Japanese Entrepreneurship: Can the Silicon Valley Model Be Applied to Japan?

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Since 1992, the Japanese economy has been utterly stagnant, with signs of weak performance at every turn. Since 1997, Japan's economy has experienced negative growth, a situation unprecedented in the postwar era. Most large Japanese corporations have engaged in extensive restructuring during this period, which has in turn contributed to 4.8 percent unemployment—higher than rates in the United States. Further, in 1998, the closure rate of small companies (3.8 percent) exceeded the start-up rate of new business ventures (3.7 percent).

This grim scenario has not always existed. Japan once fostered phenomenal growth, from the smallest of ventures to the largest of multinational companies. As is evident in organizations such as Sony and Honda, Japanese entrepreneurship once led the world in innovation. In the 1990s, however, this torch has passed to the U.S. economy, which has enjoyed an extraordinary boom, due in large part to Silicon Valley venture businesses. Why have Japanese entrepreneurial activities, formerly so robust, lagged behind?

In asking this question, other questions arise. Despite the present business climate, how can Japan revive its economy? How can it absorb its unemployed workers? Most important, how can Japanese entrepreneurship again take the lead, and restore the country's economic health? This paper seeks to address these issues.

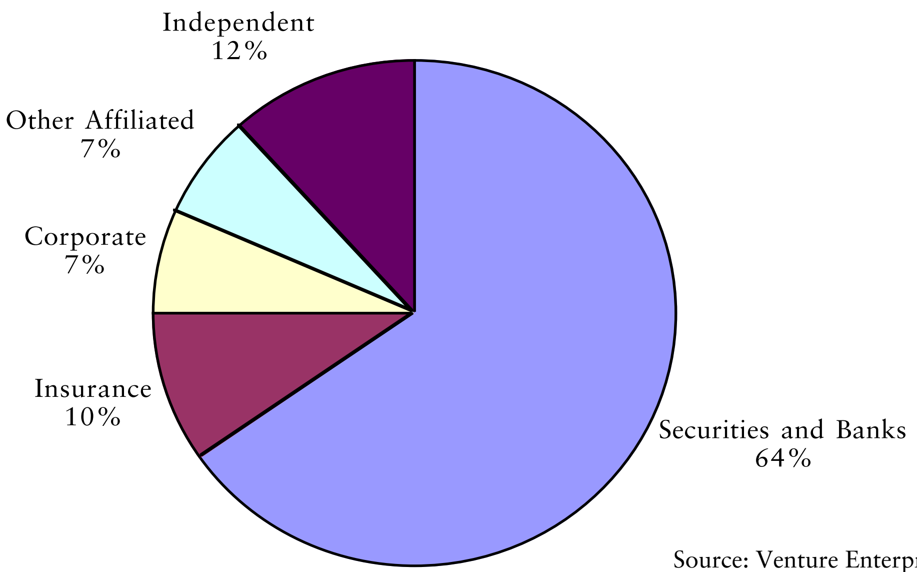
In the past, Japanese entrepreneurs fought an uphill battle. Cultural and regulatory obstacles in the Japanese business environment actually curbed the formation of new ventures. Recently, however, dramatic, positive changes have been enacted and even more are underway. Will these changes prove sufficient to foster the entrepreneurship so vital to Japan's future?

Before beginning a detailed discussion of recent improvements to the system, it is important to understand the current status of venture capital investment in Japan.

Venture Capital Investment in Japan—An Overview

Japanese venture capital groups (VCs) are primarily organized as subsidiaries of banks, securities, and insurance companies. Fully 74 percent of Japanese VCs are affiliated with these three types of financial institutions. Independent venture capitalists account for only 12 percent of the total, unlike the U.S. venture capital industry, which is dominated by independent funders. Japanese VCs total approximately one hundred-seventy, compared to over seven hundred in the United States.

