## A study of regional innovation: Shifting to the endogenous development paradigm

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Abstract— The paradigm shifting from extraneous development to endogenous development is one of the cogent ways to make the regional innovation. Littleton, Colorado, known for its "Economic Gardening" program, is a good example among all. Ise, Japan can make such innovation by making the better use of the Ise Jingu, one of the most beloved religious tourist destinations in Japan. The three key factors of making such paradigm shift are an autonomy in the local finance, the strong leadership of the civic leaders and the existence of region-specific special resources.

Keywords—regional innovation, endogenous development, economic gardening, Ise

## I. Introduction

What idea does the word "regional innovation" suggest? In many occasions, the word of "innovation" is used with a nuance of "a development or an application of new technology". However, Joseph Schumpeter (1912) mentioned that in the market capitalism under the law of diminishing returns, the stationary state of equilibrium is once destructed by entrepreneurs ('creative destruction') and after undergoing a 'new combination', a new capitalism is transformed [1]. The 'new combination' in this context, was later termed an "innovation". In other expression, an economy which came to a deadlock should be once destructed and evolutionally renovated by innovator into a new one that well adapts to the new environment. In this paper, we define the occurrence of such process in a particular region as a "regional innovation".

This paper, at first, introduces the example of the regional innovation of Littleton, Colorado, where the city government successfully made a paradigm shifting from the extraneous development to the endogenous development through a business support program called "Economic Gardening". Following, the possibility and the applicable route to the regional innovation of the city of Ise, Japan, where the authors live, is examined.

#### II. Discussion

## A. Littleton, Colorado: The regional innovation by new paradigm

Population: 41 thousand (2006) Area :  $5.82 \text{ km}^2 (2006)$ 

Revenue amount: \$78.67million (2008) (= JPY7.1 billion)

Littleton, Colorado is a small city in the west with few remarkable economic resources. In this city, a massive employment loss was made due to the relocation of the neighbor factory which had been a generous employer for the local community. After some try and errors, in the late 80's, the city government determined to take the "Economic Gardening" program where they nurtured a growthsupportive business environment specially arranged for the local companies. Consequently, the number of jobs in the city has grown from 14,907 to 35,163 and the sales tax increased from \$6.8 million to \$19.6 million respectively between 1990 and 2005, while its population increased only 30% during the same period[2].

The regional innovation of Littleton can be depicted as Figure 1.

The local economy depending on outside capital came to a deadlock due to a factory relocation. (the end of extraneous development model)

The local government determined to support the growth of domestic small businesses. (the shift of paradigm to endogenous development)

Local business flourished, the number of jobs increased and the local economy got reinvigorated. (the forming of endogenous development model)

Fig. 1 Flowchart of the regional innovation in Littleton

The business support program in Littleton is a unique one called "Economic Gardening". The three critical support fields they provided to raise local businesses are as below

#### 1. Market information

Access to competitive intelligence on markets, customers and competitors (e.g. market research tools, database services, geographic information systems)

#### 2. Infrastructure

Development of community assets to support small and knowledge businesses by elevating the overall quality of life (e.g. parks, open spaces, education opportunities)

## 3. Connectivity

Improving the interaction and exchange among the business owners and business resource providers to help increase the innovative levels of businesses (e.g. trade associations, think tanks, academic institutions)

Here are some of the unique concepts which featured "Economic Gardening" program in Littleton [4].

The niche strategy best fits small and medium-sized businesses. So, in supporting, the customer needs should be defined at first so that their business resources should not be put into the field with less strategic chances.

Establishing a competitive advantage inevitably takes long time. So, business supporters should commit in the long run basically.

In rural towns, people tend to avoid entrepreneurial and/or innovative issues. So, the entrepreneurial climate (e.g. venture spirits) should be prevailed to begin with.

Small businesses grow rapid and generate new jobs much in the early stages. So, focusing on companies on such stages should make more sense.

The lesson from Littleton is not only a story of the employment structure change nor the unique concepts of business support. We can learn, as well, the city government's sincere attitude upon local business support, which is not such indulgent to foster dependency among local business owners but is based on an accurate understanding of corporate strategy and a resolution that without local businesses' growth, no local prosperity. As mentioned, Littleton did not have any wonderful economic resources. Nevertheless, they tackled the regional innovation by remodeling from 'outside-in' business recruitment practice to 'inside-out' business expansion strategy, and made it with a great success. The strong and long-term leadership of civic leaders was obviously essential among all.

## B. Ise, Japan: The old paradigm still prevailing

Population: 134 thousand (2006) Area :  $208.53 \text{ km}^2$  (2006)

Revenue amount: JPY40.8billion (2008)

Ise, Japan is a medium-sized old city in Kii peninsula, the center-south of Honshu island. Currently in this city, the employment from machinery/metal sectors is as large as one from other sectors[5]. However, since the large part of the machinery/metal local companies depend their businesses much upon subcontracts from large firms outside the region, their business seems not to have a good autonomy. This situation is unfortunately similar to Littleton's before the 80's, where the city industry had a potential risk to lose considerable number of jobs under the global competition.

