Present State of Business Incubators in Japan and Issues – Desirable model for Japanese-style business incubators based on progressive practice

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Introduction

According to the National Business Incubation Association (NBIA), business incubation is "a business support process that accelerates the successful development of start-up and fledgling companies by providing entrepreneurs with an array of targeted resources and services. These services are usually developed or orchestrated by incubator management and offered both in business incubator and through its network of contacts. A business incubator's main goal is to produce successful firms that will leave the program financially viable and freestanding. These graduates have the potential to create jobs, revitalize neighborhoods, commercialize new technologies, and strengthen local and national economies".

Business incubators have been positioned as an important policy tool for the revitalization of local industries and development of industrial clusters. Nevertheless, they have their critics, who voice opinions like this: "business incubators are expensive to set up and run, yet they have so far failed to live up to expectations in terms of results". This kind of critical assessment is, in large part, attributable to the historical background of the introduction and development of business incubators in Japan and their operating environment.

Business incubation research in Japan dates back to the 1980s, and early works, such as the Softnomics Center (1986) and Japan Incubator Research Society (1989), centered on the introduction of the concepts behind business incubators and circumstances surrounding them in the United States and other countries. Those were followed by self-analyses of Japanese business incubators, surveys of successful cases, and the like in the 1990s. Examples include KSP (1994) and Seki and Yoshida (1993). More recently, Hoshino (2006) and others put forward papers designed to disseminate the correct understanding of business incubation. However, there have not been many works that summarize the evolution and present state of Japanese business incubators and critically evaluate them. The author conducted a complete survey of Japanese business incubators and analyzed their then-present state and issues faced by them in 1995 (Kazumi 1996). Now, more than a decade later, the number of business incubators has risen to the hundreds, making it necessary to update the situation.

This paper analyzes the reasons behind the present state of Japanese business incubators in the context of their evolution from the early introductory period right up to the present day, and explores directions of their future development that are independent of the US model by investigating and analyzing a progressive case that has produced excellent results in a short period.

1 Introduction and Development of Business Incubators in Japan

Some 20 years have passed since business incubators were introduced into Japan[1]. In this section, the paper looks into the origin of the problems identified so far by taking an overview of the historical background of the introduction and development of business incubators in Japan in the 1980s and 1990s.

(1) Introduction of business incubators in Japan

Papers on business incubators began to appear in Japan in the mid-1980s. In 1985, the Softnomics Center[2] established the Business Incubator Research Society and held an inspection tour of the United States and five research meetings by inviting researchers and other interested parties. The society pointed out that, in Japan, business incubators were "geared towards the laying of the foundation for a transformation of the industrial structure and research and development management focusing on the high-tech sector", whereas they were established and operated mainly for the purpose of creating employment in the United States and Europe, resulting in an overemphasis on facilities and lack of consideration for operational know-how, etc. Stating that "the concept (of business incubators) is yet to be established in Japan", it identified the development of a socioeconomic system that would encourage the start-up of new businesses, combined with consideration given to the creation of employment, as a matter of ultimate importance[3].

Although the society's discovery of the importance of operational know-how in as early as the 1980s was noteworthy, it still focused on facilities, equipment and other hardware elements during its field inspection tour. The same thing can be said of the National Government and local governments. The National Government and prefectural governments paid attention to business incubators as a new policy tool, and the construction of facilities began in the late 1980s.

(2) Industrial policy and business incubators

In the 1980s, business incubators were viewed as a policy tool to foster venture businesses engaged in business activities based on advanced technologies and revitalize and stimulate the growth of industrial clusters. Examples include "rental research and development laboratories" under the Law concerning the Promotion of the Development of High-tech Industry Clusters (Law No. 35 of 1983, Technopolis Law), "industrial advancement promotion facilities" under the Law concerning the Promotion of the Clusterization of Specified Businesses Contributing to the Advancement of Local Industries (Law No. 32 of 1988, Industrial Brain Location Law), and "R&D-oriented business fostering and

support facilities" under the Temporary Measures Law concerning the Development of Specified Facilities Based on the Utilization of the Capacity of Private-sector Operators (Law No. 77 of 1986, Private-sector Vitality Utilization Law)[4].

