

Industrial Revival from an Earthquake Disaster and Regional Industrial Policy: a Case Study of Great Hanshin-Awaji Earthquake

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■ **Overview** : As well-known, Great Hanshin-Awaji Earthquake occurred early morning on January 17th in 1995. This earthquake claimed about 6000 noble lives and caused catastrophic damage to Kobe's industry, which had been the basis of the local economy. This resulted in the regional economy becoming paralyzed. To break through this crisis, the financial circles, the public administration and researchers cooperated and proposed rapidly succeeding policies for industrial-recovery. After receiving these proposals, as the responsible organization of industrial-policy, the public administration arranged ordinances and so on and realized an industrial-recovery. I have reviewed regional industrial policy in consideration of the industrial policy in the damaged area during the Restoration Period from Great Hanshin Awaji Earthquake, which had been developed using the idea of enterprise zone and so on.

■ **Keyword** : Great Hanshin Awaji Earthquake, industrial policy, industrial recovery, enterprise zone, Structural Reform Specific Area

Introduction

In economics, industrial policy is defined as the governmental policy, which is intended to improve economic welfare by the government's intervention into the allocation-of-resources among industries or sections or intervention in the industrial-organization in specific industrial sectors when the competing market mechanism made the allocation-of-resources and the income distribution, which is not desirable due to some reasons ¹⁾. Economic fluctuation and industrial structure change and so on are assumed as the factors that the market mechanism causes such as socially undesirable allocation-of-resources and income distribution. However, we do not have to forget that these changes also can be caused by natural disasters.

Due to the Great Hanshin-Awaji Earthquake, which had occurred on January 17th in 1995 ^{Note 1)}, Hanshin Industrial Region whose core had been Kobe Port suffered devastating damage. It suddenly became a problem region, which is such an area discussed in the Regional Policy Theory. The paralysis of urban function and industrial agglomeration make cease smooth activities of market mechanism itself and the market economy functions cease to themselves. On the other hand, the major challenge from the viewpoint of the industrial studies is how to recover the suffering local industry and how to develop the regional economy as the external effect. Kobe City and Hyogo Prefecture, which have suffered from the Great Hanshin-Awaji Earthquake showed a strong necessity for that in their industrial policy. Also, they tried society experiments concerning a wide range of industry to manage to recover the original local industry in Hyogo Prefecture.

Since the Great Hanshin-Awaji Earthquake, we experienced many earthquakes such as the Noto Hanto Earthquake, Chuetsu Earthquake and Chuetsu Oki Earthquake. These earthquakes caused major damage on the local industries and the tourism industries. From the Great Hanshin-Awaji Earthquake to now, we fortunately have not experienced any large-scale earthquake disasters in large cities. However, if we imagine the earthquake disaster occurs in large cities including Fukuoka City, we can estimate major damage like we have experienced in the Great Hanshin-Awaji Earthquake. To review the lesson of the industrial damage and the industrial-recovery, which was caused by the Great Hanshin-Awaji Earthquake may be useful to make a regional industrial policy in the future.

As research about the industrial-recovery after the Great Hanshin-Awaji Earthquake, we can find Takayose (1996), Hayashi (1997), Osumi (1997), Fujimoto (1999), Aoki (1999), Yamamoto (2000), Seki and Otsuka (2001) and Nagamatsu (2006) and so on. Still, the research about the industrial-policies and the industrial-recovery such as those of Hyogo Prefecture and Kobe City did after being directly hit by an earthquake disaster are few.

In this paper, I treated the industrial-recovery from the earthquake disaster, and focused especially on the industrial-policy of Hyogo Prefecture and Kobe City. In the Great Hanshin-Awaji Earthquake, the city which suffered major damage was Kobe City, and the industrial damage was wide-scale specifically in this city. Because of it, the industrial-recovery from the earthquake disaster in Kobe City gives us some useful suggestions to plan the regional industry policy about the earthquake disaster reconstruction in the future. In addition, the Great Hanshin-Awaji Earthquake had an influence on the local-governments around Kobe City. The role of Hyogo Prefecture, which controls those local-governments, especially was big to recover devastated local governments. Therefore, in this paper, I selected Hyogo Prefecture and Kobe City as the target areas. In this research, I set time repartition. This time repartition is based on “The Report of the 10-Year Reconstruction Overall Verification and Recommendations.” Time in this paper is divided into four repartitions of I restoration period, II revival early stages, III full-scale recovery period and IV post recovery period. By considering that what kind of industrial policies have been helping the recovery of damaged areas, I will explore the relationship between risk management and the regional industry policy in the future ^{Note 2)}

I. Occurrence of the Great Hanshin-Awaji Earthquake and the Industrial Policy at the Restoration Period (1995 - 1997)

The Great Hanshin-Awaji Earthquake, which happened at 5:46 a.m. on January 17th in 1995, recorded a magnitude of 7.3 and caused enormous damage to 10 cities and 10 towns in Hyogo Prefecture (at the time of 1995) ^{Note 3)}. Especially, the damage in Kobe City, which was the economic center, was massive. Just its commerce and industry are alleged to have had suffered direct damage of 5,927 billion yen in the whole Hyogo Prefecture ²⁾.

This huge earthquake disaster led to the cessation of the industrial feature centered in the Hanshin area. To handle this situation, the local-governments, the industrial world and researchers cooperated and

worked out reconstruction plans and made policies in rapid succession. I will proceed the considering according to the arrangement of Kato (2005).

