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The Formation Process and Characteristics of the Japanese Venture Capital Industry

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Abstract

In this paper, I will discuss the formation process as well as the special characteristics of the Japanese venture capital industry.

Up until the mid-1990s, Japan's venture capital industry focused their investments on later stage firms within traditional industry domains, with organization-led venture capital firms being predominant. However, these later stage firms with experience in traditional industries being targeted as ventures had already been well under way as far as management was concerned, and there was no real need for post-investment support from the venture capitalists. This investment style was thought to be one of the reasons that Japan's venture capitalists were unable to mature with respect to post-investment support know-how.

In the latter half of the 1990s, there was an increase in investments within the venture capital industry in Japan that focused on companies that were based in the domains of new technology and were still in early stages as firms, i.e. new technology based firms. Also, at around the same time, in Japan's venture capital industry as well as the venture capital firms in Silicon Valley, there was an increase in the number of venture capital firms with the strong trend of letting individual venture capitalists administrate a series of investment activities.

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1. Overview of the Japanese Venture Capital Industry

According to the OECD, in a study that focused on a comparison of the ratio of annual venture capital investments to GDP in each of the OECD countries from 1998 to 2003, it was found that the U.S. had the highest ratio amongst the countries, while Japan had the 2nd lowest ratio, below all other OECD countries except the Slovak Republic. (OECD,2003：47). Furthermore, with regard to the share of the annual venture capital investments that belong to high-tech domains, Canada shows the highest share at over 80%, followed by Ireland and Norway. Japan has one of the lowest shares, higher only than the Slovak Republic and Australia (OECD,2003：47). As we can see, within the OECD countries, Japan is at one of the lowest levels with respect to the ratio of venture capital investment to GDP and the share of annual investments that belongs to high-tech domains.

According to a Venture Enterprise Center study that analyzed the investment balance of venture capitals in the U.S., Europe and Japan, it was found that in 2006, the balance held at 235 billion U.S. dollars for the U.S., 281 billion U.S. dollars for Europe and 8.3 billion dollars for Japan. (Venture Enterprise Center, 2008:21). Looking at the annual investment amounts, it was 25 billion U.S. dollars for the U.S., 94 billion U.S. dollars for Europe, 1.9 billion U.S. dollars for Japan. (Venture Enterprise Center, 2008:21).

With regard to investment balances, the actual performance of Japan in 2006 was less than 1/28th of the U.S. and less than 1/33th of Europe. Concerning the annual investment amount, Japan showed amounts less than 1/13th of the U.S. and less than 1/49th of Europe. Therefore, with respect to investment balances and annual investment amounts, Japan's venture capital industry, with a scale that ranges from below 1/13th to 1/49th when compared to the U.S. and Europe proves to be a relatively small industry when taking into account the relative economies of these countries.

2. The Formation Process of the Japanese Venture Capital Industry

When taking an overview of the formation process of Japan's venture capital industry, it is apparent that development is mostly based on the trends and systems started by the U.S. For public venture capital investments, using the example of Small Business Investment Companies (hereafter SBIC), the first private venture capital firm in Japan was modeled after the first organized venture capital firm of the U.S., American Research and Development Corporation. Also, the first Japanese investment partnership fund based on civil law was based on and revised by the U.S.'s limited partnership fund, and modified to accommodate the Japanese law structure at that time.

2.1. The Formation Process of the Venture Capital Industry in the U.S.

In 1946 the first association of venture capital firms in the U.S, the American Research and Development Corporation, was instituted. The success of American Research and Development's investments in DEC in 1957 is famous: when looking at the actual performance of the investments in DEC, the investment amount was just under US$70,000, with 77% comprising of shareholder investments. Fourteen years later in 1971, the enterprise had skyrocketed to 5,000 times its original investment, and was the benchmark for venture capital investments from the 1970s through to the 1980s.

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In 1958, the Small Business Investment Act was enacted in order to develop small and medium enterprises. According to this act, funds raised from low interest loans from the government were invested into small and medium enterprise and as a result, many small business investment companies were set up. While from 1960 to 1962, there was a sudden increase of about 600 approved enterprises for small business investment companies, the late 60s saw a sudden reduction to approximately 300 enterprises. In the latter half of the 1960s, the U.S. economy was in a slump, with public stock flotation showing a cooling growth. Furthermore, problems in the system that failed to connect the different characteristics of direct and indirect financing was also a factor in these lowered growth rates. (Hamada,1996：37).

