confidence and community ties.

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