Since the development of hardware infrastructure, such as buildings, is tangible and therefore easy to understand, it helps secure sizable budgets. This is believed to be the reason why it was enthusiastically pursued. Software-side support measures, such as services provided by incubation managers and other professionals, on the other hand, are less visible and therefore more difficult to understand, and often require fixed recurring budgets due to personnel costs. For this reason, they tended to be shunned.

The heart of business incubation lies with software measures, such as management support and coordination. In Japan, however, business incubators were initially utilized as an industrial policy tool, particularly one geared towards fostering R&D-oriented businesses, and spread across the country on that basis. Because of this, the majority of business incubators established in and before the second half of the 1990s centered around the development of hardware infrastructure, leading to their failure to adequately produce expected results.

When the author conducted a survey of domestic business incubators in 1995, eight facilities were found to have been established on the basis of the Technopolis Law and Industrial Brain Location Law. Of those, only one had an incubation manager. In addition, only 16 out of 82 companies that had moved in had their headquarters established at their respective incubators. (Although another 13 companies were identified in the survey, their status was unknown, because they were yet to move in). Moreover, only three facilities provided a management counseling service (Kazumi 1996, pp. 19-23)

It was believed that business incubation was about specifying the industries to be supported in accordance with a law, screening applications in terms of whether they were R&D oriented, and letting successful applicants move into a facility for a cheap rent and stay there until the end of a predetermined period. There was a belief that, as long as businesses came up with high-tech products, they would succeed because buyers would automatically emerge. Unfortunately, this scenario, in most cases, turned out to be just a myth[5].

(3) Problems with Japanese business incubators during their introduction phase

(i) Lack of policy coherence

In Japan, the notion of business incubators being synonymous with R&D-oriented business fostering facilities took hold as soon as they were introduced in the mid-1980s. As a result, the development of hardware infrastructure immediately took off, leaving the introduction and dissemination of operational know-how behind.

The main reason for the failure of the software side to function was a lack of understanding about the central role of management support in the business start-up support functions of business incubators. At the same time, there were very few professionals with adequate knowledge and experience in business start-up support, particularly the fostering of R&D-oriented companies, resulting in the absence of incubation managers at most facilities. Although industrial location policy under the Techno-

polis Law incorporated the networking of business incubators with universities, public experiment and research organizations, and the like, it did not include their networking with individuals and organizations that supplied them with professional services essential for fundraising, marketing, business alliance building, and so on (for example; management consultants, accountants, lawyers and patent attorneys).

Initially, business incubators were utilized as a policy tool in the area of industrial location policy relating to, among other things, the development of infrastructure aimed at luring businesses to set up bases. Management guidance (support) for individual companies, on the other hand, was provided under SME policy. However, this service was meant for existing companies, and often involved different sections of a local government, with no systematic mechanism for coordination among them put in place.

Thus, despite the fact that the National Government and local governments made great efforts to introduce and spread business incubators as an industrial policy tool, they were slow to produce results, because only hardware elements took off, leaving software elements behind in terms of conceptual understanding and spread. Factors responsible for this were a lack of accumulated know-how needed to foster companies that had moved in, a shortage of specialist personnel and a discrepancy between the concept of business incubators and conventional policy principles and implementation methods.

(ii) **Underdevelopment of environment conducive to starting of companies and creation of venture businesses**

Another problem was the underdevelopment of a socioeconomic environment that provides the seedbed for the starting of companies and creation of venture businesses. In concrete terms, it encompassed, among other things, a lack of entrepreneurial education as part of school education, very limited availability of risk money for early-stage companies, difficulties in fundraising due to a very high hurdle for new listing and initial public offering, heavy skewing of the creation of technology seeds to research laboratories of major companies, and low mobility of quality personnel. In short, despite efforts made to foster R&D-oriented companies, few entrepreneurs emerged, and venture businesses faced enormous difficulties with commercialization and growth.