VCs by Affiliation Type

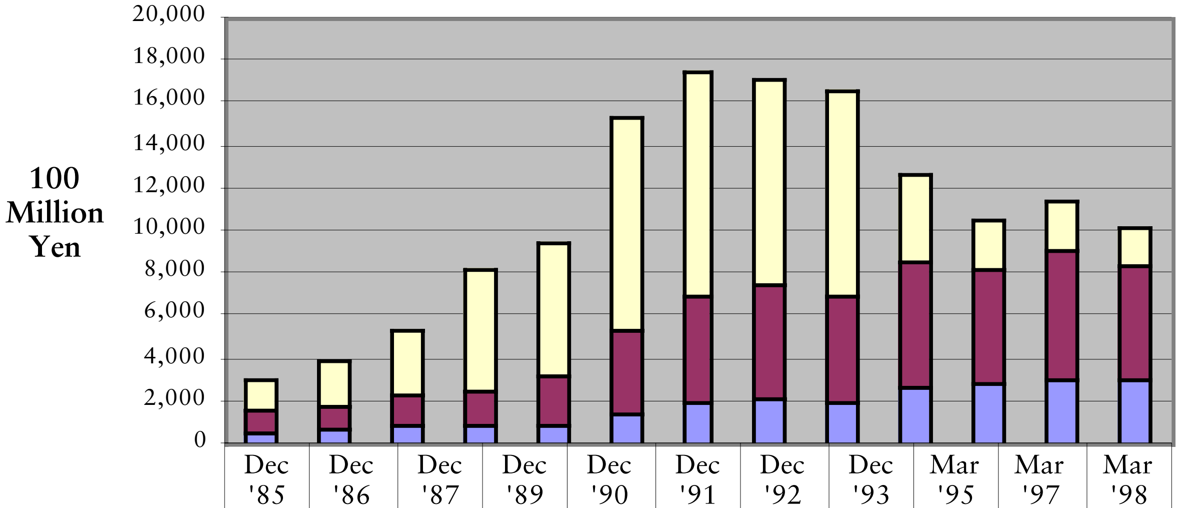


Source: Venture Enterprise Center

Historically, Japanese venture capitalists have extended loans instead of offering equity financing. During the past decade, however, the preferred financing vehicles have changed dramatically. For example, of the 8.2 billion yen of venture capital invested in Japan in 1988, 81 percent came from loans. A decade later, the proportions had reversed. By 1998, only 18 percent of the total invested channeled through loans. A striking 82 percent, by contrast, came through venture capital funds and accounts. There has also been corresponding growth in the percentage of equity investment. Since 1995, equity investment outstanding has hovered around 820 billion yen (around U.S. $7 billion). By March 1998, an impressive 81 percent of those monies were invested in Japan. Investment through funds is slowly but steadily increasing, but Japan still has some distance to cover. To put it in comparative terms, U.S. venture capitalist equity investment outstanding reached U.S. $43.5 billion in 1996. The same year, Japanese equity investment outstanding amounted to only 10.6 billion yen—roughly one-sixth of the U.S total.

Recent movement toward increased venture capital equity activity augers well for Japan's venture financing, but the overall rate of equity disbursements has declined precipitously, a by-product of the prolonged economic recession. In fiscal year 1996, Japanese venture capitalists invested 2.4 billion yen in 3,604 investments. The following year, the total invested declined 17 percent to 2.0 billion yen in 3,148 investments. In 1998, there was an even greater drop—75 percent—to a mere .493 billion yen and 1,002 investments. It is interesting, too, to compare the exposure that Japanese and American VC firms are willing to assume. In 1997, the average Japanese VC investment per company totaled 39.9 million yen (approximately U.S. $328,000, based on the average 1997 yen-dollar exchange rate), whereas U.S. VC firms typically commit an average of one to five million dollars to the ventures they fund.

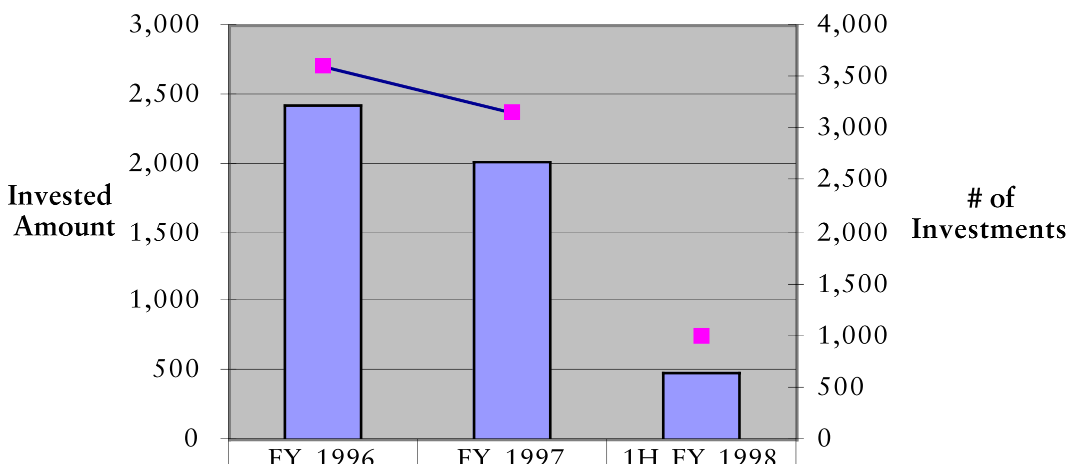
VC Investment and Loans Outstanding



	Dec '85	Dec '86	Dec '87	Dec '89	Dec '90	Dec '91	Dec '92	Dec '93	Mar '95	Mar '97	Mar '98
Loan	1,535	2,046	3,065	6,207	10,066	10,459	9,589	9,636	4,203	2,194	1,841
Own Account	1,004	1,182	1,414	2,331	3,850	5,114	5,328	4,963	5,876	6,128	5,300
VC Fund	524	625	825	967	1,419	1,876	2,167	1,978	2,655	3,065	3,092

Source: Venture Enterprise Center

Recent Disbursements (Equity)



