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Abstract

This study consists of three sections. The first one considers the recent history of venture capital in Japan, Europe and United States. The subsequent section discusses the motives of entrepreneurs and investors, and ponders the question of how to ensure that entrepreneurs' decisions meet with investor approval. Evidence is presented which suggests that venture capital practices in Japan discourage an entrepreneur from taking risks, and that practices in Europe and United States lead to a greater willingness to take risks. The final section presents some recommendations and discusses other constraints on the growth of venture capital.

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Introduction

Venture capital has followed different routes in Europe, Japan and the United States -but none has been smooth. The United States was the first to emerge with institutional venture capital in the 1960's. Venture capital funds were organized in Europe and Japan (Kimishima, 1989) soon after. But the early 1970's saw a major decline in venture capital everywhere. In the late 1970's, stimulated by changes in tax and investment regulations, it recovered strongly in the United States, reaching a peak in the mid-1980's and declining from then onwards (*Venture Capital Journal*, 1989). Japan witnessed a flurry of activity in the early 1980's, but has not grown since, and has never approached the overall level of the United States (Venture Enterprise Center, 1989). Europe has surprised everyone; its investment levels have grown annually by 50 % since 1983 and it surpassed the United States in the late 1980's (European Venture Capital Association, 1990).

These international comparisons demolish one widely shared belief - that Europe has deep cultural biases which prevent entrepreneurship (see e.g. Tyebjee & Vickery, 1988, for a summary of these views). When policy changes removed the impediments, pools of capital were assembled and entrepreneurs materialized with worthy ideas.

A similar belief exists regarding cultural biases towards entrepreneurship in Japan (Kimishima, 1989), where entrepreneurship is viewed as a rare event (Ohe, Honjo, and MacMillan, 1990). However, the experience of Europe suggests that patterns in entrepreneurship can respond rapidly to favorable institutional developments.

This paper suggests that institutional impediments, more so than culture, are an important root cause of Japan's comparatively low level of new venture formation. Other possible causes are not convincing. For example, although start-ups in Japan are not common compared to the United States (and now Europe as well), those which exist are similar to their counterparts in other countries¹. Similarly, a study by Ohe, Honjo and MacMillan (1989), which compared the perceptions of American and Japanese entrepreneurs, found few important differences. What is more, the surprising growth in European venture capital investment since 1984 confirms that

¹ This is based on comparison of 127 start-up ventures: 21 from Japan, 38 Europe, and 68 from the United States (Keeley, Roure, Goto, Yoshimura, 1990).

entrepreneurial ambitions, though dormant in some cultures, readily appear if the environment is conducive.

This is not a comprehensive survey of institutional arrangements in Japan as they relate to venture capital. Rather, it deals primarily with one arrangement, one which venture capitalists themselves have the power to change. The issue is how much investment to require of a company's founders.

This study is made up of three sections. The first considers the recent history of venture capital investment in Japan, Europe and the United States. The subsequent section discusses the motives of entrepreneurs and investors, and ponders the question of how to ensure that the entrepreneur's decisions meet with investor approval. It presents evidence that venture capital practices in Japan discourage an entrepreneur from taking risks, and that, by contrast, practices in Europe and the United States lead to a greater willingness to take risks. The final section presents some recommendations and looks at other constraints on the growth of venture capital.

Venture capital investing in Japan, Europe, and the United States: Recent Experience

Table 1 compares recent venture capital investment activity for the three regions featuring in this study. The Index of Activity, which measures investment as a fraction of GNP, is perhaps the best single indicator. It shows that by 1988 Europe had overtaken the United States. Equally impressive is the fact that in 1983 the European Index of Activity matched that of Japan at about 22. Five years of rapid growth transformed Europe from a laggard into the world's leader!

Table 1

Venture Capital Activity in Europe, Japan and the U.S.