Understanding this unfavorable situation, the city of Ise and neighbor city/town have been contending to make up "a basic plan to reinvigorate the regional industry in Ise-Shima area" since the fiscal year of 2010. In this plan, they stipulate three sectors of "environmental and energy business", "medical and welfare business" and "tourism and regional resource application business" to be aided and promoted to form industry clusters within the area[6].

This plan, obviously grounding on Michael Porter's cluster theory (1998) [7], is not incorrect theoretically. However, since this plan still adopts the business recruitment practice, it can never a measure to evade the risk that the extraneous development paradigm itself expires. Furthermore, even if we believe this conventional practice is still valid, the plan's effectiveness is undoubtedly poor. Nowadays, emerging countries in Asia such as China and India are in a tough rivalry with Japan in the field of business recruitment. The question here is, how attractive and advantageous Ise-Shima area is, compared to those emergent countries. As long as the plan reads, the convincing answer is not found. While it contains some worthwhile opinions, this plan is not practical due to a lack of the strategic eminence.

## C. Comparison of the revenue structures: Autonomy and heteronomy in finance

As seen in the previous sections, Littleton made the regional innovation by shifting paradigm to endogenous development while Ise has not yet made such substantial innovation. From the comparison of two cities' revenue structures, we can point out one thing as its cause; an autonomy in finance.

As shown in Figure 2, the percentages of city tax in the city revenues were 60% in Littleton and 41% in Ise, respectively[3] [8]. Although this situation might not be something the people in Ise desired to be, it inevitably influences the roadmap to local government's administrative goal. In Littleton, there is a straight roadmap that the reinvigoration of the area's economic activity increases the amount of city tax and the financial situation of the government is improved accordingly. But in Ise, the roadmap is somewhat complicated: by introducing the policies given by the central government, a considerable amount of subsidies would be put into the local economy and finally the finance of local government get improved. In short, the revenue structure of local government can be one of the key factors of the regional innovation by shifting to the endogenous development paradigm.

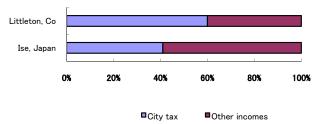


Fig.2 The comparison of the revenue structures (2008)

# D. Suggestion for Ise: Route toward the regional innova-

In these days, it is said that industrialization is not the only way to modernize regions and a new concept of the regional development is required. One of the applicable solutions is that the local societies pursue various manners of development, not limited in the economic field, but in the fields such as historic, cultural and geographical, based on the region-specific resources. This is the concept of the *endogenous development*[9]. If the local city like Ise hopes to implement the endogenous development, the region-specific special resources should be defined to begin with. Then, according to the strategy considering with market needs, the region should be marketed making the best use of the resources.

We would like to point out *the Ise Jingu* as the most important region-specific resource in Ise. The three-star tourist destination in *Michelin Green Guide*(2009) [10], *the Ise Jingu* is one of the oldest and most beloved Shintoism shrines in Japan. In recent years, *the Ise Jingu* attracts

overwhelming 8 million visitors, that is as many as no other years of our times. However, the officers of Jingu Administration Office are rather concerned with this seemingly prosperous situation. The reasons are as following:

## 1) Traffic congestion

In weekends of high seasons, the car traffic in downtown Ise is so congested that it takes almost two hours to drive just three kilometers from car parks around *the Jingu* to the nearest highway entrance.

### 2) Misunderstanding of visitors

It is said that more visitors today recognize Ise as a gourmet attraction and/or an occult-like *power spot*, and it is of minority who may properly understand *the Jingu's* true meaning in Japanese religious culture.

It is ironical that while Ise attracts unprecedentedly many visitors, *the Jingu* herself feels anxious. But this anxiety is understandable because the current booming for Ise is rather fickle and it may be disappearing in future. And if so, the value of this irreplaceable religious and cultural spot might be impaired. Therefore, it is an important mission for civic leaders of Ise to elevate and sustain the value of *the Ise Jingu* both by improving visitors' satisfaction and by informing the cultural goodness of Shintoism in proper manners.

In order to do these, we strongly believe the four sectors of local business people(san), the city government(kan), academic/educational organizations(gaku) and Jingu Administration Office(shin) should build up a closer connection and deal with such visitors' satisfaction issues. For further and concrete suggestions, we would offer in later occasions.

## III. CONCLUSION: "MARKET THE REGION!"

The essence of the regional innovation in Littleton lies in the paradigm shifting from the extraneous development to the endogenous development. One of the reasons such innovation was made was the good autonomy in the local finance. As well, the strong leadership of the government in setting up the overall strategy and conducting each sector to implement the strategy was indispensable. This function of strategic management is suggested to be the new role of local governments in the future modernization of regions.

In spite of Littleton's admirable success, we pointed out an essentially advantageous factor, which Littleton has not and Ise has, to accomplish the regional innovation by endogenous development paradigm. That is a region-specific special resource. Ise has *the Ise Jingu*, one of Japan's worldlevel tourism resources. The city of Ise can make an unique regional development model when they come up with a marketing plan to better use this enviable resource, which is somehow neglected in the current area development plan.

The environment of regional economies in Japan is making a substantial change which leads beyond the point of no return. We, in Ise, have no time to hesitate in starting the innovation.

"Entrepreneurial innovation is the essence of capitalism." ----Joseph Schumpeter

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