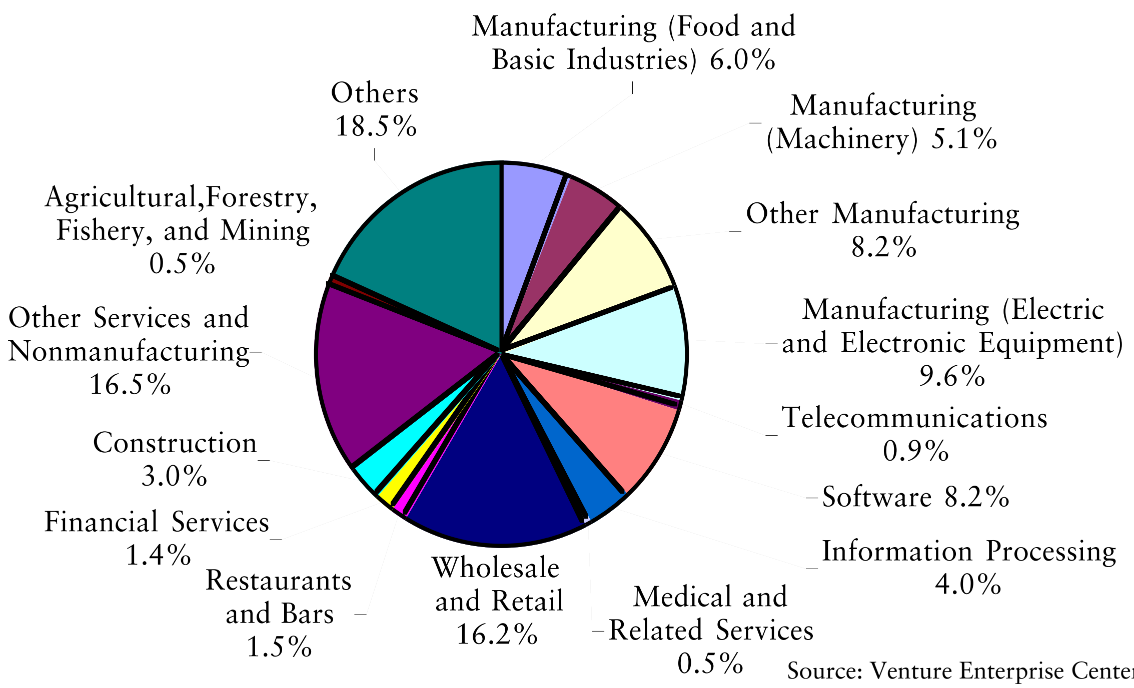
	FY 1996	FY 1997	1H FY 1998
Amount (100M Yen)	2,427	2,004	493
# of Investments	3,604	3,148	1,002

Source: Venture Enterprise Center

Patterns and Performance

Where does the money go? The pattern of Japanese VC investment differs significantly from that of the United States, in industry focus, geographic concentration, and stage of company development. In recent years in the United States, the information technology (IT) industry has received the lion's share of venture investment. In Japan, by contrast, IT has received a small fraction of the total money available. In 1997, for example, U.S. VCs channeled more than 60 percent of their total investments to IT, whereas Japanese venture capitalists directed only 23 percent (33.4 billion yen). Japanese VC firms prefer to spread their money across a variety of industries. Sectors that lured little venture capital financing in the United States—due to the strong focus on technology—attracted Japanese VC backing on a level nearly comparable to that of IT. Wholesale and Retail (16.2 percent), as well as Manufacturing in Food, Basic Industries, Machinery, and Other (19.3 percent), were all able to share the wealth in Japan.

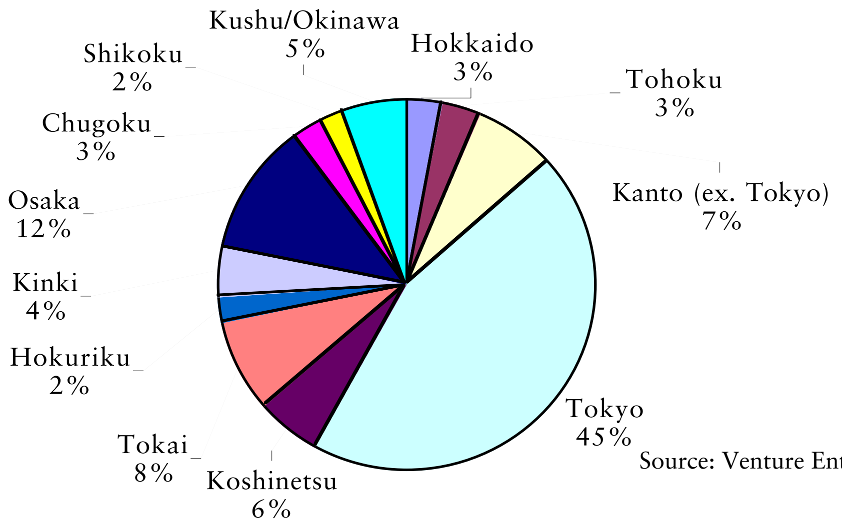
Disbursements in Japan by Industry Sector (1997 Yen Amount)



Source: Venture Enterprise Center

Although Japan boasts no equivalent to Silicon Valley, Tokyo and the surrounding Kanto region have dominated venture capital investment in Japan. In 1997, this geographic area received 52 percent of total disbursements, more than 2 1/2 times the total investment in the next two top regions—Osaka (12 percent) and Tokai (8 percent). Other areas of Japan are trying to challenge the dominance of Tokyo and its environs, and many less VC-favored prefectures and municipal governments are trying to establish their own Silicon Valley-type centers for innovation and entrepreneurship. Among the more highly publicized developments are Kanagawa Science Park and Gifu Softpia. Unfortunately, the names sound good, but these regions do not yet attract the level of investment enjoyed by their competitors in Tokyo, let alone those in Silicon Valley.

