# Citizen / non-profit sector fulfilling "seedbed function" of new industry – Input resources of regional innovation clusters and the creation process of new industries –

Masashi Imase (Associate Professor, Kyoto College of Economics, Junior college)

Keyword: regional innovation cluster, citizen / non-profit sector (NPO, NGO, volunteer), seedbed function, regional resources, new industry, market mechanism, regional problem

#### Abstract

The citizen / nonprofit sector has the function as "economic entity" together with "public interest entity", and has been creating new business in the area. In the region with serious problems, innovation is easy to create and new businesses are being created. Activation of local contribution activities by citizen / non-profit sectors and "businessization" will make local needs visible.

In the fields of products and services where market mechanisms were hard to work until then, companies also started to do business, and new product and service fields will mature. Through such processes, new markets and industries are created. In the region, the citizen / non-profit sector fulfills the "seedbed function" of a new industry.

In this paper, the author report case studies of IT business (internet related business) created by citizen / nonprofit sector. Also report the estimate of economic scale and ripple effect of civic / non-profit sectors. Then, as a role played by the citizen / nonprofit sector, the author will clarify "input resources" of regional innovation clusters and the creation process of new industries.

### 1. "Businessization" of citizen / non-profit sectors and creation of new industries by that

#### 1-1. The seriousness of regional problems and "businessization" of citizen / non-profit sectors In Japan, since the 1980s, potential demand for activities such as welfare, nursing care, child rearing support, environmental conservation, informationization support, etc. became manifest as a social problem in the region. However, there was not much effort to supply so as to satisfy such demand. Because market mechanisms are hard to work, there have been few companies to commercialize. Despite being a field of high public nature and non-profit, administrative agencies have not made much policy because of low recognition of necessity and difficulty of handling.

Under such circumstances, since around 1990, the social and economic environment in the region changed variously, and activities of the citizen / nonprofit

sector have been active. In an effort to solve social problems in the region, citizen / nonprofit sectors that are working to supply against such "unsatisfied demand" have increased.

The citizen / nonprofit sector has the function as "economic entity" as well as the function as "public interest entity". Citizen / nonprofit sectors such as private non-profit organizations and volunteer groups have high public benefit / non-profit, pioneering and do social experimental activities. The citizen / nonprofit sector is divided into two major types of activities in the process of activity development. One type of activity is an organization that continues to act as a grassroots type or volunteer type "citizen public benefit organization." Another type of activity is an organization that develops like a business as the organization and activities expand. It is an organization that "businessizes" nonprofit activities and volunteer activities.

### 1-2. Creation of new industries by citizen / nonprofit sector

In the region, citizen / nonprofit sectors have done civic public interest activities that solve social problems and revitalize the community in various ways. These civil public interest activities will be businessized as "community business". Citizen / nonprofit sectors that supply goods and services corresponding to "unsatisfied demand" began to appear. Thereafter, general corporations also began to do such new business, imitating the business of the citizen / nonprofit sector. As they spread, they grew as new industries and began to form new markets.

As a case example of a new industry created by such citizen / nonprofit sector, there are the following businesses.

(1) IT business (Internet related business) that supports the introduction of personal computers and the Internet (2)Long-term care services for the elderly and disabled (3)Welfare  $\cdot$  nursing-related business such as wheelchair and nursing care bed (4)Environmental business promoting renewable energy such as solar power generation and wind power generation (5)Educational support business for non-attending children In this paper, as one of them, we will report on the results of the survey and analysis on the cases in the Kansai region where the citizen / nonprofit sector created the IT business (Internet related business) and created the opportunity to create a new industry.

### Case Study> Citizen / Nonprofit Sector Creating IT Business (Internet related business)

## 2-1. "Businessization" of the Internet created by NPO activities

At the time of the Great Hanshin-Awaji Earthquake in January 1995, the Internet which was not used at all in Japan was used for the earthquake support activities of the citizen / nonprofit sector. As a result, the method of utilizing the Internet and its usefulness became clear, and the Internet spread rapidly afterwards.

It has been demonstrated that the Internet can function as "communication means" in emergency situations and "means for sending and receiving information" and as a new activity tool for private nonprofit organizations (NPOs / NGOs). It showed possibility to dramatically increase NPO / NGO's activity ability by "informationization". It also showed that human networks spontaneously born on the Internet function organically. Regarding the Internet, the citizen / nonprofit sector has shown the possibility and direction afterwards.

In the industrial world, there were hardly any companies that introduced the Internet at that time in Japan. Nobody knew about the application and utilization of Internet technology and functions to business. Under such circumstances, the Internet was utilized for support activities by citizen / non-profit sectors in the Great Hanshin-Awaji Earthquake. By doing so, it was first empirically evident. "Which technology and function can be used", "Which application can be used", "How to use it", "How useful is it", and so on.