1. Various Reconstruction Plans Immediately after the Earthquake Disaster

(1) Reconstruction plan from the nongovernment

“The Industrial Reconstruction Plan” was presented first on June 30th in 1995. Fuyuhiko Maki, chairman of the Federation of Chambers of Commerce and Industry in Hyogo Prefecture (in those days) served as the chairman. The plan had a purpose to build new industrial structure to enable to develop continuously for the mature society in the 21th century. To concern this plan and to implement revival business effectively and smoothly, the local governments and the private companies sought collaboration with private companies and nongovernment working persons from home and abroad. As the organization that promotes an industrial-recovery accelerating by doing the accurate support according to the characteristics and step of the Reconstruction Plan, the Hanshin-Awaji Economic Revitalization Organization (HERO) was established in December, 1995. It has developed a variety of initiatives aimed at supporting foreign companies entering and support for business start-ups, support business for the sophistication of local industries.

(2) Reconstruction Plan of Kobe City

Kobe City Restoration Plan was established in June, 1995. This plan was built as the revival program for whole of Kobe City. The restoration goal year was set as 2005. To establish this plan, an exploratory committee was established. Surprisingly, the first meeting was held only 20 days after the earthquake disaster, February 7th in 1995. By the way, in the policy about the industrial-recovery, establishment of new business facilities was placed as a major task for the revival of the international city, which is a leading city in the 21th century. Especially as a task for international zone building, the policy expressed clearly the promotion of the accumulation and physical distribution of international organizations, foreign affiliates and so on, and information, art, science and cultural exchange. Specifically, it was “Kobe Enterprise Zone Maintenance Initiative” and the area for the Port Island 2nd stage was specified later.

(3) Reconstruction Plan of Hyogo Prefecture

The Hyogo Prefecture Restoration Plan was established in July, 1995. The target year was set as 2005, the same as for Kobe City, and the damaged 10 cities and 10 towns became the target areas. This Reconstruction Plan was established, based on the basic vision of the Great Hanshin-Awaji Earthquake Revival, which was presented by the urban restoration strategy meeting in March, 1995, and the ground design of the Great Hanshin-Awaji Earthquake Restoration Plan. In the point about the industrial-location, I specified the “balanced industrial relocation and wide area cooperation” and “investment promotion for internal and external companies” on this paper.

2. Development of the Local Industry Policy according to the Reconstruction Plan

Based on these restoration planed by Hyogo Prefecture and Kobe City, individual regional industry

policies were developed. The enforcement of the Hyogo Industrial Restoration Ordinance and the proposal of the Kobe Enterprise Zone Initiative were given as the policy-instrument at the restoration period.

(1) Enforcement of the Hyogo Industrial Restoration Ordinance

First, in the Hyogo Industrial Restoration Ordinance, the necessity of attempting for the new industry's agglomeration to promote a restoration of the earthquake disaster was recognized. The purpose is "to promote the prompt revival of industry in the damaged area, with utilizing the excellent infrastructure of the Osaka Bay coastal region and utilizing the policy based on the Law for Temporary Measures about the import promotion and the inward investment business facilitation, by taking a step to promote the formation of the foothold district where the various business is suitable for the new economic environment concentration.³⁾" This ordinance was proposed in September 1996, and was enforced in January 1997^{Note 5)}. As a result, foothold district a New Industrial Creation Area was set. Its main policy was attraction of enterprises of the fields with potential growth by installing a foothold district in the damaged area and offering preferential treatment such as a local tax rate reduction. In the preferential treatment, the prefecture grants incentives in addition to the municipal's policy. As the taxation system benefit, it was very drastic change. Incidentally, this ordinance had a timelimit measure until March 2002.

(2) Enterprise Zone Initiative

Based on the settlement of the ordinance of Hyogo Prefecture, which prescribed such a preferential treatment, Kobe City decided the foothold district of the industrial-recovery as the Port Island 2nd stage area. This area was decided as "Enterprise Zone," which had been the keyword for industrial-recovery since the earthquake disaster, is a political instrument for the regional industrial policy based means "intervention of a public administration, especially, an intervention by a local-government is the tool of an urban problem, and public administration should withdraw so that the free market becomes free from limitation by tax, regulation and so on and it functions efficiently." In the case of Kobe City, the urban problems responded to the problem of the restoration of the suffered industry and the realization of the enterprise zone had an important implication in the regional industrial policy.

In March, 1995, "Hyogo Creation Seminar" (Chairman Kojiro Niino, professor emeritus of Kobe University) was utilized to propose new local promotion with specifying the enterprise zone in "the Great Hanshin-Awaji Earthquake - the proposal to Hyogo Creation." Then, in May 1995, "the Kobe City flotation zone seminar" proposed "Kobe flotation zone plan"^{Note 7)}. It specified the city revival plan whose nucleus is the incentive of the limited-time based on the tax reduction and exemption and the deregulation. In June 1995, in the policy about the industrial-recovery in "Kobe City Reconstruction Plan," the establishment of the enterprise zone (a firm location promotion area in the plan) was decided as a means of "the promotion plan of the advance of the industrial structure of Kobe."