Since then, adequate policy measures relating to technology transfer from universities and other institutions, the fundraising environment and business start-up support have been put in place, and factors involved in the socioeconomic environment have greatly improved. One can say that the environment needed to start companies and create venture businesses is now in place.

2 Present State of Business Incubators and Issues

(1) Development of business incubators under New Business Creation Promotion Law

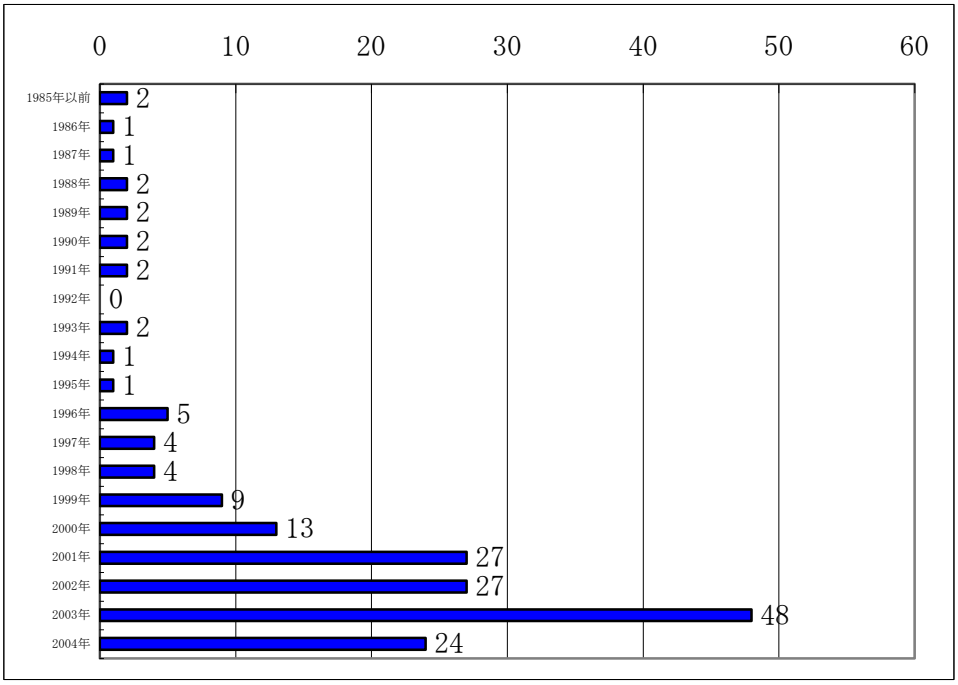
In December 1998, the Technopolis Law and Industrial Brain Location Law were replaced by the New Business Creation Promotion Law (Law No. 152 of 1998), which took partial effect in February

1999. Aiming to achieve local revitalization through the creation of new businesses, the new law set the following policy pillars: (i) direct support for the starting of companies by individuals and launch of spin-off businesses through the establishment of new companies, (ii) promotion of SME business activities based on new technologies, and (iii) development of a business environment conducive to the self-sustaining development of local industries on the basis of an effective utilization of local industrial resources. Business incubators are characterized as an element that forms part of a local platform to be developed in each prefecture under policy pillar (iii) (Ministry of International Trade and Industry, 1999).

To strengthen local incubation functions, the Ministry of the Economy, Trade and Industry (METI) provides integrated hardware and software support under the development of the system of local platforms mentioned above (industrial cluster project from FY 2004), with the budget for the development of new business support facilities and other purposes reaching 6.7 billion yen in FY 2006.

In particular, subsidies have been introduced for the fostering and utilization of entrepreneurs and support personnel, business matching, hosting of seminars, operation of comprehensive counseling corners, implementation of incubation manager training, and placement of incubation managers (personnel costs) as a support measure relating to the software side of business incubators.

Figure 1: Breakdown of Business Incubators by Year of Establishment



Source: "Promotion of Innovation through Business Incubation - Survey Report" (March 2005) by Japan Industrial Location Center

(2) Establishment of Japan Association of New Business Incubation Organizations

On the heels of the enactment of the New Business Creation Promotion Law, it was decided to organize core support organizations as agents for business incubation throughout the country, and the Japan Association of New Business Incubation Organizations (JANBO) was established in June 1999 within the Japan Industrial Location Center.