In 1961, the prototype for the contemporary form of venture capital investment was formed. Arthur Rock, one of the most distinguished venture capitalists, established the first partnership fund in the U.S. together with his business partner Tommy Davis (Gupta ed., 2000：142). Arthur Rock, famous for identifying companies such as Intel and Apple Computers, held the investment philosophy that he would invest in firms that could achieve new concepts for products and services that would change the way people live and work. (Bygrave and Timmons, 1992: 6).

2.2. The Formation Process of the Japanese Venture Capital Industry

When reviewing the formation process of the venture capital industry in Japan, it is different from that of the U.S. in that in Japan private enterprises preceded government measures. In 1963, learning from SBIC, small and medium business investment and consultation companies were set up in the 3 areas of Tokyo, Osaka and Nagoya. These 3 companies were built with the purpose of enhancing the equity capital of small and medium enterprises. However, unlike the SBIC from the U.S. which receive venture capital investments based on low-interest loans from the government, the small and medium enterprises in Japan were mostly self-funded. These 3 companies were later privatized, and now fulfill the same roles as current private venture capital firms. However, the constant problems of enhancing the equity capital of small and medium enterprises when first set up were recognized as particular characteristics, but the private venture capital firms set up in the 1970s were essentially different (Hamada, 1996:92).

In 1972, the first private venture capital firm in Japan was established. This was Kyoto Enterprise Development, with the parent organization being Kyoto Keizai Doyukai (Kyoto Association of Corporate Executives). The position of first CEO of Kyoto Enterprise Development was assumed by the CEO of Tateishi Electronics at that time, Kazuma Tateishi, with a capital of 300 million Japanese yen. The majority shareholders were mostly members of Kyoto Keizai Doyukai, such as Wacoal, Bank of Kyoto, and the Kyoto Stock Exchange. Ten distinguished companies from established industries such as securities, banks and makers participated, and approximately 1 hundred million yen was invested to each of the different industries (Omron Corporation internal memo “Kyoto Enterprise Development”). Learning from U.S.’s American Research and Development, Kyoto Enterprise Development focused on assisting the maturation of small and medium enterprises producing high-tech products, and sought to stimulate the knowledge-based industry in Kyoto. It was, however, liquidated 8 years after establishment, in March of 1980. With regard to the failure of this investment project, a direct factor was identified as a lack of formal understanding and a gush of criticism from the investors, followed by dissolution due to Kyoto Enterprise Development providing large amounts of compensation to investor companies for their losses (Omron Corporation internal memo "Kyoto Enterprise Development").

The original CEO, Kazuma Tateishi, had the following goals for Kyoto Enterprise Development: in addition to assisting the maturation of enterprises and providing capital investments to ventures, the most important thing was the provision of advice and management guidance for the marketing strategies of the development of new products, technologies, services (Nikkei Ryutsu Shinbun, 6th September 1972), which was similar to the methods of American Research and Development. With investments of about 3 hundred million yen, Kyoto Enterprise Development invested in 42 companies from local enterprises, financial institutions, and the Kyoto stock exchange. Kazuma Tateishi said that a reason for dissolution was that all members of the investors agreed that ventures were not to be cultivated (Omron Corporation internal memo "Kyoto Enterprise Development"[2]).

Furthermore, the first investment partnership fund setup in Japan was JAFCO I, built by Nihon Godo Finance in 1982. The executives of JAFCO at that time had learned from inspecting the limited partnership fund, which was the predominant venture capital firm in the U.S., and founded JAFCO. In this way, the venture capital industry in Japan was formed by following the example of the U.S., and it has been over 30 years since Kyoto Enterprise Development, the first private venture capital firm, was setup in 1972. This process showed that the characteristics of the venture capital industry were different from that of the U.S.

3. Investments in conventional and later stage industry –before the late 1990's-

3.1. Investments in conventional industry

According to the Japanese Ministry of Posts and Telecommunications ed. (2000) on the distribution proportion of venture capital investment amounts to individual industries in Japan in 1998, the manufacturing industry received the lion's share of investments, followed by wholesale industry, retail industry, food and beverage industry, and others (Table 1). In comparison, the same kind of comparison in the U.S. in 1998 showed that the majority of venture capital investments went to

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2) As background to the dissolution of Kyoto Enterprise, Asai (1996) pointed out that the similar business climates and environments of Kyoto and Boston had prohibited the production of ventures. For entrepreneurs in Kyoto, whom had never shown much interest in IPOs, it is easy to imagine that the management stance of Kyoto Enterprise Development was hard to understand and accept (Asai,1996:60), and lack of understanding given to the venture capitals regarding Kyoto's economic climate and business environments was identified as a factor for failure. Furthermore, in the case of Kyoto Enterprise Development, connecting the 42 investor companies of the 3 hundred million yen from local enterprises, financial institutions and Kyoto Stock Exchange resulted in the formation of a large organization. Asai(1996) further notes that there is the problem of organizational control, a marked contrast with the U.S. venture capitals, which usually consist of few individuals and financial associations (Asai, 1996:60).