Table 1 Preferential treatment in Kobe Enterprise Zone

	Preferential treatment	Well-treatment for growth field companies which runs "specific business"	Good treatment for "core business"
Tax benefits	Fixed asset tax and city planning tax	1/2 is exempted for 3 years	
	Real estate acquisition tax	1/2 is exempted at acquisition	
	Office tax (prefecture)		Fixed assets basis : half exemption for 3 years 600 yen/m ² per year to 300 yen/m ² per year
Subsidy	Subsidy to Industrial agglomeration promotion of Job creation type (prefecture)	Subsidy : ①Subsidy for new employment of local worker 60 to 120 million yen / person (1/2 for temporary worker and so on)	
		②Subsidy for new energy equipment...Subsidy ratio 1 / 2	
		Auxiliary limit: 300 million yen for ① and ② respectively	
		Auxiliary requirements: Acquisition or rent of land	
		• Amount of plant-and-equipment investment: More than 50 million yen	
		• 11 or more new local employees	
		Auxiliary limit: Office rents of foreign-affiliated firms	
		• Starts business within 6 months after the lease	
		• 11 or more new local employees	
	Investment subsidy for R & D type companies Subsidy for investment (prefecture)	Subsidy ratio: 3% of total investment amount excluding land	
		Auxiliary limit: no limit (10 billion yen per year for grant)	
		Auxiliary requirements: Amount of investment (excluding land) more than 1 billion yen	
	Subsidy for rent for industrial-cluster forming promotion (Prefecture and city)	Subsidy ratio: up to 1/2	
Limit : 1500 yen/m ² per month, 200 million yen per year			
Period : up to 3 years			
Objective : Medical related company which moves into R & D type facilities			
Office rent subsidy for foreign companies and foreign affiliates (Prefecture and city)	Subsidy ratio: up to 1/2		
	Amount of subsidy: 1,500 yen / m ² per month, up to 2 million yen / year		
	Period : up to 3 years		
Loan	Loan for advancing to specific areas	The limit of loan amount: 200 million yen	
		Interest : (with credit guarantee) 1.75% (fixed interest)	
		: (without credit guarantee) Rate of financial institution	
	Support loan of Kobe City for advancing to the industrial complex	Limit of loan amount: 1000 million yen (200 million yen with credit guarantee)	
		Interest rate: 1.75% (fixed interest)	
		Loan period: up to 20 years Grace period: up to 3 years	
	Support loan of Hyogo Prefecture for advancing to the industrial complex (to the base area designated by Hyogo prefecture)	Limit of loan amount: Less than 80% of target business or less than 2.5 billion yen (If specially admitted, 5 billion yen)	
		Interest ratio: 1.35% (fixed rate) per year	
		Loan period: up to 15 years Grace period: up to two years	
	Support loan of Hyogo Prefecture for advancing to the industrial complex (to the industrial complex designated by Hyogo prefecture)	Limit: Less than 80% of target business or less than 0.5 billion yen (If specially admitted, 1 billion yen)	
		Interest ratio: 1.75% (fixed rate) per year	
		Loan period: up to ten years Grace period: up to two years	

Source: under the editorship of Kobe City (2006), Kobe Institute of Urban Research, p.145.

(3) Proposal and collapse of Enterprise Zone

Now, I describe a series of processes about the proposal and the collapse of the enterprise zone initiative to the national government ^{Note 9)}.

A request for the national budget preparation for the fiscal 1997 was proposed in December 1996. And, at the same time, the Great Hanshin-Awaji Earthquake revival promotion conference demanded the industrial-recovery relation budget ^{Note 10)}. After receiving the request and demand, the Hyogo prefectural government began the support of the accumulation of new growth industry according to the Hyogo Industrial Restoration Ordinance. On the other hand, Kobe City established the Kobe Enterprise Zone ordinance ^{Note 11)}, and serviced a systematic framework to set the enterprise zone within Hyogo Prefecture. While Hyogo Prefecture and Kobe City, which were damaged areas, watched the trend of the national government. They held enterprise zone seminars to make clear the ideal way of the Kobe like enterprise zone, and agreed on the rough draft based on the result among Hyogo Prefecture, Kobe City, the Kobe Chamber of Commerce and Industry, and the Hanshin-Awaji Economic Revitalization Organization. However, the national government, which did not admit the double systems in a single nation, did not admit the draft.

(4) Sub Summary

As we have considered so far, Hyogo Prefecture and Kobe City were in the trial and error to build a regional industrial policy. Among them, the enterprise zone is worthy of attention as the trial, which the industry, university and government proposed cooperatively. The double systems in a single nation were not admitted. Therefore, the industrial foothold district was established because of the deregulation and the preferential tax system and so on by the ordinance of the local government. These trials were the embryos of the regional policy, which leads to the Special District for Structural Reform and the Regional Revitalization plan. Therefore, the industrial-policy in the restoration period can be evaluated in this point.

II. The industrial-policy of Hyogo Prefecture and Kobe City at Revival Early Stages (1998 - 1999)

As the characteristic of the industrial-policy in the early stages of the revival, I noticed that the local governments centered on the fullness of the international exchange base feature and the attracting promotion of the domestic and international companies according to the globalization of the rising economy. The typical policy is the International Economic Zone Initiative. It is the initiative which proposed the foundation of the system to form “the International Economic Zone” where the foreign affiliates companies and so on worked freely and generously in several areas in Japan, which had the potential from the viewpoint to reform economic structure in the whole country ⁴⁾.