JANBO undertakes the promotion and dissemination of business incubation, training of incubation managers (IMs), exchange and sharing of business incubation-related information and know-how and research and investigation relating to business incubation. Of these activities, IM training is practically oriented, involving five months of OJT in addition to classroom studies on business incubation. By the end of FY 2007, over 500 people have completed the course.

It also established JANBO awards in FY 2003 to further spread and advance business incubation, with awards presented to incubators and IMs who have produced outstanding results. In FY 2005, it introduced a certified IM system designed to formally recognize IMs who, on the basis of assessment, meet certain standards set in accordance with diverse criteria in order to improve the status of IMs and facilitate their mobility.

(3) Present state of business incubators and assessment

In 2002 and 2004, JANBO conducted a comprehensive general survey on business incubators, and shed light on their situation by ascertaining their numbers and collecting basic data on their facilities (METI 2005). Let us now take an overview of the present state of Japanese business incubators using 2004 survey data.

(i) Number of business incubators and years of establishment

According to the four definitions set by JANBO6, there were 177 business incubators that provided management support, as well as access to facilities and equipment[7]. When the author surveyed domestic business incubators in 1995, there were only 40 such facilities, including those without a resident IM, so that there was more than a four-fold increase in their numbers over some 10 years.

Not surprisingly, the breakdown of facilities by year of establishment shows that the number increased rapidly following the enactment of the New Business Creation Promotion Law in 1998. The major contributing factor to this was the introduction of national government subsidies payable to local governments which undertook hardware and software development relating to business incubators.

(ii) State of tenant businesses

Where restrictions apply to the activity fields of prospective tenant businesses, electronics & machinery and information & communications were the most common industrial categories, followed by pharmaceutical, biological & agricultural technologies, marketing & service, and the environment & recycling.

Overall, 61.3 percent of all companies surveyed experienced an annual average increase in sales of at least 1 percent from the time of moving in to the time of the survey, with 42.5 percent enjoying an

annual average increase in sales of at least 30 percent. Survey findings on graduate businesses show that the cross-industry average tenancy period was 32.0 months, indicating that companies successfully achieved commercialization and financial independence in just less than three years. Companies which attempted to commercialize R&D results took nearly five years, with their tenancy period averaging about 56 months.

Of all graduate businesses of main incubation facilities[8], an average of 96.6 percent were in existence at the time of the survey, while the five-year survival rate of graduate businesses was also high at 89.3percent[9]. These figures show that business incubation had some degree of effectiveness in helping tenant businesses achieve growth and successful commercialization.

(iii) **State of IM support**

The average number of IMs stationed per facility was 1.9 for main incubation facilities and 2.0 for pre-incubation facilities. The most common service provided was "business start-up and growth support, 87%, followed by incubator management (for example; recruitment of tenant businesses, event planning and facility management), 56 percent, support system development, 49percent, and entrepreneur development, 34 percent.

Twenty percent of IMs maintain almost daily contact with tenant businesses to provide business start-up and growth support, with 39 percent and 25percent doing so for 2 to 4 days a month and 2 to 3 days a week, respectively.

(iv) **Achievements of business incubation**

The JANBO survey attempts to quantify the benefits brought about by the local platform program over a five-year period from FY 1999 to FY 2003 as follows: the number of businesses started 1906, number of jobs created 3576, and an increase in sales achieved by tenant businesses 41.16 billion yen. Of these, the BI facility-related budget (new business support facility assistance and strengthening program) accounts for 254 businesses started, 660 jobs created and an increase in sales of 5.93 billion yen.

Although the survey results indicate that business incubation has been successful in terms of business growth and survival rates as far as tenant businesses are concerned, these results are rather inadequate in the context of the start-up of new businesses and creation of employment in the Japanese economy as a whole. Nevertheless, there are other factors that need to be taken into account when evaluating those figures as follows: the survey only covered business incubators recognized under the local platform program, and there are quite a few cases in which spin-off businesses of existing companies move in or companies move in after being launched. It is also true that, given that most of the business incubators surveyed were established in 1999 or later, they have not been given enough time to produce significant results.