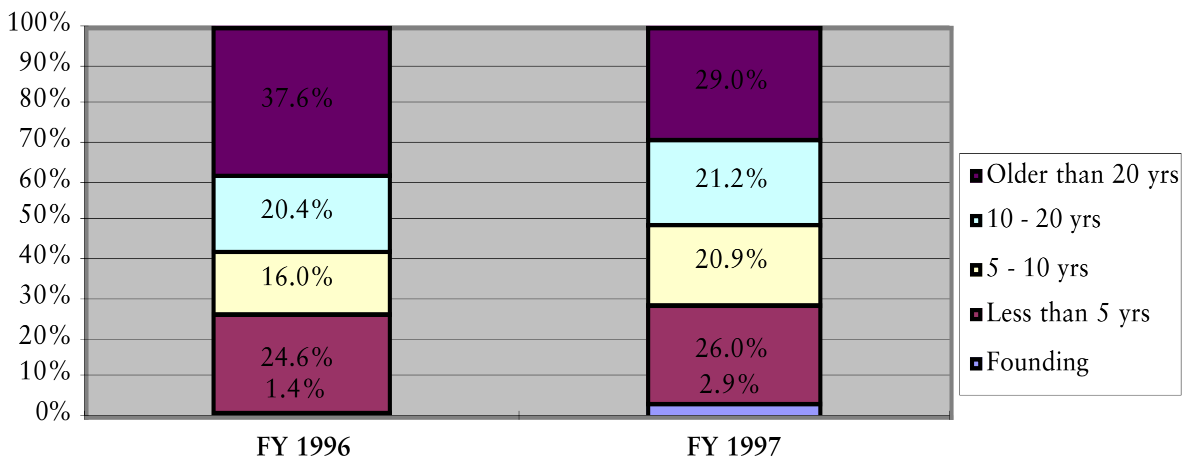
Disbursement by Region in 1997 (Yen Amount)



Source: Venture Enterprise Center

In addition to their tendencies toward industry variety and geographic predictability, Japanese venture capitalists have a pattern of investment in older, more established companies. In 1996, 58 percent of Japanese VC disbursement occurred in companies more than ten years old. This contrasts sharply with U.S. venture capital activities: in the same year, an overwhelming 83 percent of total investment took place in companies in business for *fewer than* ten years. Recent investments in Japan have established a similar trajectory toward backing younger companies—total disbursement in these ventures increased from 42 percent in FY1996 to 49.8 percent in FY1997. Japanese venture capitalists must continue to invest in newer, nimbler businesses if they wish to keep pace with their brethren in Silicon Valley.

Disbursements by Company Age (Yen Amount)



Source: Venture Enterprise Center

Given all of the above factors, how well do Japanese VC firms perform? MITI was interested in the answer to this question, and inaugurated its annual Benchmark Survey, which analyzes performance data on the Japanese VC industry. In the 1998 MITI Benchmark Survey, MITI reported that continuing venture capital funds performed consistently better than public stocks, but poorer than bonds. Closed funds, on the other hand, which require no consideration of the J-curve effect (negative cash flow at the fund's earlier stage with larger positive cash flow at later stages) performed better—with a 10.3 percent rate of return—than either public stocks (3.4 percent) or bonds (6.9 percent).

Performance of VC Funds (Weighted Average Annual Return)

	VC Funds	Topix	Bonds (Nomura BPI)
Closed Funds	10.3%	3.4%	6.9%
Continuing Funds	1.6%	-9.6%	7.1%
Funds 5 years or older	3.2%	-4.9%	7.2%
Funds younger than 5 years	2.8%	-14.2%	6.7%

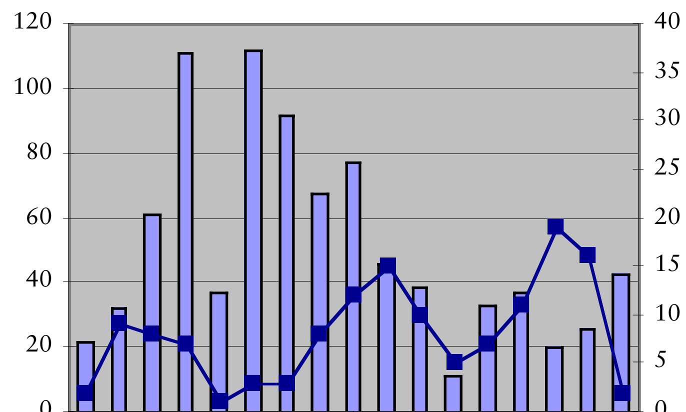
*Returns of Topix and Bonds are those of the same periods of VC funds.

*The sample includes 135 funds raised between 1982 and 1997.

Source: MITI Survey

This is a notable accomplishment, especially when one considers that the average size of Japanese venture capital funds has reached between 2 and 4 billion yen in recent years. Because of Japan's prolonged economic slump, however, the number of VC funds being established is decreasing at an alarming annual rate.