1. International Economic Zone Initiatives and Hyogo Investment Support Center

(1) Discussion on the International Economic Zone Initiatives

As the following, an international economic zone initiative has been discussed the process ⁵⁾. First, in

the keynote report in “the Hanshin-Awaji Great Earthquake revival symposium,” which was held on January 23rd in 1998, the governor (at that time), Mr. Toshitami Kaihara, proposed the formation of a seminar to realize an enterprise zone initiatives and to proceed with it as a policy. Because of this proposal, Hyogo prefecture established the International Economic Zone, held the seminars four times and showed the policy of the new area specification to promote investment in Japan. These studies results were summarized as “the institutionalization report for the formation of the international economic zone (tentative name).” This report was explained to the Japanese government on January 11th in 1999 ^{Note 12)}. The national government responded as follows. “First, it is difficult to carry out a good benefit policy to a metropolitan area. Second, the national government expects unique efforts by the local-government, but it is difficult to reform the national tax system.” In these responses by the national government, there are some difficulties of the preferential treatment to a metropolitan area. The Laws for Limitation on Factories existed then and the national industrial-location policy was still in the transition from localization to the area of urban agglomeration. It was not metropolitan area oriented like now. Therefore, we can easily guess that the central government did not admit industrial agglomeration forming to the metropolitan area such as Hyogo Prefecture and Kobe City.

(2) The establishment of Hyogo Investment Support Center (HIS)

The international economic zone initiative was the policy which was concurrently proceeded with the establishment of the Hyogo Investment Support Center. The Hyogo Investment Support Center was established in May, 1999 aimed to realize one-stop service, such as offering information on industrial housing complexes, idle suitable land, rental offices in Hyogo Prefecture, the reserving of the fund and talented people, and the administrative procedure after the location decision. This organization changed the name as Hyogo-Kobe Investment Support Center (HKIS), and is providing one-stop service about the industrial-location continuously now.

(3) Sub Summary

As I mentioned above, in the early stages of the revival, there was not active development of industrial-policy compared to the restoration period. Above all, following the enterprise zone, the national government did not understand the idea of proposals from Hyogo area about the international economic zone initiatives, and the idea was never embodied. There were some policy proposals from the local governments. However, the centralization of the power system of the national government or the wall of regulations obstructed them as a result. International Economic Base Initiative was also institutionalized by the local-governments in the same way in the “Industrial Accumulation Ordinance” and “Kobe Enterprise Zone Ordinance” by Hyogo Prefecture and Kobe City. However, at this time, it overlapped with the Heisei Recession and any enterprises were not located. Prof. Yoshimasa Kato reminded the industrial-policy of that time and stated ⁶⁾ “further policies might be necessary to be taken as the locational policy (such as change from sales to rent, lease holding, house lease method and free ground rate for a fixed time). These were actually taken after that period.” This comment precisely expresses the insufficient industrial policies at the revival early stage.

III. The Industrial-policy of Hyogo Prefecture and Kobe City at Full-scale Recovery Period (2000 - 2004)

The national government began to put power in the economic structural reforms in earnest during the so-called full-scale recovery period. Because of this, the change to deregulation is born and the industrial policies of Hyogo Prefecture and Kobe City changed their dynamics from that of the past.

1. Industrial-policy of Hyogo Prefecture

(1) Establishment of Industrial Accumulation Ordinance

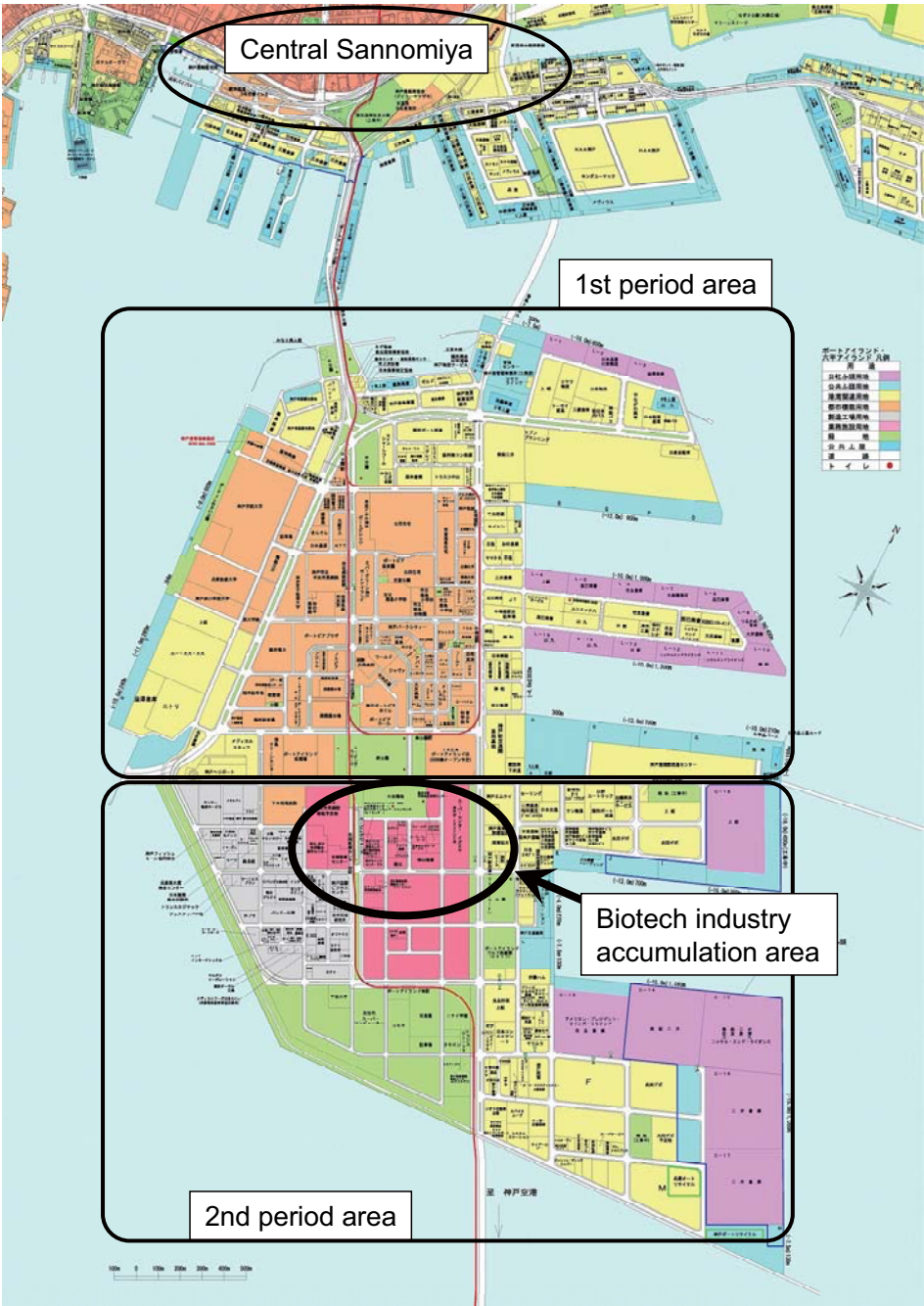
First, the Industrial Restoration Ordinance in Hyogo prefecture, which was established in the restoration period, was revised as the Industrial Agglomeration Ordinance in April, 2002 after 5 years from its establishment ^{Note 14)}. This ordinance's purpose was "by forming the zone where the various industries that are suitable for the new economic environment agglomerate in the prefecture, while utilizing the prefecture's infrastructure and regional characteristics, attempt to activate the prefecture's industry and to create new employment. And as this result, it contributes to develop the prefecture's industry and promote regional economic agglomeration" ^{Note 15)}. Specifically, it utilizes the area's potential to set the foothold district, and by the agglomeration advantage of industry, it aims at structural reforms of industry and the economic reform in the area.