(4) **Problems with business incubators**

(i) **Redefinition of concept and review of business incubation**

Quantitatively speaking, the creation of start-up companies by business incubators is inadequate. A widespread understanding of the basic concept of business incubation, i.e. supporting companies during their early stages and helping them achieve commercialization, has been slow to catch up, and some incubators even solely target entrepreneurs engaging in R&D-oriented businesses. However, in light of the diversity in local conditions from area to area, it is unrealistic to expect that R&D-oriented companies can be created in all areas.

A sensible approach would be to devise a more realistic concept according to the issues and conditions characteristic to each area and develop a business incubation system consistent with such a concept. Examples include the revitalization of local industries and response to the closure of a large manufacturing plant. Another possibility is the creation of community-based businesses aiming to meet demand arising from an aging or shrinking population. The important thing is to establish a clear justifiable reason for the injection of public funds or local management resources to support the start-up of new businesses, which is, after all, individuals' voluntarily action, to help them survive longer and grow faster. Since the target differs from objective to objective, a support menu and support activities should be tailored to each target.

(ii) **Position of business incubation in local revitalization**

Another problem is that the relationship between local revitalization and business incubation has not been clearly recognized. The industrial cluster project aims to "create industrial clusters which turn out new world-class businesses one after another". To achieve this goal, it is desirable to develop an environment conducive to innovation and efficient production in specified industries in each area by promoting local cooperation between the industrial, academic and government sectors. Business incubators are defined as entrepreneur development facilities under the industrial cluster project. The number of incubators and similar facilities affiliated with the industrial cluster project has been put at 125, which is only about 40 percent of all facilities (329)[10]. Moreover, only a fraction of the tenant businesses, approx. 2%, have taken part in the project[11].

Local economy revitalization policy initiatives other than industrial clusters often fail to incorporate business incubators, while most of the companies that form existing industrial clusters are SMEs. Persons starting new businesses do so on the basis of the latest business opportunities. This fact points to the need to promote the exploration of new business fields by combining existing companies in conventional industries which are suffering from a slump in demand with new companies. Nevertheless, in many areas, there is little interaction between new companies operating from the local incubation facility and existing local companies. It takes too long for business incubators to create small batches of new companies and wait for them to gradually replace existing ones. There is a need to position business incubators as a system integral to the revitalization of local economies, instead of operating them in isolation of local economies.

(iii) **Enhancement of incubation managers as professionals**

Incubation managers (IMs) provide tenant businesses with management support and help revitalize local economies. For this reason, they must be professionals with advanced knowledge and support know-how. Although IMs are being trained through various training program, including those implemented by JANBO, they are no match for their U.S. counterparts. Their remuneration also falls short of levels appropriate for professionals. Despite the fact that about 70 percent of IMs have worked at private-sector companies, there are few experienced IMs, with 61 percent only having less than three years' experience (METI 2007).

In the United States, 48 percent of full-time IMs have a masters degree, with another 29 percent holding a bachelor's degree. Their average income is $84,157 for men and $63,744 for women, and their length of experience in working as an IM is 0-4 years for 57 percent of them and 5-9 years of 34 percent of them (Knopp 2005).

Although an accurate comparison is not possible because of the limited availability of Japanese IM-related statistical data, according to the author's general impression, Japanese IMs are inferior to their U.S. counterparts in terms of both academic qualifications and annual income. To advance business incubation, it is necessary to position IMs as a high-level profession and improve their pay and other conditions to attract talented and well-qualified people.

3 New Trends in Business Incubators

This section explores future directions of business start-up support and local revitalization on the basis of the practice of a business incubator engaged in new activities, taking into consideration the current issues faced by business incubators.