Average Fund Size and Number of Funds by Vintage Year

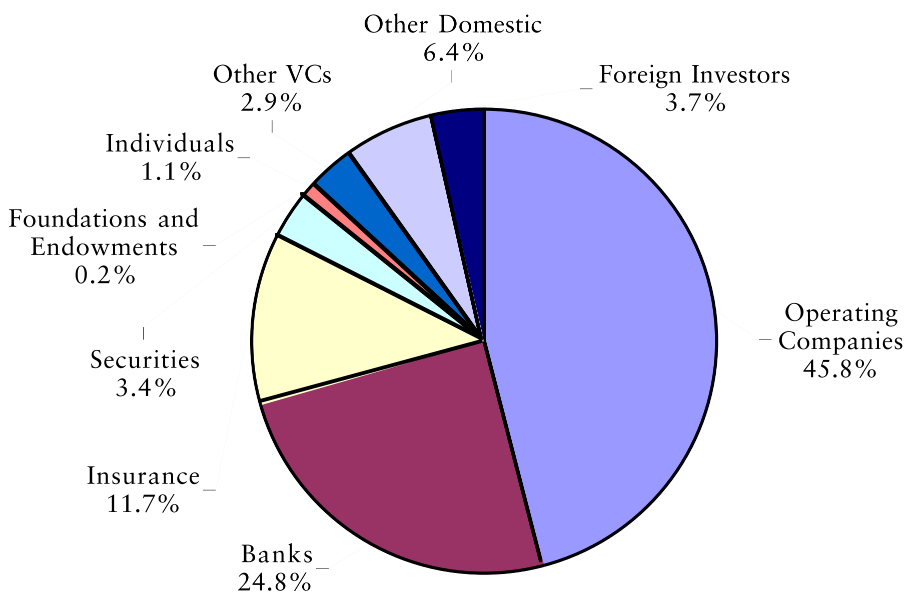


	1982	1984	1986	1988	1991	1993	1995	1997
Avg Fund Size by Vintage Year	22	61	37	92	46	11	37	26
# of Funds by Vintage Year	2	8	1	3	15	5	11	16

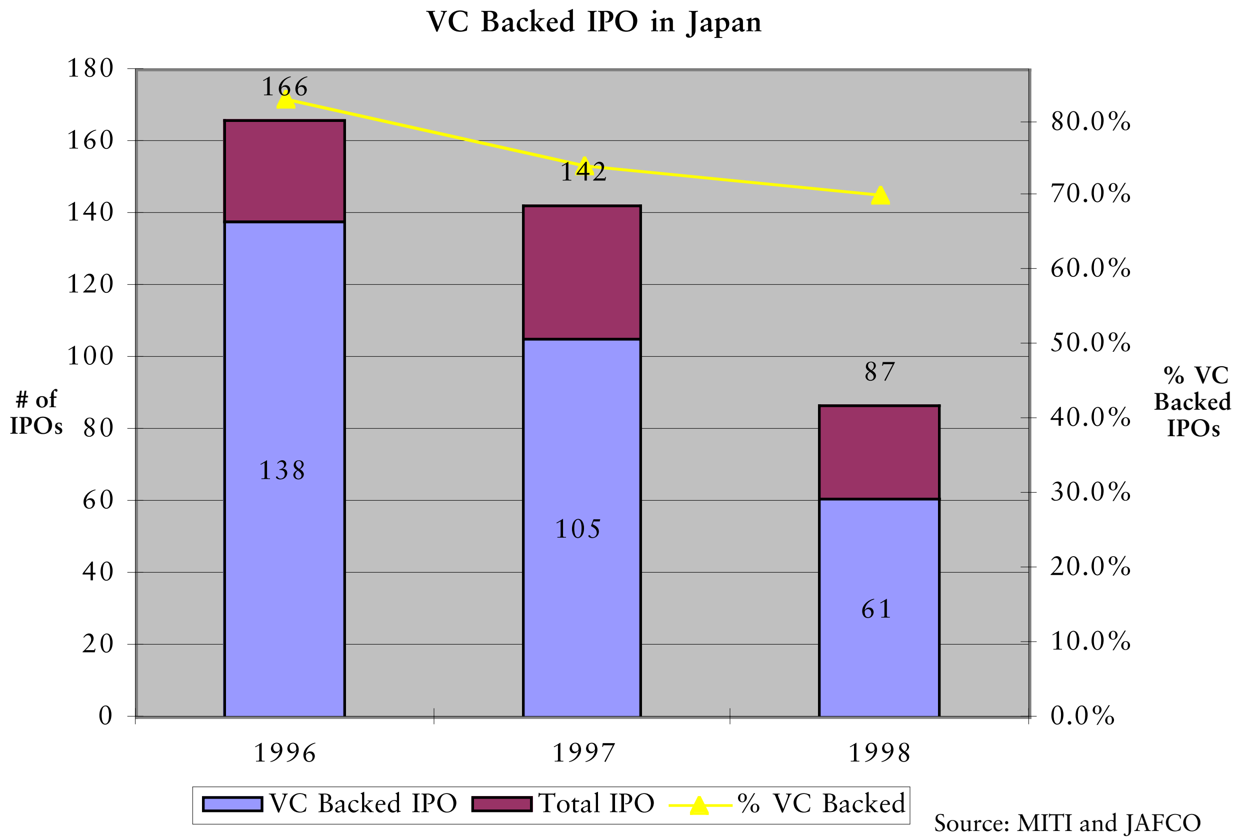
Source: MITI Survey

The money for Japanese venture capital funds comes from a wide variety of sources. In funds formed between 1992 and 1998, a full 46 percent derived from operating companies, in the form of limited partnerships. Only 0.2 percent came from foundations and endowments, whereas in the United States, 50 percent of venture capital money flows from pension funds and endowments. Until very recently in Japan, corporate pension funds were barred from investing in enterprises as potentially risky as venture capital funds. Financial institutions, however, such as banks and securities, invested relatively heavily, and their contributions comprised 24.8 percent—the second largest stake—of total limited partnerships granted during this six year period.