(2) Industrial policies and support policies by Hyogo Prefecture

As policy in Hyogo Prefecture, it set an International Economic Zone and an Industrial Agglomeration Promotion Area. The former is the area which was equipped with the requirement that investment by foreign company; foreign affiliate is accomplished outside of the Osaka Bay seaside area and the high tech business-academia collaboration area and that the urban function agglomerates are expected. The latter is appropriate for utilization of high tech and for contribution of realization of high quality of life out of the area, which is suitable for factories location and so on. The securing of the necessary land to agglomerate the specific business is easy there. Moreover, it is the area where has the infrastructure facilities such as affecting high-speed transportation that are well-proportioned.

These policies were described in "Hyogo Economic and Employment Revitalization Program" of Hyogo Prefecture issued in 2001. As for the Industrial Agglomeration Ordinance, the expansion in the whole prefecture of the zone policy and a location incentive are highly evaluated. The purpose was defined as "to attempt further fullness of the incentive, which also suits with the time and the environment, to develop the zone policy in entire prefectures for the industrial housing complex and existing build-up area and so on in addition to the New Industrial Creation Area in the damaged area." Specifically, it demanded further reinforcement of the incentive, such as the expansion in entire prefecture of the zone policy and the location promotion in the damaged area. On the other hand, the international business environment and research infrastructures are in Hyogo Prefecture. The forming of the international economic zone was its precondition, supposing that putting an effort into the attracting of a foreign affiliates. It clarified specific policies for its purpose. The policies are such as (1) the addition of the incentive such as the office rent

subsidiary, which directly leads to motive. (2) The induction of direct equity investment to Hyogo Prefecture through the acceptance of the overseas business missions. (3) The facilitation of the entering to Japan by the business matching of foreign affiliates and companies in the prefecture, and (4) study and training support of foreigner office workers to the business practice in Japan. As for the enterprise enticement system, it describes “Incentives of respective local government in Hyogo Prefecture and the grasp of the investment trend by the company as its presupposition become important”⁹⁾ and it decided to attempt to expand the enterprise enticement system about the location decision.



Source: the author altered based on the website of Kobe City (http://www.city.kobe.jp/cityoffice/39/port/business/pi_map.htm)

Figure 1 Location of Port Island and land use

2. Deregulation and Industrial-policy

By the way, at the full-scale recovery period, the biggest policy changeover is the realization of the deregulation. This is the result of national implementation of designated special area for structural reform since 2002. From April, 2003 to January, 2004, the suffered local-government (area) in Hyogo Prefecture made nine Special District for Structural Reform applicate and 15 Structural Reform Special District propose. As a result, eight Special District for Structural Reform in the suffered local government were authorized. Here are some typical ones.

(1) Kobe Advanced Medical Industrial Area

First, Kobe City had the Kobe Advanced Medical Industrial Area. Kobe City was the main constituent of this special district for structural reform. In this special district for structural reform scheme, the designated area was Port Island, and it attempted to agglomerate biotech industry into the area. At that time, Kobe City serviced a base of research and development of the advanced medical care, and agglomerate medical care related industries and research and educational institutions of life science to build the Kobe health care industrial city and activate Kobe's economy and improve the citizen welfare. At Port Island, in 1999, the setup of the innovative medical center, and the incitement of the Center for Developmental Biology was already decided. At the time of the special district for structural reform application, more than 300 researchers gathered from home and abroad. In addition, 32 companies of medical care related companies had advanced or decided to advance. Thus, a deregulation was made under the situation where there is existing potential in this way.