The Chiyoda Platform Square (CPS) has sought inspiration from the *yamori* agent system dating back to the Edo period, in which agents called "*yamori*" took charge of the land, buildings and residents of row houses and extended this to the management of entire neighborhoods by looking after tenants' trade selection, fostering new businesses, and so on. CPS's updated version of the *yamori* agent system is a brainchild of the Chiyoda SOHO Community Development Promotion Study Group, established by Chiyoda Ward in 2000. The Kanda area of Tokyo's Chiyoda Ward has a concentration of old small office buildings and has been left with pockets of vacant office spaces due to the collapse of the bubble economy and rise of large-scale redevelopment projects. Against this background, the study group issued a recommendation advocating "the pursuit of SOHO-oriented community development policy initiatives that take advantage of Kanda's historical background and convenience associated with its central location by characterizing the SOHO sector, which embodies the "work where you live"-type work style and lifestyle, as a contributor to the regeneration of an inner-city commercial district, while envisaging the recovery of the area's resident population (Edami 2006, p. 37). In short, this amounts to an attempt to transform Kanda, a traditional craftsmen's town dating back to the Edo period, into a district dominated by SOHO professionals, such as IT engineers, consultants and planners.

Along the lines of this recommendation, *yamori* agents were recruited, and the first floor of an old office building was turned into a Linux café, which doubled as the base of an Open Resource-related venture, while office/studio space was created on a floor of another building to cater to architecture and design-related SOHO businesses. This was followed by a refurbishment of the Chiyoda SME Center, owned by Chiyoda Ward at the time, giving birth to CPS, which featured booth-style open-nest work spaces, closed-nest office spaces for SOHO businesses, conference rooms, a café, a business convenience store and other facilities.

The heart of the *yamori* agent system lies in the creation of new activities, cross-sector interactions and businesses in the community through collaboration with administrative authorities, local residents and local businesses. In addition to promoting collaboration between businesses using its facilities, CPS seeks out opportunities for collaboration between users and local residents and transaction between users and local companies and tries to revitalize the entire community by drawing administrative authorities and local residents into the scheme as well. These activities get a further boost from CPS's facilities. For example, the cafe and outdoor wooden deck area have been opened up to non-users. This, along with events held on the rooftop, facilitates interaction between users and local residents and companies. As a *yamori* agent has successfully brought in design offices and designers, hopes have been raised that plans to develop new products will proceed in collaboration with local small to medium-size textile wholesalers.

The key difference that CPS has with other business incubators lies in the fact that its staff, these are *yamori* agents, try to solve local problems and create business opportunities for tenant businesses and others by actively involving themselves in the local community. It is also managed in a flexible and nimble manner which is only possible in the private sector.

Moreover, it takes swift action whenever the need arises to improve support for tenant businesses or advance the revitalization of the local community, while minimizing costs through creativity and ingenuity. This light-footedness has produced tangible results. In just three years from its establishment, CPS has won more than 400 contracted users, who are engaged in business activities using CPS as their bases, as well as 1800 registered users.

CPS's activities show a new direction for Japanese business incubators in terms of (i) an open facility and facility management that encourage collaboration among users and between users and the local community, (ii) setting of targets that take into consideration the area's historical background and local management resources, and (iii) flexible action to adapt to local circumstances and environmental changes. These characteristics are readily adaptable to non-SOHO industries. There is no need to develop high-tech industry clusters in all parts of the country. Possible avenues include support for the development of spin-off businesses by existing companies and commercialization through collaboration between start-ups and existing companies. To encourage this kind of collaboration, open facilities should be established and operated.

Rather than blindly following the U.S. model, which is based on the construction of a research park in a desert, luring of research laboratories, launch of high-tech ventures by engineers who are ex-employees of major corporations, and promotion of a further concentration of high-tech companies

through business incubation, local revitalization based on a combination of existing industrial clusters and IT and other cutting-edge technologies should be pursue as it would be more suited to Japanese conditions. CPS presents an excellent example for this new direction of business incubation.