### 2-2. Citizen / non-profit sector that fulfilled "seedbed function" of IT business (Internet related business)

After that, the use of the Internet in support activities of the citizen / nonprofit sector in the Great Hanshin-Awaji Earthquake became the basis for its dissemination. In addition, the release of Microsoft's Windows 95 has also brought about a synergistic effect, and the use of the Internet has also spread rapidly to enterprises and administration. At the "Asia-Pacific Economic Cooperation (APEC) Osaka Conference" held in November 1995, the experiences, technologies, know-how, human networks, etc. of the citizen / nonprofit sector accumulated through activities of earthquake disaster support and information conversion support, It was utilized in the management of the meeting.

Indeed, the activities of the civic / non-profit sectors for earthquake disaster support and information conversion support became one social experiment. That created the foundation for a new IT business (Internet related business) that supports the introduction of personal computers and the Internet. That fulfilled the "seedbed function" that creates the IT industry, and created the new market. If the citizen / non-profit sector did not have an active part in the Great Hanshin-Awaji Earthquake, the spread of the Internet in Japan would have been delayed for many years.

## 3. Estimation of economic scale and ripple effect of citizen / non-profit sector as economic entity

3-1. Development of "NPO / NGO built-in type input-output table"

In 2000-2001, the author estimated the economic scale (production amount in the whole country and the Kansai region) and the economic ripple effect of the private non-profit organization (NPO / NGO) of the citizen / non-profit sector. The NPO /NGO covered "specified nonprofit corporations" and "association without rights" "volunteer organizations". and No statistical data on NPO / NGO activities existed so far. Estimating it was an unprecedented attempt. Cases from around the world were not helpful. It was not easy to develop a quantitative estimation method (model). The author has developed a unique estimation method (model) utilizing the "Input-Output Tables (IOTs)" and the financial statements of NPOs / NGOs. In the industrial sector of the "Input-Output Table", the author was conceived to newly incorporate the NPO/NGO sector which had never been before. The author independently developed an NPO / NGO built-in model of "input-output table" which newly incorporates "input (vertical)" and "output (horizontal)" as NPO / NGO sector. The author estimated the economic ripple effect of NPO by using this "NPO / NGO built-in type input-output table".

### 3-2. Estimation of economic scale and ripple effect of NPO activities utilizing "input-output table" - Kansai region (Kobe · Osaka etc.) -

In 2000, the author first estimated the NPO  $/ \rm NGO$ 

activity in the Kansai region such as Kobe, Osaka. The economic scale (production amount) of NPO /NGO activities in the Kansai region was estimated to be about 150 billion yen.

The magnitude of the production ripple effect of NPO activities given to all industries in the Kansai region was estimated to be 1.77 times. The figure shows that the production ripple effect is 1.77 times in the Kansai region due to the occurrence of one unit of NPO/NGO sector demand. It was 0.3 point larger than the average value of all industries 1.47 times.

### 3-3. Estimation of economic scale and ripple effect of NPO activities utilizing "input-output table" Nationwide -

In 2001, the author estimated about NPO /NGO activities nationwide. The author conducted comparative verification of production scale and transaction type characteristics between NPO / NGO sector and each industry sector. By doing so, the author tried to simulate the future economic ripple effects of NPO /NGO activities.

As a result of the estimation, the economic scale (domestic production amount) of NPO activities nationwide was estimated to be 694.1 billion yen on the basis of 2000. By the way, the economic scale of the motorcycle industry was 686.8 billion yen, the economic scale of NPO activities was beyond that. This amounted to 0.08% of the total production amount of all industries.

In addition, as a result of trying simulation under a certain scenario, we estimated the economic scale of NPO /NGO 10 years later. Due to the expansion of domestic final demand, it was estimated to expand to 1.7844 trillion yen as of 2010.

### 3-4. Support of social experimental projects by administrative agencies

Estimates based on these NPO / NPO financial statements and "NPO / NGO built-in type input-output table" were completely new experimental attempts. The success of this quantitative estimate proved that the economic scale and economic ripple effect of NPO/NGO activities are not small. Until then, in general, there were a lot of opinions that "private non-profit organization (NPO / NGO) activities are done with volunteers and hobbies, not related to the economy and no economic effect".

However, this estimate showed that there is a rationale for the economic role of NPOs. The country (Ministry of Economy, Trade and Industry) positioned

NPOs as subjects of economic and industrial policy, and began to address support policies. It also served as a basis for revising the "Act on Promotion of Specified Non-profit Activities" and establishing a preferential tax system.