	Growth Rate (1983-88)³ %yr.	Index of activity² (U.S. = 100)	(\$, million)	1988 Investments Number	Ave. Size (\$, 000)
Europe-Total	52.3	162	4,303	5,078	847
Lowest (Germany)	37.1	12	147	224	656
Highest(U.K.)	51.2	632	2,934	2,104	1,394
Europe(Excluding Buyouts) ⁴	N/A	123	2,642	4,176	633
Japan ⁵	(3.6)	25	290	634	457
U.S.	(2.8)	100	3000	1,827	1,64

Notes:

¹ Sources: European venture Capital Association (1989), Venture Enterprise Center (1989), Venture Capital Journal (1989).

² Index is 1988 Investment by venture capital firms divided by GNP. The U.S. value of 0.0617% is scaled to 100.

³ The European base for calculating growth is the 1981-1984 average from Tyebjee & Vickery (1988).

⁴ Activity ratio for this line excludes buyouts for the U.S. (which are 19 % of U.S. activity) and Europe.

⁵ Excluded are loans by Japanese venture capital firms. These numbered 75 in 1988 and totaled \$1,567 million. They appear to be low risk loans to established, young companies.

Europe has achieved this growth without relying on the technology sectors as outlets for its funds. As Table 2 shows, the venture capital industries of Japan and Europe have similar investment patterns. The implication is that a country, which at first may seem unreceptive to venture capital, can transform itself in a remarkably short time.

One important change in the European capital markets was the establishment of an *Over the Counter* or *Second Market* in 1980 for Great Britain, 1983 for France and 1982 for The Netherlands. This serves three important roles. Firstly, it offers venture capitalists a means of withdrawing from their investments within a time horizon of five to eight years.

Table 2

Distribution of Venture Capital Investments in 1988 by Industrial Sector

Europe²	U.S.		Japan³
Electronic	15	47	Electrical Machines & Software
Medical/Bio	5	21	
Industrial Prod.& Manufacturing	24	4	Gen.Machines + Other
Automation	2	1	Mfg. +Info. & Services
Other Services	7	n/a	Precision Machines
Consumer	24	13	Sales, Dist. & Trading
Foreign	3		Foreign
Other	20	14	Other

Notes:

¹ Sources: European Venture Capital Association (1989), Venture Enterprise Center 1989), Venture Capital Journal (1989).

² "Foreign" has been taken from sectors on a pro rata basis for Europe.

³ The case of Japan refers to fund balances, not to investment flows, because investment was not available.

Secondly, and more importantly, it is a source of capital for the successful start-ups at a time when capital needs begin to outrun the capacities of venture capitalists. Without this source, a company's growth would be constrained and its value correspondingly diminished. Thirdly, it is a public demonstration to other prospective entrepreneurs of the rewards which attend success.

Although the growth in United States venture capital occurred prior to the time period represented in Table 1, two changes in institutional arrangements during the latter part of 1978 proved important there as well. One was a lowering of the capital gains tax rate. The second permitted pension funds to invest in venture capital.

The country in Table 1 with the least venture capital activity, Germany, has financial markets which are heavily dominated by banks. Venture capitalists there complain that banks have limited the access of new ventures to the capital markets (European Venture Capital Association, 1989, p. 136). Germany has a very successful economy; so the limitation of new venture activity cannot be shown to be overly damaging.

However, Porter (1990, p. 377-8, 380) notes that Germany has experienced difficulty in creating new businesses, in establishing positions in new industries, and in creating jobs. All of these problems have been alleviated in other countries by new ventures. There are two important effects caused by these new ventures: first, the direct contribution of the new venture, and second, the competitive spur which they give established firms.

The decline in activity in the United States since 1983 suggests that suitable institutional arrangements are not all that is necessary for an active venture capital industry, nor is venture capital destined to become a major part of aggregate investment. The technology-based sectors, which received much of the venture capital investment of the early 1980's, have seen fewer new venture formations, and no other sector of the economy has taken up the slack. Europe, on the other hand, is experiencing structural changes as the economies converge, and this has created a demand for venture capital.