Conclusion – Future Outlook of Japanese-style Business Incubators

This paper provided an overview of the historical background of the introduction and development of the business incubation concept in Japan and discussed past and present problems and issues. Because of its origin as the National Government's policy tool under its industrial location policy, early Japanese business incubators tended to specialize in the fostering of R&D-oriented companies and all but neglected management support services, leading to their failure to produce adequate results. In recent years, the true role of business incubators has begun to be widely understood, and the business start-up environment has improved. On the other hand, in the face of problems such as a decline in local industrial clusters and collapse of communities due to the aging of the population and depopulation, there is an urgent need to recognize/utilize business incubators as a catalyst for local revitalization.

Functions that will be demanded of business incubators in the future include a local business direction function designed to coordinate/commercialize technologies, human resources, brands and other business resources accumulated in the local area on the basis of a grand design drawn up for it. The creation of community-based businesses and businesses that utilize farm products, tourism resources, and the like may be considered to tackle a falling birthrate, aging population and depopulation. To make a swift response to the needs of entrepreneurs and the local communities possible, a public-private partnership in the form of facility development by the public sector and facility operation by the private sector is necessary.

In addition to CPS, there are other successful business incubators. Examples include the SOHO Pilot Office in Mitaka City and SOHO Shizuoka. Their success is a result of incubation managers' efforts into business start-up support and local revitalization which involve community residents and local companies and take into consideration local characteristics (Koide 2006 and Kazumi 2004). A reevaluation of the roles and functions of business incubators will help produce results beneficial to the local area.

1. Although the Tohoku Industrial Technology Development Association was established in 1966, it was an R&D facility intended for companies pursuing collaboration between the industrial and academic sectors. The oldest facility that supported the commercialization of R&D results was Micon Techno House Kyoto, established by the Kyoto Industrial Information Center, a third-sector (public-private partnership) organization, in 1983.
2. The Softnomics Center ceased to operate in March 2005 and dissolved in the December of the same year.
3. This argument appears in the introduction of the Business Incubator Research Society Report (Oc-

tober 31, 1986), published by the Softnomics Center.

4. There were 26 designated areas under the Technopolis Law, and the same number of areas were designated under the Industrial Brain Location Law. Those designated areas were established prior to the enactment of the New Business Creation Promotion Law (1998), and a total of 24 business incubators are still in existence. Under the Private-sector Vitality Utilization Law, 14 research-core facilities were established altogether.

5. Some papers have passed a negative assessment on industrial location policy, including the Technopolis Law and Industrial Brain Location Law. Yamazaki 2003, p. 178, which states "from a long-term perspective, (industrial location policy) has not been so successful in making the local economic structure more advanced and maintaining and expanding employment", is a typical example. Nevertheless, discussion here focuses on business incubators.

6. Those four definitions are: (i) owning office space and other facilities to be offered to entrepreneurs, (ii) providing support for business start-up and growth through support personnel (e.g. incubation managers), (iii) placing restrictions on prospective tenant businesses (by business area, industrial category, number of years that have passed since establishment, size, etc.) and (iv) classifying companies which have moved out into two categories, "graduated" (the company moving out as a result of achieving its commercialization and other goals) and "other".

7. Of those 177 institutions, approx. 90% were established by local governments, non-profit corporations, universities, and the like. Although BIs established by private-sector companies account for about 10% of the above total, many similar BIs are likely to have slipped through the survey's net, as it is difficult to get a grasp of such BIs in a comprehensive manner. Private-sector BIs are classified into those used by a venture capital to nurture the start-ups it has invested in, those operated by a consulting firm, those operated by a real estate company in an office building owned by it, and so on. Ascertaining the situation surrounding BIs established by private-sector companies will be a future task.

8. JANBO divides the incubation process into pre-incubation (preparation for company establishment), main incubation (commercialization support) and post-incubation (follow-up support after graduation).

9. Graduated company current survival rate = Number of graduated companies currently in existence/Total number of graduated companies×100%

Five-year survival rate = Number of graduated companies in existence for five or more years after graduation/Total number of graduated companies that graduated five or more years prior to survey ×100% (March 18, 2005)

10. "Japan's BI Policy - Future Direction and Strategies" by the Industrial Facilities Division, Regional Economic and Industrial Policy Group, Ministry of Economy, Trade and Industry

11. Ibid.

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