LPs by Type
(Cumulative Number of LPs in Funds Formed between 1982 and 1998)



How many IPOs, then, occur in Japan? In 1996, 166 companies were listed in the Japanese stock market. (For comparison, approximately 750 companies were listed in the same year in the United States). Around 70 to 80 percent of Japanese IPOs were backed by venture capitalists. The key differences between American and Japanese IPOs, however, have historically been the moment at which the VC firm decides to invest, and the length of time a company takes from inception to IPO. In Japan, most companies wait an average of twenty-seven years before an initial public offering, and VC firms typically invest at a very late stage of those pre-IPO proceedings. In the United States, where the time from inception to IPO averages five to seven years for IT companies, VC firms prefer to invest much earlier. Up to now, this kind of early stage, high-risk investment has not been possible in Japan. Since many Japanese VCs are themselves backed by risk-averse financial institutions, they tend to allocate their funds to later stage, lower risk companies. Further, because of the long period between inception and IPO, VC firms cannot make capital gains on the money they advance. At this time, Japanese venture capitalists do not play a significant role in providing risk/seed money to early stage entrepreneurs.



Source: MITI and JAFCO

Obstacles to Japanese Entrepreneurship

Both institutional and cultural obstacles have curbed Japanese entrepreneurship. On the institutional side, Japan lacks the financing mechanisms that have successfully incubated venture businesses in Silicon Valley and raised them, in stages, to maturity. Early stage venture financing is particularly difficult to come by, and there are very few so-called "angel" investors in Japan. Consequently, Japanese entrepreneurs—depending on the age and stage of their ventures—rely heavily on debt financing from banks, and on money from cautious VC firms that are themselves subsidiaries of banks and securities companies. For obvious reasons, such institutions rigorously avoid risk, and insist on collateral. In most cases, they even require entrepreneurs to provide personal guarantees, against household assets, on the loans. If the company goes bankrupt, the entrepreneur goes bankrupt as well. Too often, professional bankruptcy also equals personal bankruptcy.

Another significant institutional constraint on Japanese entrepreneurship is the dearth of "exit options" when things go wrong, or when significant change is required to keep a company alive and growing. This is true for venture capital firms as well as entrepreneurs. The first obvious exit option is to sell the company outright to another company. This is difficult because the Japanese mergers and acquisitions (M&A) market has not been well developed, and also because the buying and selling of companies—treating them like commodities—is not socially accepted in Japan. The second common exit option, the IPO, or the sale of a portion of the company's equity to outside parties, is similarly challenging. In Japan, the over-the-counter (OTC) market, though smaller, serves as the closest analogue to the U.S. NASDAQ market. Because of tough listing criteria and pre-IPO regulations set by the Japan Securities Dealers Association (JSDA), along with Japan's recent financial difficulties, the OTC does not allow for the kind of tremendous monetary gains that NASDAQ companies have posted in recent years. Given these significant institutional obstacles, there is little opportunity for entrepreneurs or venture capitalists to profit from new businesses. With so few returns promised for the many risks, it is natural that Japanese entrepreneurship has been inactive.

There are also cultural impediments to be overcome. To be sure, the length of time an OTC Japanese company takes to reach IPO stage is tremendously long—twenty-seven years as compared to the five or seven years for typical NASDAQ companies. But mere comparison of time periods is meaningless. In Japan, many entrepreneurs would actually prefer *not* to list their companies in the stock market. Such CEOs and company founders maintain a *sushi-shokunin* attitude: that is, they do not wish to grow the company to a stage at which they cannot oversee it themselves. More to the point, they do not wish their decisions to be challenged by equity holders whose financial stake has purchased them a vote in the company's governance. One caveat to this *sushi-shokunin* scenario, discussed above, is that Japanese VCs typically invest in companies at a very late, pre-IPO stage. Because they assume less risk, they may also assume less responsibility, leaving the founder/CEO to run the business as he sees fit.

Ironically, Japanese VC firms themselves can hamper entrepreneurship. It is understandable that entrepreneurs, Japanese or otherwise, would entertain reservations about the loss of control that can arise from equity financing. They are hesitant about financial disclosure to potential partners and financiers. Significantly, though, Japanese venture capitalists receive discipline—if not comeuppance—from their parent companies, rather than less forgiving market forces. They tend to secure future customers, to focus on loophole regulations, to eschew capital gains, and to avoid aggressive behavior. Lack of professional business school education and a liquid labor market perpetuate these problems, making it difficult for VCs to attract talented, experienced, innovative executives. Indeed, there are "Salary Men" venture capitalists who enter the industry not through merit, but through standard rotations arranged by VC firms' parent companies. Not surprisingly, the relationship that exists between venture capital firms and venture businesses is seldom based on trust. Tendencies in the Japanese business culture toward nonconfrontation and risk-aversion exacerbate the situation: in many cases, Japanese venture capitalists cannot fire a founder CEO, even if his performance is poor.