Our review of Europe and the United States suggests that the "correct" or "appropriate" level of venture capital investment will vary from country to country and will vary within a country over time. The European experience also suggests that cultural biases against entrepreneurship may prove ephemeral, if other institutional arrangements are improved. Furthermore, the contrast between Germany and the rest of Europe suggests that unfavorable institutional arrangements can be a powerful inhibitor to entrepreneurship.

How many potential entrepreneurs are there?

Recent studies view Japanese entrepreneurs as "rare" (Ohe, Honjo & MacMillan, 1990), as living where "the social structure works against entrepreneurship," (Ray & Turpin, 1990), as "products of chance or ...mere eccentrics" (Kimishima, 1989).² If these assessments are correct, one may wonder whether an ideal institutional structure could bring about an increase in entrepreneurship. A definitive answer to this question is for the moment out of our reach, but the following list of evidence suggests that entrepreneurship might subsequently increase to a surprising degree:

1. The European experience. These are also cultures which attach low value to entrepreneurship.
2. Studies which show significant parallels between U.S. and Japanese entrepreneurs.
3. Studies which suggest that personal traits are less important than the prevailing "situation" or "environment" in determining how a person behaves.

The European experience has already been discussed, but it deserves emphasis whenever someone suggests that a given culture simply does not have many potential entrepreneurs. Europe represents a case where policy changes were made, even though many observers felt the culture was not conducive to entrepreneurship. The results proved that cultural influences are not easily predicted – at least where entrepreneurship is concerned. As impediments were removed, the pool of venture capital expanded rapidly and entrepreneurs with good ideas came forward.

A study by Ohe, et al. (1989) comparing two groups of entrepreneurs – one Japanese, the other American – finds little difference between the groups in terms of their views of themselves and of the companies they started. It finds substantial variation within each group, and a strong

² "Entrepreneur" is misleading because it refers to an individual; whereas most venture capital backed start-ups are founded by a team of people. Thus, surveys of entrepreneurs evidently focus on companies smaller than those of interest to venture capitalists, or they are arbitrarily assigning the title "entrepreneur" to a member of the team as though that person determined the team's behavior and choices. A study by Keeley & Roure (1990) of US ventures finds that a dominant leader or "entrepreneur" is not the norm. Instead, the team is often egalitarian, with the CEO merely the first among equals.

tendency for someone, whether Japanese or American, to provide similar answers to questions regarding one's views of oneself and one's company. It found that Japanese and American entrepreneurs were typically in their mid-30's when they started a company. That is, they spent ten or more years working as employees before deciding to become founders/owners.

The work of Ohe et al. (1989) does not tell us how many potential entrepreneurs exist in each country. Conceivably there are very few in Japan and a great many in the United States. However, it suggests a Japanese entrepreneur is not particularly different from his American counterpart.

A related study by Ohe, Honjo and MacMillan (1990) finds a difference between Japanese entrepreneurs and managers. Studies comparing American entrepreneurs and managers also find differences (e.g. Begley & Boyd, 1987). However, these studies can not address the most important question: "How much difference existed between the manager and the entrepreneur before the latter started a company?" Differences which exist several years later may result from their divergent careers, not from any inherent personality differences. The changes in context may produce the differences.

"Entrepreneurship" on the other hand refers to a function which may be performed by a team.

The question of how personal traits and contextual variables influence attitudes and behavior has received renewed attention lately.

The setting has not been entrepreneurship, where the importance of personal traits has long been accepted. Instead, studies have looked at job satisfaction among employees (e.g. Staw & Ross, 1985). However, the findings have relevance to entrepreneurship, as they suggest a bias toward exaggerating the importance of personal traits (Blake-Davis & Pfeffer, 1990). Blake-Davis & Pfeffer (1990) assert that an equally strong case can be made that the prevailing situation or context is the dominant influence. They even suggest that the influence of the prevailing situation or environment should take precedence in "strong situations" (i.e. situations which convey strong incentives.), which all new ventures are.