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software and information processing, followed by communications industry and medical products (Table 2). An analysis of venture capital investments distributions by industry in Silicon Valley in 1998 showed the following results: software and internet-related industries received 33% of investments; communications-related industries received 28%, followed by consumables with 11%, bio- and medical product-related 8%, business services 8%, others 6%, computer-related 5%, and semiconductor manufacturing equipment 2%. (Joint Venture Silicon Valley Network, 2000:15).

Up to the latter half of the 1990s, Japan's venture capital investments were concentrated to wholesale/retail/food and beverage industries, other industries, construction industries, and financial and insurance industries, all of which are essentially conventional industries. Furthermore, the portfolio firms invested in covered a broad range of business types. When compared to the situation in Silicon Valley, specialization towards new technology domains in the U.S. in general, which account for a proportion of approximately 7.1% of wholesale/retail businesses, has been somewhat slow-paced in Japan. When comparing the situations between Silicon Valley and Japan, this difference becomes even more distinct.

Table 1: Venture capital investment amounts and percentage distribution by industry in Japan

	Ma	WRFB	OS	Co	FI	So	IS	Com	AFM
Inv. Am.	240.9	105.8	99.1	41	38.6	3.23	9	2.2	1.9
Percentage	42.2	18.5	17.4	7.2	6.8	5.7	1.6	0.4	0.3

Note: Ma=Manufacturing, Wholesale/Retail/Food and Beverages=WRFB, Other Services=OS, Construction=Co, Financial and Insurance=FI, Software=So, Information Processing/Services=IPS, Communications=Com, Agricultural & Forester/Fishery/Mining=AFM.

Investment Amount Units: Billion Japanese Yen.

Source : Ministry of Posts and Telecommunications ed. (2000), p.110.

Table 2: Venture capital investment amounts and percentage distribution by industry in the U.S.

	SI	Com	MP	WR	Bio	SME	Comp	IM	Oth
Inv. Am.	5.7	2.8	2.3	1.2	1.0	0.8	0.6	0.4	1.8
Percentage	34.4	17.0	13.7	7.1	6.2	5.0	3.4	2.3	9.2

Note: Software/Information Processing =SIP, Communications=Com, Medical Product=MPR, Wholesale/Retail=WR, Biotechnology=Bio, Semiconductor Manufacturing Equipment =SME, Computer-related =Comp, Industrial Machine=IM, Others=Oth.

Investment Amount Units: Billion US dollar.

Source : Ministry of Posts and Telecommunications ed. (2000), p.110.

3.2. Investment in later stage ventures

The new investments categorized by the growth stages of Japan and U.S. venture capitalists in 1998 are shown in Tables 3 and 4 (Ministry of Posts and Telecommunications ed., 2000). In 1998,

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51% of the venture capital investments in Japan went to later stage firms that had at least 10 years of experience since being set up, while in the U.S., 85% of investments went to early stage firms and expansion firms. Therefore, we can see that in 1998, Japan's venture capital investments were focused more on later stage firms when compared to those in the U.S. The state of Japan's stock market was one of the factors for this situation: in the latter half of the1990s, improvements in markets with lenient listing requirements for emerging companies were a factor for venture capitals to increase investments to early stage firms. However, before that period, listing requirements into the stock market were extremely strict, with approximately 30 years from a business's inauguration till public listing. Under such circumstances, long-term capital becomes fixed with a fixed-term investment partnership of 10 years even when utilizing self-funding with no repayment deadlines. As such, Japan's venture capital firm's investment decision-making allocates more importance to whether a firm can be publicly listed within 4 to 5 years following investment as compared to the growth potential of that firm. Firms that lack growth potential but clear the condition of maintaining a constant sales/profit and therefore able to achieve public listing within 4 to 5 years, as well as firms that are able to achieve public listing during the period of investment, would have been chosen as targets for investments. On the other hand, early stage firms with extremely high growth potential but do not clear the criteria of being able to achieve public listing within 10 years of investment would not be chosen as investment targets due to the long period required before the investments would be reclaimed. In other words, the predominant investment behavior in the venture capital industry was to provide capital to already-mature firms that would achieve public listings in a short time, to guide these firms through the listing process and reclaim the capital as well as benefits soon after. However, these mature enterprises generally have ample experience in management issues, and there is little requirement for extra assistance from venture capitalists after investments are made. This kind of investment style is thought to be one of the factors as to why there was no cultivation of the assistance know-how of venture capitalists for the post-investment period for Japan's venture capital firms.