Another cultural obstacle to entrepreneurship is the Japanese stigma against failure. As I have already noted, risk-taking activities are discouraged. While it is often said that an American can fail three times before succeeding, there are no second chances for the Japanese. In Japan, social status correlates closely with organizational affiliation. Japan's top university graduates are channeled into positions at élite government ministries and large corporations. They are the best and the brightest, and yet, if they were to leave their large employers for start-up ventures that eventually failed, they would have great difficulty in reentering the mainstream workforce. Because of lifetime employment practices, large Japanese large firms have relatively limited midcareer hiring. Entrepreneurial activities and venture capital investment have yet to be accepted as prestigious, desirable jobs. Further, making money, strangely enough, is not socially accepted. Where the United States lionizes its rich, brash upstarts, Japan often views newfound wealth with suspicion, because it upsets the society's much-prized egalitarianism. A cultural aversion to money-making naturally does not encourage venture capital firms to realize huge gains.

One final obstacle that Japanese entrepreneurship has historically faced is the lack of cooperation between academia and business in advancing research and development (R&D) agendas. R&D expenses by businesses, particularly large corporations, account for almost 80 percent of total R&D in Japan. But patents acquired by corporations often do not contribute to their core businesses, and more than 60 percent eventually become dormant. Similarly, Japanese academics frequently prefer to exist in an ivory tower and to avoid associating with industry. Consequently, university research resources are not fully utilized by industry. Few university researchers obtain patents or licensing fees for their work, largely because Japan lacks Stanford-type technology and patent licensing institutions.

Seeds of Venture, Signs of Change

Turning from obstacles to progress, there are changes now underway in Japan that should aid in revitalizing its entrepreneurial activities. The first of these takes the form of accelerated regulation reform. In 1998, the Limited Partnership Act for Venture Capital Investment was enacted, which defines a legal basis for the limited liability of nongeneral partners in VC funds (i.e., there now exists a limit on investor liability to the extent of the investor's original investment), and provides legal assurance for limited partners' right to obtain management information on the funds. The OTC market was also reformed in 1998. Previously it had introduced a special section for high tech venture businesses, with some relaxation of listing criteria, but the section failed. Accordingly, in December 1998, the OTC abolished this section, and instead drastically relaxed general listing criteria across the OTC market. Similar drastic deregulation of the OTC market—including pre-IPO regulation (placing a stringent limit on allocation of new shares to a third party in the period before IPO)—was implemented in 1999, aimed at making the OTC market equivalent to the NASDAQ. The NASDAQ will soon open its own market in Japan, through collaboration with SoftBank. And, in November 1999, the Tokyo Stock Exchange opened a market for high-tech and emerging stocks. All of these developments will likely increase the number of IPOs in Japan, and dramatically decrease the time required for ventures to reach the IPO stage.

Several other regulatory reforms have taken place. One is stock options, which the government introduced partially in 1995, and totally in 1997. Around 180 companies—though not necessarily all new venture companies—have made use of this system. Another 1997 reform involved corporate pension funds, which for the first time were allowed in venture investment. Corporate pension funds amount to around 6 billion yen, and if even 2 to 3 percent of these monies are invested in VC funds, they will become a major source of venture capital investment. Last among recent notable regulatory reforms were measures for a more liquid labor market. The government relaxed the rules on temporary staffing and placement services, and is also considering pension portability, including the introduction of 401K-type pensions.

The second significant positive change for Japanese entrepreneurship is the introduction of government support for a wide variety of business activities. Public assistance for new start-ups in Japan falls under the jurisdiction of SMEA (Small and Medium Enterprise Agency), which is associated with MITI and offers generalized small business support programs. One example of these, the Small Business Investment Corporations, was established in 1963, as public venture capital firms. They have invested in more than 2,500 companies, 78 of which have gone public. Recently, supporting venture businesses has become a key area for policy initiatives. Both SMEA and MITI's New Business Policy Division have worked to enact legislation to create a favorable environment for new ventures. Those policy measures include a public program for direct equity and debt financing, as well as loan guarantees through semigovernmental and prefecture institutions. In 1995, MITI revised the Law on Temporary Measures to Facilitate Specific New Businesses, and SMEA initiated the Small and Medium Size Enterprise Creation Law (enacted in 1995), so that the above measures were made possible.

More recent governmental reforms have also taken place. In 1998, the Act of New Business Creation was enacted, introducing governmental loan guarantees to start-ups without requiring them to provide collateral or guarantors when borrowing (through the Credit Guarantee Association). Special low-interest governmental loans for start-ups by women and the aged—requiring neither guarantors nor collateral, via the People's Finance Bank and the Small Business Corporation—were also introduced. Under another new governmental scheme, the Japan Small Business Corporation can now invest in VC funds as a limited partner. And, under the so-called Angel Tax Incentive, introduced in 1997, an individual investing in start-up ventures enjoys a special tax deduction, for up to three years, on any loss derived from the investment.

In the formerly thorny area of academic and business cooperation, more strides have been made. MITI has introduced laws and measures to facilitate university-industry technology transfer. The new Act—the Act for Promoting University-Industry Technology Transfer of 1998—helps to establish technology licensing offices (TLOs), which obtain patents and handle marketing and licensing on behalf of university researchers, who are gradually descending from the ivory tower. At the University of Tokyo, professors have established the Center for Advanced Science and Technology Incubation, and professors at the University of Kyoto and Ritumeikan University formed the Kansai Technology Licensing Organization. Academics at other institutions, including Tohoku and Nihon Universities, have followed suit.