A study by two other authors (Keeley & Roure, 1990) supports the importance of the situation regarding entrepreneurship. In their study of 16 technologies-based ventures, only one involved a lone entrepreneur searching for the right idea. Ten started when one of the founders (usually not the CEO) happened to come up with a good idea. Nearly all of the founders had careers as successful managers, and were experts in their industries. Thus, they were able to recognize the merit of the idea, and the opportunity for a new company. In the absence of a chance encounter with said idea, they probably would have happily continued their successful careers as managers.³

For our purpose, the "situation-personality" debate suggests that we may usefully view all managers as part of a pool of potential entrepreneurs. This is undoubtedly an exaggeration, but it serves to shift the debate. Potential entrepreneurs are no longer viewed as terribly scarce. Instead we need to consider the circumstances, including incentives and impediments, which may influence the decision as to whether or not to help create a new company.

³ This may convey a misleading impression that the founders appropriated ideas which actually belonged to their employers. Only one of the 16 cases resulted in competition between the new company and the employer of the person who discovered the idea. That case led to a lawsuit and a consequent finding that the new company had not taken "know-how" belonging to the former employer.

Founder investment requirements: An institutional impediment in Japan?

With the assistance of venture capitalists in Japan, Europe and the United States the authors obtained data from the original business plans of 127 companies: 21 from Japan, 38 from Europe, and 68 from the United States. Many comparisons were performed and are reported in Keeley, Roure, Goto & Yoshimura (1990). For present purposes, one difference brought to light by the data is especially interesting. As shown in Table 3, Japanese founders invested far more, and venture capitalists invested far less, than their European and American counterparts.

Table 3

Comparison of Founder Investment and Venture Capital Investment in Japan, Europe and the U.S.
(Y in 000, 000)

	Japan	Europe	U.S.
Founders' Investment	58.223	21.173	12.908
Venture Capital Investment	74.500	213.938	253.050
(Fdr. Inv.) / (Ven. Cap. Inv.)	0.78	0.099	0.051

The ratio of Founder to Venture Capital investment is even more striking. It is 15 times as high in Japan as in the United States and nearly 8 times as high as in Europe.

Clearly, many of the European and US companies would never have been started if Japanese standards for founder investment had been applied to them. The economic losses from applying Japanese standards in Europe and the United States would have been considerable: the average gain in the value per share in Europe was 40%. In the United States, where the companies in this sample are somewhat older, the average gain was 1255%.⁴

We shall now go on to examine whether the requirement of substantial investment by the founders is counterproductive. The following three issues will be reviewed:

1. What effect does a large investment by the founders have on their motivation and willingness to assume risk?
2. What benefits are gained by requiring a large investment by the founders?
3. Do other methods exist for obtaining the benefits of investment by the founders?

Regarding the willingness to assume risk, company founders are far less diversified in their investments than venture capitalists, and this tends to make them more risk averse. Actions by the firm have a major effect on the wealth of the founders but a minor effect on the investors.

This is true even when the founders make a small investment in the firm. The result in many cases will be more caution on the part of the founders than the investors would prefer.

But there are other considerations. In some cases the founders may find they have "nothing to lose." They have already given up their old jobs by starting the company, so now the remaining risks are with the investors' money. This can be an important problem, and it is alleviated by

⁴ For the Japanese companies the average gain is 60%. This sample is younger on average than the European or American groups.

requiring a large investment by the founders. Additionally, founders probably overestimate the chances of success (Cooper, Dunkelberg & Woo, 1988). A crude way to offset this optimism is to increase their inherent risk aversion by requiring a large investment.

Excessive optimism and the "nothing to lose" syndrome reflect certain deficiencies among the founders, which can be dealt with to some extent by requiring them to invest heavily. In addition, there are clearly positive benefits to be accrued from a large investment by the founders, and they are worth mentioning. One is increased ownership, and a corresponding narrowing of the founders' investment portfolio. Although this makes a founder more risk averse, as noted above, it may also increase his or her commitment. A second benefit is reduced risk to the investor of loss of principal. A third is that the willingness by the founders to invest sends a "signal" that this is a high quality opportunity. If investors are not able to assess the quality of opportunities, such "signals" can be important to the functioning of a venture capital market (Amit, Glosten and Muller, 1990). Finally, investment by the founders increases the amount of capital available.