(2) Kobe International Port Economic Area

Secondly, Kobe City also has the Kobe International Port Economic Area likewise. It was also the main constituent of this special district for structural reform. In this scheme, the designated area were the four areas of Port Island, Rokko Island, Sannomiya Central, Eastern New urban Center Area (HAT Kobe) and by utilizing Kobe Port, which is an eminent international harbor, an international economic base attempted to be made. This scheme was the way to realize the above-mentioned international economic foothold district. The Kobe International Port Economic Area was the one which aims at both of the regeneration of the harbor and the regeneration of the Kobe's economy, utilizing Kobe Port, which is a symbol in Kobe City. As the important base, it is supposed to service all three being the logistics hub base, general vein physical distribution complex and International Economic Area. For forming of the logistics hub base, mainly in the 2nd stage of Port Island area, Kobe City built a high standard container terminal to brew international competitiveness against Asian cities. The general vein physical distribution complex had a purpose of using marine transportation where there is little environmental load in the validity by linking and utilizing the agglomeration of the secondhand-car correlative industry and harbor facilities and contributing to the promotion of the recycling. Lastly, the International Economic Area aimed for the existence industry to advance, to attract and to develop new industry with a background of the decline of the heavy industry, which is basic industry in the concerned area. Above all, it put emphasis on the technology transfer business and it had a purpose of the realization of the conversion of the industrial structure.

(3) Sub Summary

Just by surveying a main Special District for Structural Reform only in this way, it can be clarified that it is actively utilized as the means of regeneration of damaged local-government. I think that the special district for structural reform in Kobe City succeeded above all out of the specified area in this area in a certain degree. The reason of this success is the result of the active review of the Hyogo prefecture and Kobe City's industry reconstruction plan since its earthquake disaster recovery period.

The spread of the Industrial Agglomeration Ordinance and the Special District for Structural Reform removed the regulation problem, which had been a barrier about industrial-policy in Hyogo Prefecture and Kobe City after the earthquake disaster. For example, specifically, the forming of an International Economic Area began to forward the embodiment like the Kobe health care industrial city. In this meaning, the regeneration of the urban agglomeration by the industrial agglomeration ordinance and the Special District for Structural Reform completed the first stage, which had finished in the industrial-recovery from the earthquake disaster.

IV. The Industrial-policy in Hyogo Prefecture and Kobe City on the Post Recovery Period (2005 - 2007)

It was in "the program of the acceleration of the regeneration of Hyogo economy and employment" and "Kobe Advanced Medical Industrial Area" that it makes the pivot of the industrial-policy in Hyogo Prefecture and Kobe City in the post recovery period. The former was a new industrial-policy in Hyogo Prefecture and the latter is a new industrial-policy in Kobe City.

1. The Program of the Acceleration of the Regeneration of Hyogo Economy and Employment

In the new industrial-policy in Hyogo Prefecture, it said the location in the prefecture basic area was solidly status and the location measure in the prefecture produces a good result for the most part. Specifically, Hyogo Prefecture's big gains were that Matsushita Electric's large-scale plasma display factory moved to Amagasaki City in May, 2004, and that the liquid crystal panel factory of the IPS alpha technology moved to Himeji City in 2007. It thought that it was necessary to strengthen the bottom of such perception about the present state of affairs, the frame and the location support plan of the new enterprise incitement strategy, and also to support cluster strategy in the country and to promote the attracting of an advanced-technology industry and a research and development type venture or a foreign companies and so on. Based on this status, under the frame of the promotion of the attracting of a domestic and international companies and institutes by the new industrial agglomeration ordinance, the two main policies were shown. One is the forming of the nucleus of the industrial cluster through the attracting of research and development type companies and institutes. And the other is the forming of the industry agglomeration base, which utilized regional characteristics ^{Note 16)}. In the former, therefore, it is realized through the promotion of the Hyogo cluster project. Kobe health care industrial city is about to be realized.

2. Kobe Health Care Industrial City and the Industrial Cluster Formation

These industrial-policies have been steadily gaining excellent results. For example, there is a Kobe health care industrial city in the industrial cluster policy. The factors which the Kobe health care industrial city is succeeding in as the industrial cluster are: the existence of the institutions such as the university which becomes the nucleus, which invents technology seeds; the existence of the support-system of the interpreted such as the investor by preceding and succeeding IT industry and so on, and the existence of the hospital as the core of the cluster formation. The regional innovation started because these element conditions were realized and the correlative industries are agglomerated. Core facilities were serviced in this way, and it became a big bio cluster which contains more than 100 companies¹¹⁾, but the evolution still continues. In March, 2007, the service of the next generation supercomputer fixes as the 2nd period Port Island area where the Kobe health care industrial city is finding a suitable location and scheduled to operate in the end of the fiscal year 2010. Moreover, enterprise enticements are actively done continuously.

3. The Cooperation of Special District for Structural Reform of Innovative Health Care Industry and Kobe Health Care Industrial City

In addition, the existing industrial-policy was about to achieve some positive results. For example, in the Special District for Structural Reform, special district for structural reform of the innovative health care industry linked with the above-mentioned Kobe Advanced Medical Industrial Area, and the preferential treatment was given. As a result, about 20 foreigners accepted well treatment of municipalities. As the result, the 94 medical care related enterprise including foreign capital affiliates has gathered there. Also, special district for structural reform in the Kobe International Port Economic Area, on the occasion of acceptance promotion of the foreigner information handling technical expert, 62 persons received well-treatment and the import and export out of the Customs business hours increased to quadruple. Moreover, the 80 foreign affiliate companies found suitable locations and a company limited university was newly established in Kobe City. We should note these results to precede the consideration.