The last in this impressive series of governmental actions occurred early in 1999. The Small and Medium Enterprise Technological Innovation Scheme, which is Japan's version of the U.S.'s S.B.I.R. (Small Business Innovation Research), aims to increase the allocation of governmental R&D spending to small businesses, under the 1998 Act of New Business Creation. Large companies, too, are emulating government, seeking out seeds of excellent technology and developing them into new businesses within their own organizations. Some have even introduced incentive schemes to encourage this brand of aggressive innovation. The government's enthusiasm for big companies to undertake management buy-outs (MBOs) suggests that even more start-up ventures will develop in this newly favorable environment.

The third kind of change currently underway in Japan concerns social practices and conventions within business. These changes take many forms. Because of eroding lifetime employment practices and Japan's stagnant economy, there will be increasing numbers of unemployed white collar workers. Strong shareholder pressure for profitability will lead many large corporations to divest or spin off activities that do not contribute to their core business, including inapplicable R&D. Recently, more of the best and brightest professionals have begun to join foreign-affiliated companies, rather than conventional large Japanese corporations. This new breed of talent, influenced by western culture and eager to take advantage of the improved environment for Japanese start-ups (i.e., big reward and relatively small risk), will try their luck as entrepreneurs. In addition, M&A is being encouraged; foreign financial institutions are undertaking joint ventures with Japanese banks and securities firms; and colleges and universities have begun to teach students about entrepreneurship and venture businesses. Another recent development concerns the Shibuya area of Tokyo, where a number of small ventures specializing in e-business have recently formed the Bit Valley Association—a place for information exchange and human networking among interested parties. Further, new venture businesses are now recognized as both the catalyst for necessary structural reform, and the cure for current stagnation.

Past as Prologue

As discussed above, Japan's business environment is changing, and becoming more hospitable to entrepreneurs. The changes are gradual, and their full impact has yet to be felt throughout the Japanese economy. Nevertheless, many Japanese companies—from the small to the long-established—are thriving in the world market. For instance, Sawako, Ltd., a small construction company which oversees design, construction, and maintenance of buildings, was listed on the OTC market five years from its inception, and listed on NASDAQ a year later. Yahoo! Japan was listed on the OTC market one year and nine months from its inception. Digicube Co. Ltd., a games software company, was listed on the OTC two years and five months from its inception, and IIJ, an Internet service provider, was listed on the NASDAQ in August 1999, seven years from its inception. IIJ was not listed on the domestic OTC market, instead moving straight to NASDAQ. Other recent success stories include:

- I-A-I Co., Ltd.: Manufacturer of intelligent actuators (IA).
  - —Share of world IA market: 45 percent
  - —Number of employees: 103
  - —Average employee age: 34
  - —Sales: 2.8 billion yen
- Arufa Giken. Co., Ltd.: Manufacturer of quick-drying glue, used in the Apollo Space Shuttle.
  - —Share of world glue market: 2nd largest sales
  - —Number of employees: 41
  - —Average employee age: 35
  - —Sales: 1.7 billion yen
- Eruteru Co., Ltd.: Manufacturer of optical (infrared) communication equipment.
  - —Share of world market: Sets *de facto* world standard of data transmission between PC and printer.
  - —Number of employees: 18
  - —Average employee age: N/A
  - —Sales: 100 million yen
- Enkei Co., Ltd.: Manufacturer of aluminum wheels (AW).

—Share of world AW market: 12 percent (7 million units)
—Number of employees: 304
—Average employee age: 38
—Sales: 23.8 million yen

- San Emu Package Co., Ltd.: Manufacturer of disposable medical goods.
  —Share of world disposable face mask market: 30 percent (2nd largest)
  —Number of employees: 110
  —Average employee age: 38
  —Sales: 1.9 billion yen
- Nakashima Propeller Co., Ltd.: Manufacturer of vessel propellers (VP).
  —Share of world VP market: 30 percent
  —Number of employees: 321
  —Average employee age: 39
  —Sales: 11 billion yen

Another notable example of a successful Japanese venture business is Sawako Ltd., a small but full-service construction company that handles building-related projects, from design and construction to maintenance. Sawako was listed in the OTC market within five years of its inception. One year later, it was also listed in the NASDAQ.

In conclusion, let me say that many changes are conspiring to improve the state of entrepreneurship in Japan. The OTC market is changing. The business culture is changing. Venture capitalists are becoming independent. Venture funds have been established and are becoming more and more active. Venture investment has shifted from debt financing to equity. Stock options are gaining ground. All of these factors are contributing to an improved environment for entrepreneurship and venture businesses, which will in turn support the Japanese economy in the years to come.

About the Author

Upon graduating from the Law Faculty of Tokyo University in 1965, Katsuhiro Nakagawa joined the Japanese Ministry of International Trade and Industry (MITI). In 1971, he received ann M.P.A. from the Kennedy School of Government at Harvard University. In 1997, after holding key positions in various policy areas at MITI, he became vice minister for international affairs, actively engaging in trade negotiations. He now serves as executive advisor to Tokyo Marine and Fire Insurance Company, Ltd. In 1998-99, Katsuhiro Nakagawa was a visiting scholar at the Asia/Pacific Research Center.

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