In view of the benefits, the one drawback of excessive risk aversion on the part of the founders may seem a small price to pay, especially since their natural optimism tends to offset such risk aversion (i.e. they do not believe they are taking much risk). But the real penalty is hidden. It lies in missed opportunities, meaning those good ideas which never get started.

Some venture capitalists in the United States believe that their growth in the late 1970's was possible because they no longer needed to require a large investment by the founders -a common practice in the early 1970's. They had developed other means of acquiring the benefits of investment by founders. If a large personal investment is not needed, persons with important knowledge, but with limited assets or a risk-averse nature, will find it attractive to start companies, and the number of excellent start-ups can be expanded.

By learning from the experience of the early 1970's, venture capitalists developed five ways of accruing the benefits of investment by the founders:

1. Careful pre-investment investigation of the business concept and the founders themselves.
2. Investing in teams not in single entrepreneurs.
3. Requiring adherence to a mutually agreed business plan as a condition of investment.
4. Investing in several stages, with subsequent investment being contingent on the company's performance.
5. Ensuring active participation in the company via the board of directors.

In combination, these are effective substitutes for a large investment by the founders.

The pre-investment investigation allows venture capitalists to distinguish high from low quality proposals, and to weed out those founders with "nothing to lose." This is not easily done, and the development of information-gathering networks which make it all possible is a key asset of venture capitalists.

The existence of a capable team of founders serves as a sign of the venture's quality. Their mutual endorsement of the idea and of each other, assuming that they are employed and are leaving promising careers to pursue the venture, is a valuable indicator of a venture's merit.

When investors and founders agree that a specific business plan will be followed, it serves to inhibit founders from becoming overly conservative. Excessive caution is equivalent to violating an understanding. In addition, most venture capitalists invest only enough to support the company for about one year. Further investment will not be forthcoming unless the company is approximately following its plan – unless, of course, any unforeseen changes have already been endorsed by the investors.

Finally, active participation on a board of directors, which meets frequently, means that investors quickly become aware of deviations from the plan or of situations where the founders might have “nothing to lose” and thus be inclined to take desperate gambles with the investors’ money. Through their investment agreements they can prohibit such actions. The fact that they have the means to prevent such actions, and, through participation on the board and the resultant ability to learn whether such actions are being contemplated, serves to prevent managers from taking steps contrary to the interests of investors.

Conclusions

Investors do not need to require a large investment by the founders. Effective substitutes exist. And, by using these substitutes they can enlarge the pool of worthy new ventures. Thus we respectfully suggest that Japanese venture capitalists should consider changing their practice of requiring large investments by the founders of start-up companies.

The practice of requiring large investment by the founders is an impediment to entrepreneurship in Japan, but there may be related impediments which also need consideration. Indeed, removal of a single constraint may not have much effect if another one is quickly encountered. In Japan, as in Europe prior to 1980, the absence of an active Second Market appears to be such a constraint. If successful ventures find their growth potential choked off because nothing fills the gap between start-up venture capital and the Tokyo Stock Exchange, then high growth startups will indeed remain rare - as they are today in Japan.

Some may ask whether additional entrepreneurship is a good thing in Japan. Established Japanese firms are noted for their abilities to innovate, and this has been a key role of start-ups elsewhere. They may worry that increased entrepreneurship will cause them to lose good people. However, experience in the United States suggests such effects are minor. In the United States the total amount invested by venture capitalists has never matched the research and development budget of IBM or several other large firms; so the fraction of technical people who move into start-ups is very small. The gain, provided through many high risk “experiments” (i.e. through new ventures), has, however, led to new industries such as personal computers, or local area networks from which established companies and new ventures have derived enormous benefits.

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