V. Summary

As we reviewed so far, the public administration and the regions which were affected by the Great Hanshin-Awaji Earthquake did many policies proposals, forming various factors regardless of the non government. As for development of the policies, I summarized in Table 2.

Table 2 Spread of the industrial-policy after Great Hanshin-Awaji Earthquake

DD-Month-YY	
I. Restoration period (1995 - 1997) : Establishment of Earthquake Reconstruction Plan	
01-Mar-95	Hyogo Creation Seminar proposed Enterprise Zone
01-May-95	Kobe City flotation zone seminar proposed Kobe flotation zone plan
01-Jun-95	Civilian "Industrial Reconstruction Plan" was presented
01-Jun-95	Kobe City Restoration Plan was established
01-Jul-95	Hyogo Prefecture Restoration Plan was established
01-Dec-95	Hanshin-Awaji Industrial Reconstruction Promoting Organization was established
01-Jan-97	Hyogo Industrial Restoration Ordinance was enforced
01-Jan-97	Kobe Enterprise Zone ordinance was enforced
II. Revival early period (1998 - 1999) : Extension of the international exchange base feature and enterprise enticements	
01-Sep-98	Started to review Kobe Health Care Industry City Conception
01-May-99	Hyogo Investment Support Center was established
III. Full-scale recovery period (2000 - 2004) : Economic structural reforms and deregulations	
01-Dec-01	Economy and employment revitalization program was established
01-Feb-02	Industrial Accumulation Ordinance (Hyogo Industrial Restoration Ordinance was revised) was established
Apr-03~	Applied for Special District for Structural Reform application and presented Structural Reform Specific Area proposals
IV. Post recovery period (2005 - 2007) : Formation of new industrial accumulation	
01-Jan-05	The program of the acceleration of the regeneration of Hyogo economy and employment was established
01-Mar-07	Decided to service the next generation supercomputer

There were also many policies which were proposed from the various actors which were not realized in the damaged area. For example, the Enterprise Zone Initiative proposal was a unique industrial-policy, which was centered on the deregulation special case to the country and attempted an industrial-recovery of the damaged area. However, the national government before implementation of the structural reform did not admit the double systems in a single nation. As the result, a proposal in Hyogo Prefecture and Kobe City was not realized. Nevertheless, the Special District for Structural Reform was became the means of the industrial-policy in the concerned area later. The change of the situation to the industrial-policy of the national government was the background.

The change of the national government in the Restoration Process from the earthquake disaster showed that there was a paradigm conversion by the economic theory which the industrial-policy depended on. Until the earthquake disaster restoration period, the industrial-policy of the national government was based on Keynesian economics, which places enormous trust for the policy of the bureaucrat who is called the presupposition of so-called Harvey Road. Because the iron triangle of the administration, the government service and the property existed robustly in addition to it, the vested interest of the company and the area had priority over and an industrial-policy where protectionism was taken. There was a spread of the industrial-policy of the national government with the strong taste of protectionism. However Hyogo Prefecture and Kobe City were therefore negative about the proposed enterprise zone initiative.

Koizumi cabinet's birth drastically changed the trend. With the structural reforms which were developed by the Koizumi cabinet, the economic theory which the industrial-policy of the national government depends on, changed from Keynesian economics to the neo-classical economics and also an

industrial-policy was converted into the direction to think much of the competition among firms and the inter-district competition by the deregulation. As a result, the way of thinking that the area promotes industry independently through the market mechanism was generalized. One of the techniques which the national government used to ease regulation and turned to the regional industry promotion, which is based on the market mechanism, is the Special District for Structural Reform. There is an approval or disapproval in the evaluation of the Special District for Structural Reform. But, from the viewpoint, for the realization of the enterprise zone which the local-government suffered from the Great Hanshin-Awaji Earthquake such as Hyogo Prefecture and Kobe city, it was not enough that ones such as the double systems in a single nation, which was the primary purpose. Because it has eased regulation by the area limitation and that enabled to perform an experiment on society, it can be evaluated in the meaning of the spread of the regional industrial policy whose purpose is earthquake disaster reconstruction. As for the earthquake disaster reconstruction of the Great Hanshin-Awaji Earthquake, at first, a local deregulation like the Special District for Structural Reform was not admitted. If the industrial-policy which was based on the deregulation of the area limitation from the time to have proposed an enterprise zone was done for the damaged area to have sought temporarily, the speed of the industrial-recovery and the form of the city restoration could have been different from current one. If a revival fund specifically had been sufficiently supplied with deregulations from the national government, it could have formed a new industrial agglomeration becoming the opportunity of which was an earthquake disaster reconstruction of the Japanese economy, which was under the Heisei Recession and there might be possibility to have become the whole Japanese industry's new vitality.

When surveying the Hyogo economy and Kobe economy of the present time, it is difficult to say that the economic power recovered to that of before the earthquake disaster. For example, the affected Kobe Port lost the international competitiveness of the harbor and its harbor hub feature was transferred to Pusan Port, and Kobe Port still has not recouped it. The reason that the industry which supports regional economy in Hyogo Prefecture and Kobe City has not recovered is because the international competitiveness of the concerned area, which was lost by the earthquake disaster, sufficiently is not recovered. In this meaning, the spread of the regional industrial policy toward the industrial-recovery since immediately after suffering is important.