Table 3: Amount and percentage distribution of new venture capital investments by growth stage of portfolio firms in Japan

	Start up	Early stage	Later stage
Investment Amount	18.8	7.5	28.1
Percentage Distribution	35	14	51

Source : Ministry of Posts and Telecommunications ed.(2000), p.110.

Investment Amount Units: billion yen.

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Table 4: Amount and percentage distribution of new venture capital investments by growth stage of portfolio firms in the U.S.

	Early stage	Expansion stage	Later stage	Buyout
Investment Amount	4.8	9.3	1.0	1.6
Percentage Distribution	29	56	6	9

Source : Ministry of Posts and Telecommunications ed.(2000), p.110.

Investment Amount Units: billion U.S. dollar.

4. The shift of investments to new technology and early stage ventures from the late 1990s onwards

According to Venture Enterprise Center, Japan's venture capital investment amount marked a 17% increase from 839 billion yen in 1998 to 982 billion yen in 2007. The total amount of annual new and additional investments increased approximately 40% from 200 billion yen in 1998 to 279 billion yen in 2004. A year-to-year observation of changes in the total investment amount and annual new and additional investment indicate a general upward trend, though not a continuous increase, in investment (Venture Enterprise Center ,1998-2008).

A survey on the new annual investment by growth stage indicates a rapid increase in investments in early stage firms. Notably, there has been a rapid shift of investments to early stage firms among Japanese venture capitalists since the late 1990s. To be specific, the percentage of investments in firms during the first 5 years of inauguration was 34% in 1998, which increased to 62% in 2000, and slightly declined to 42.3% in 2008 (Venture Enterprise Center ,1998-2008).

The breakdown of new investments by business categories shows that the percentage of investments in biotechnology, a major technical innovation area, has more than doubled from 3.7% in 1998 to 7.7 % in 2008, while the percentage of investments in medical healthcare rose from 1.5% in 1998 to 5.6% in 2008 (Venture Enterprise Center ed., 1998-2008). The investment in an internet related business has increased from 3.8% in 1998 to 9.4% in 2008.

The number of venture capital funds for university spin-offs, which are the major funds for new technologies established since Hokkaido University's "Hokudai Ambitious Fund" was founded in 1997, has shown a rapid increase since 2001. Along with such continuous increase in the amount of investments in general, there has also been a notable growth in the percentage of investments in new technology based firms such as those in biotechnology and internet industries.

5. Venture capital firms and individual venture capitalists

Up to the latter half of the 1990s, the predominant method of operations used by Japan's venture capital firms was not to allow a single venture capitalist to administrate a series of investments, but rather an organization was set up in which investment administration was separated into functional categories, with each of the functions administered by a unit of specialists. In light of this background, the private venture capital firms in Japan that were instituted after Kyoto Enterprise Development was set up were mostly affiliated companies of financial, insurance and securities

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enterprises.[3]. Firstly, workers dispatched from these financial institutions that served as parent companies to the venture capital firms were mostly management executive officers, and these parent companies administered venture capital firms in the same functional categories methods that they administered loan businesses.

In comparison, venture capital firms in Silicon Valley adopted an organizational system of control where individual venture capitalists assumed the leading role. In addition to taking part in post-investment activities, other activities such as those to build personal relations of trust with the management teams of the portfolio firms were conducted, and capable venture capitalists that were very familiar with the portfolio firms were fully responsible for them. It is thought that this method provides a high level of efficiency (Hata and Kamijyo,1996：121). Consequently, there is also an organization in which a conglomerate of single professional venture capitalists is used to administer the investment process.

Quintessential venture capital firms from Silicon Valley such as Sequoia Capital and Kleiner, Perkins, Caufield & Byers utilize a high level of specialist knowledge and an extensive human network to focus on involvement with portfolio firms. Kleiner, Perkins, Caufield & Byers created a network known as ZAIBATSU that focused on entrepreneurs of past portfolio firms, and the members of ZAIBATSU introduced a value-adding system to the portfolio firms based on actual business experience in new technologies such as biotechnology and internet. Notable members of ZAIBATSU included founders of Netscape Communications Corporation and Sun Microsystems, Marc Andersen and Scott G McNeal, respectively. Furthermore, Sequoia Capital identified the development potential of Sun Microsystems, which had been founded in 1984, and was deeply involved in its management by assuming an initiative functional role, such as replacing the CEO. In Silicon Valley, a positive growth cycle was created in which vastly-experienced venture capital firms that consistently produced good performances, such as Sequoia Capital and Kleiner. Perkins Caufield & Byers, attracted further lucrative investment projects, thereby leading to even better investment performances. (Kutsuna, 1999: 22).