### 4. Citizen · Non-profit Sector as Regional Innovation Cluster

**4–1. Regional Innovation and New Industry Creation** In the region, various management resources and regional resources are necessary to create innovation, create new business, and create new industries. With demand becoming obvious in the region, companies supply products and services, and new businesses are created. However, even if there is a potential demand, companies will not supply products and services unless a relationship between demand and supply is established.

Even if there are management resources and regional resources, companies can not develop new business unless market mechanisms work. In other words, in the region, innovation is created, potential demand is found, it becomes obvious, and the market mechanism works. On top of that, companies have management resources and regional resources, utilize them, supply products and services, and create new businesses.

Global innovation is triggered by regional innovation. The needs of products and services that people demand in the region will become the needs of products and services that people around the world want. Global business and global markets are born first from local businesses and regional markets. Products and services are created to meet the needs of people in some areas or to solve social and economic problems somewhere in the area. In some cases, they spread all over the world.

### 4-2. "Input resources" of regional innovation clusters and the creation process of new industries - Citizen / non-profit sector

fulfilling "seedbed function" of new industry -Based on examples such as IT business (Internet related business), what kind of regional resources are being introduced into the region by regional innovation clusters? The author clarified the input resources and arranged the process by which new business and industry are created. It also summarizes the role that the citizen / nonprofit sector contributes there.

#### 4-2-1. Revealing social and economic problems in the

region - Factors of regional innovation creation -There are various social or economic problems in the region. Regional innovation is sought to solve regional problems, and it is created by the needs of residents, consumers, businesses, etc. who are members of the region.

#### 4-2-2. Citizen / nonprofit sector activities to solve regional problems - Revealing latent demand -

The citizen / non-profit sector is the one that finds potential demand, become it obvious, and makes market mechanism work. Citizen / non-profit sectors are private nonprofit organizations (NPO / NGO), volunteer organizations, etc. who develop business and activities to solve regional problems. They have high public benefit / non-profitability, pioneering and do social experimental activities.

### 4-2-3. Innovation by social experimental activities of citizen / non-profit sectors

The citizen / nonprofit sector has the function as "economic entity" as well as the function as "public interest entity". Citizen / nonprofit sectors create innovation and develop businesses and activities in the region against potential demand that market mechanism does not work. The citizen / non-profit sector develops business and activities pioneeringly and socially experimentally, taking advantage of non-profit characteristics and volunteer power.

### 4-2-4. Progress of "businessization" of citizen / non-profit sectors and creation of market mechanism As its business and activities expand, the organization expands, "businessization" progresses. Potential demand that the market mechanism did not work become obvious, and supply to it will expand.

### 4-2-5. Collaboration between companies and citizen / non-profit sectors

Citizen / non-profit sectors conduct various pioneering activities and projects to solve regional problems. On the other hand, companies will cooperate as part of social contribution activities and social responsibility. In addition, there are cases where such a business can also benefit the company's commercial business (main business). In such a case, the company develops social experimental business in collaboration with the citizen / nonprofit sector.

4-2-6. Support of social experimental projects by

citizen / nonprofit sector by administrative agencies Administrative bodies develop various support policies for social experimental projects for solving regional problems by citizen / nonprofit sector. For example, it is the following support policy.

(1)Provide subsidies from administrative agencies to private nonprofit organizations (NPOs / NGOs) and others. (2)Outsourcing of administrative services to NPOs /NGOs. (3)Development of collaborative project between NPO and administrative agency.

### 4-2-7. Companies entering new businesses and creating new industries

Through such processes, companies will enter the business field. By increasing the number of companies engaged in the business, new industries and new markets will be created.

#### 5. Conclusion

In this way, the citizen / nonprofit sector has the function as "economic entity" together with "public benefit agent", and has created new business in the region. Social experimental projects by citizen / non-profit sectors are initially very small as individual projects. However, they have the power to create new business models in the region. They possess the possibility of creating new industries and markets by accumulating and collaborating many in the region. In other words, due to the activation of citizen / non-profit sector activities and "businessization", the supply-demand relationship of potential products and services becomes obvious and expands. Along with that, in the products and services fields where market mechanisms were hard to work until then, an environment where companies can enter easily is created. And as companies start to do business one after another, such new products and service fields will mature. Through such processes, new markets and industries are created.

In this way, the citizen / non-profit sector has a very high pioneering ability and can be said to be a "venture" that exceeds the company as an entrepreneur. In the region, the citizen / non-profit sector fulfills the "seedbed function" of a new industry.

#### References

Masashi Imase (June 14 2018), As an element of the regional innovation cluster, the citizen / non-profit sector that fulfill the "seedbed function" of the new industry, 21st Uddevalla Symposium 2018, Luleå University of Technology, 971 87 Luleå, Sweden