As we can see from this consideration, at the time of the Great Hanshin-Awaji Earthquake, the enough industrial-policy could not be developed to the suffered industries. It resulted that the influence which the regional industry at the damaged area underwent labored. The reason was in the industrial-policy of the national government which presupposes equalitarianism by the regulation. In recent years, the industrial-policy of the national government shows the direction to make a localization moves ahead, by describing "Local government decides its own policy" under the structural reforms. In the future, as for the industrial-recovery when the urban area hit earthquake occurs, the working-out of the regional industrial policy which is based on the decision-making in the region. And the regeneration of the regional competitiveness by the drastic local deregulation will become necessary. In the industrial-recovery from the Great Hanshin-Awaji Earthquake, it is possible to say that it put a head start to establish a regional industrial policy in such an earthquake disaster reconstruction period.

Conclusion

In this paper, through the literature survey, I reviewed an industrial-policy in Hyogo Prefecture and Kobe City whose purpose was an industrial-recovery after the Great Hanshin-Awaji Earthquake. The industrial world in those days was in the midst of the Heisei Recession. And it is the one of the reasons that the earthquake disaster reconstruction lagged behind. This time, as for this point, I did not explain with data. To analyze the development of the industrial-policy in Hyogo Prefecture and Kobe City through the data analysis after the Great Hanshin-Awaji Earthquake was left as a task. The review of the regional industrial policy, which is compatible to the Kego fault earthquake in Fukuoka City, is also our assignment. I will make a research for them in the future.

Notes

Note 1) The Great Hanshin-Awaji Earthquake is a popular name and the formal name in the Meteorological Agency is the South Hyogo Prefecture Earthquake. In this paper, I used the Great Hanshin-Awaji Earthquake to deepen understanding by calling it a more specific area name.

Note 2) In this paper, I mainly concentrated manufacturing industries except the local industry to review the industries. The paper by Seki and Otsuka (2001) describes some results about the revival of local industry. However, I omitted the results because there was a change after that and it needs further review and due to the shortage of the space.

Note 3) 10 cities and 10 towns in this paper are: Kobe City, Nishinomiya City, Amagasaki City, Ashiya City, Itami City, Takarazuka City, Kawanishi City, Akashi City, Miki City, Sumoto City, Tsuna Town, Awaji Town, Hokudan Town, Ichinomiya Town, Goshiki Town, Higashiura Town, Midori Town, Seidan Town, Mihara Town, and Nandan Town.

Note 4) The official name of Hyogo Industrial Restoration Ordinance is “Ordinance for Promoting Industrial Recovery by Forming New Industrial Structure Base.”

Note 5) In this part, it depends on Omori (1998).

Note 6) Institute for Future Urban Development (1997) pp. 25 – 26. The idea of Enterprise Zone was made by an urban planning scholar, Prof. Peter Hall. The idea was the response to criticism that an overly restrictive plan system in the United Kingdom obstructs activity of the private sector. Incidentally, according to Kato (1998), Peter Hall took Hong Kong, which was a free port in those days, as the image of the enterprise zone, and proposed the establishment of the space of the experiment for *laissez-faire*.

Note 7) It says that the Kobe City flotation zone seminar was composed of researchers and the members (volunteers) who belonged to private enterprises, government-affiliated financial institutions, and local government and so on.

Note 8) I reorganized the enterprise zone based on Kato (2004).

Note 9) In the following progress, it depends on Kato (2005) p.238.

Note 10) The revival promotion conference of the Great Hanshin-Awaji Earthquake was the organization whose purpose was to “seek the early industrial recovery at the damaged area through the promotion of “the industrial-recovery plan,” which was established by the industrial revival conference and was

formed mainly by the business community from the damaged area.” The first chairman was Fuyuhiko Maki, chairman of the Federation of Chambers of Commerce and Industry in Hyogo Prefecture (in those days).

Note 11) An official name of the Ordinance for Kobe Enterprise Zone was called the Ordinance for Setting of the Kobe Enterprise Zone and Support Measure at the Relevant Zone.” It was established in November, 1996 and enforced in January, 1997.

Note 12) The national government here refers to the Ministry of International Trade and Industry, Economic Planning Agency and Prime Minister's Office (at the time).

Note 13) Hyogo Kobe Investment Support Center (at first, Hyogo Kobe Investment Support Center) has opened its Tokyo office in June 1999. This office still exists now, and functions as the base to attract industry to Hyogo Prefecture and Kobe City.

Note 14) As for the Hyogo Industrial Restoration Ordinance, the official name is called “the Ordinance about the activation of the economy and employment by the agglomeration of the industry.”

Note 15) A part of Article 1 of the Hyogo Prefecture industrial agglomeration ordinance

Note 16) As for the term, the industrial cluster, in “Program”, it is called “autonomous development type industry group.” But as for the industrial cluster in the same Hyogo Prefecture, while Marumi (2007) quotes the theory of Prof. Michel Porter, it is called “businesses and universities agglomeration group.”

Note 17) In case of Kobe, it was Kobe University medical school and Riken Institute of Physical and Chemical Research.

Note 18) As for the locational conditions, the most suitable place for the regeneration medicine, which is the core of the cluster, is the place where is close to the area where big hospital facilities, which consume a lot of cells, cluster. (Nakashima (2007) p.16) Mr. or Ms. Nakashima is a president of a biotech company.

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