In Japan's venture capital industry, similar to the venture capital firms in Silicon Valley, a continuous increase of numbers of venture capital firms that followed an increasing trend of assigning individual venture capitalists to a succession of investment activities began in the late 1990s. For example, with the management reform started by a leading Japanese venture capital firm in the late 1990's, investment assignments that had previously been separated into functional departments and were reformed from teams consisting of 5 people to those consisting of 10, with each of those teams operating as a single fund. Also, in order to provide incentive for individual venture capitalists to improve their abilities, the increase and decrease in capital gains were reflected in a portion of the

3) When compared to the venture capital industry in the U.S., the industry in Japan is relatively weak with respect to independence. It has been reported that the discovery of portfolio firms are mostly dependent on referrals from parent companies (financial institutions); without lending any special assistance to the target portfolio firms, investments are carried out based on whether the parent company requests funding/loans (Hata and Kamijyo ed. ,1996:104).

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payment.

Furthermore, an independent emergent venture capital firm that concentrated on the investment domains in nanotechnology, an industry with international competitiveness, assembled a management corps that was well-seasoned and vastly-experienced in administrating nanotechnology in order to strengthen the support to the portfolio firms. This venture capital firm was limited to the realms of portfolio firms, providing specialized investments to early stage firms with concurrent aims to be involved with management, and was aware of the discrimination towards pre-existing venture capital firms in Japan.

As another independent emergent venture capital firm based its management philosophy on involvement with portfolio firms. In order to implement a cohesive involvement with portfolio firms, it is necessary that the portfolio firms must be within an area reachable from the main company or the administrative offices in 2 hours. There is a research approach in which ventures would desire an overseer that was geographically nearby, and because this short distance would influence the entry of the overseer into the board of directors, venture capitalists would minimize costs by monitoring geographically close firms (Lerner, 1995: 312-316). Furthermore, in 2002, a limited partnership fund was set up, which specialized in university spinoffs and academic-industrial alliances that focused on the Kansai region in mid-western Japan. Also, at the venture capital firm, as an incentive to improve the functions of venture capitalists that had managed to successfully improve the value of portfolio firms, a payment system was introduced in which employees that had improved the results of firm development were rewarded with a bonus that consisted of capital gains of 2%, and income gains of 10% when performing consulting work to portfolio firms.

6. Conclusion

In this paper, in addition to a survey of the venture capital industry in Japan, the formation process and the special characteristics of the Japanese venture capital industry were also discussed. On top of that, in the latter half of the 1990s, I investigated the venture capitalists in Japan that started to focus their efforts on new technologies and early-stage investments.

It has been shown that Japan has one of the lowest levels amongst the OECD countries in the relative amount of venture capital investments to its GDP that is targeted towards high-tech domains. Also, Japan’s venture capital industry was found to still be relatively small when compared to the magnitude of the U.S. and Europe’s economies, with Japan’s investment balances and annual investment amounts ranging from 1/13th to 1/49th of that of the U.S. and Europe. Scrutiny of Japan’s venture capital industry formation process revealed that it was heavily influenced by trends started in the U.S. Using the small business investment companies in the U.S. as an example for public venture capital investments, the first private venture capital firm in Japan was modeled after the first organized venture capital firm in the U.S. Furthermore, the distinctive investment partnership fund in Japan that was built as an organization based on civil law, like the U.S. limited partnership fund, was designed to accommodate the laws at that time. Up until the mid-1990s, Japan’s venture capital industry focused their investments on later stage firms within traditional industry domains, with organization-led venture capital firms being predominant. However, these later stage firms with experience in traditional industries being targeted as ventures had already been well under way as far as management was concerned, and there was little necessity for post-investment support from the venture capitalists. This investment style was thought to be one of the reasons that Japan's venture capitalists were unable to mature with respect to post-investment support know-how.

In the latter half of the 1990s, the venture capital industry in Japan saw an increase in investments that focused on new technology based firms that were based in the domains of new technology and were still in early stages as firms. Also, at around the same time, in Japan's venture capital industry as well as the venture capital firms in Silicon Valley, there was an increase in the number of venture capital firms with the strong trend of letting individual venture capitalists administrate a series of investment activities.

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