

# Kasvuyrityskatsaus 2012

Työ- ja elinkeinoministeriön julkaisu  
Innovaatio  
20/2012



TYÖ- JA ELINKEINOMINISTERIÖ  
ARBETS- OCH NÄRINGSMINISTERIET  
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# 10 Venture Capital Has a Role, but Do Not Forget Nice-Growth Firms

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For about two decades building a successful domestic venture capital (VC) industry has been among the central policy objectives in Finland. Finland should consider, however, whether developing strategies to encourage non-VC-funded *nice-growth firms* might better fit its unique set of advantages and social values. Arguably - with its high-quality, white- and blue-collar human capital, but small internal market and limited VC industry - nice-growth firms fit better Finland's unique profile.

## Nice-Growth Firms Have a Big Impact

*Venture capital (VC)*, *entrepreneurship*, and *innovation* are often treated as though they are synonymous, but this is not the case.

In recent years, great attention has been given to nurturing, subsidizing and encouraging venture capital investment often without understanding the determinants of VC investing and considering the possibility that venture capital-financed firms do not encompass the entire universe of knowledge-based firms that can emerge and be important contributors to regional economic development.

In reality, many entrepreneurial ventures creating high value-added products and services with significant employment impacts are not good candidates for venture investing. When creating policies meant to encourage entrepreneurship and innovation, non-VC-funded firms should not be overlooked. While these firms may not grow as rapidly as VC-backed firms, in aggregate they may have as big or a bigger economic and employment impact. For the sake of this paper, we term this larger universe as nice-growth firms.

Nice-growth firms are a polyglot category whose common characteristic is that their products and services have a large knowledge component. Firms in this category include medical and scientific devices and equipment, high-end design and consulting firms, and sophisticated engineering-intensive precision machinery firms. What these firms share with those likely to be VC-backed is that they are knowledge intensive and employ highly skilled workers and engineers. And yet, nice growth firms differ from VC-funded firms in terms of their combination of slower growth, a probable upper limit in firm size, and an inability to increase revenues *dramatically* more rapidly than costs. The vast majority of these firms are destined to grow at a moderate pace and only to a modest size. For this reason

they are not of interest to venture capitalists, but should be of great interest to development policy makers.

## Venture Capital – Strengths and Weaknesses

There is little need to define venture capitalists, but in a nutshell they are financiers who invest equity capital in young firms in the hopes of receiving an out-size return provided the firm grows dramatically in value.

Because of the equity stake, venture capitalists adopt a partner-like stance toward the firm, but ultimately their loyalty is to their *capital* and, if they deem it necessary and have a sufficient ownership stake, they can and will replace the founders.

Ideally, the venture capitalists provide various forms of *assistance* to the firm and its entrepreneurial team. This assistance can include helping plot firm strategy, involvement in the recruitment of the management team, providing introductions to potential customers, and a myriad of other services that propel the growth of their investee firms.

A typical venture capital-financed firm will have two or three venture capitalists on their board of directors. During their career, experienced venture capitalists may have served on twenty, thirty, or even more boards of directors. So, collectively the VC directors will have participated in the development of between 60 and 90 firms. Moreover, they can call on the experiences of the other partners in their firm. Ultimately, it is this experience that makes seasoned venture capitalists valuable to the fledgling firm.

As with any investor, *returns and only returns* define venture capital success. Achieving those returns by investing in young firms is difficult. The dominant condition for VC investors is *uncertainty*. The three most salient vectors of uncertainty are:

1. The technology may not, or cannot be made to, work sufficiently quickly (in a few years).
2. The entrepreneurial team is ill-suited for building a rapidly expanding firm.
3. For whatever reason, the expected market does not emerge or cannot be tapped by the investee firm when it emerges.

With such great uncertainty, not unexpectedly, the *mortality rate* for young firms is high, therefore the returns from successes must compensate for the losses. For this reason, venture capitalists must invest in firms having the potential for a rapid increase in value. This also means that VCs push their firms to grow as rapidly as possible – this will be the case even if, by growing more slowly, the firm would have a greater chance of survival. Firm survival with slow growth is not an investment goal – if the growth is insufficiently rapid to allow the sale of the firm, then for the VC the capital invested cannot be extracted and is thus the same as a loss. In many respects, it is *worse* than a failure because it clutters the portfolio and still demands some management time.

This highlights an important *distinction* between the venture capitalist and government policy. The goal of the venture capitalist is *capital gains*, while society's goal is employment, tax revenue, etc.

Obviously, when firms are successful, the goals of the venture capitalists and society *are* congruent. If the venture capitalist pushes the firm too hard and it fails for this reason, the venture capitalist's goal and the societal goal do *not* match. Further, this analysis suggests that many potentially societally beneficial firms will *not* receive VC funding because they do not promise a high enough rate of return on the capital invested.

When judging whether a financial vehicle can support a particular genre of organizations, the question is whether the organizations have the characteristics necessary to meet the investor's criteria.

For example, for a bank loan there must be a high probability that the borrower is able to make the interest and principal payments, a low probability of a loss of capital, and collateral capable of covering any losses.

In contrast, the key factors for a venture capital investment can be reduced to three interdependent criteria:

- rapidly growing markets,
- scalable technologies and ventures, and
- large and rapid pay-offs (Hargadon and Kenney 2012).

When these criteria are not sufficiently satisfied, then those investment opportunities are unlikely to receive venture capital. The next three sections briefly expand upon the implications of these criteria and illustrate them by using *Google's* growth history.

## Soon Large and Rapidly Growing Markets

VCs aim to invest in markets, which are on the *verge* of creation or disruption, thereby allowing their portfolio firms to rapidly attract customers and fuel their growth (for more discussion in the context of clean technologies, see Hargadon and Kenney 2012).

The value proposition of the portfolio firm should be so compelling that customers rapidly adopt the new service or product. Often, this will require that they migrate from incumbent technologies and competitors. For example, firms such as *Netscape*, *Yahoo!*, *Excite*, and *Amazon*, benefited from the rapid adoption of the Internet by new users, creating a new platform upon which they could offer their services. There were quite literally no incumbents with whom they had to compete.

In contrast, *Google* had to compete with existing search engines and displace them by offering a more attractive product. As this occurred and, as demonstrated in Figure 10.1, *Google's* revenues grew exponentially as new customers began to use its search service, which it monetized by delivering advertisements. In the case of each of the Internet firms mentioned above, they captured a market opportunity and grew very rapidly.

Venture capital is drawn to locations where communities of entrepreneurs are creating or exploiting the kind of opportunities discussed above. I return to the idea of communities later because having a single success such as *Skype* or *Rovio* does not necessarily create the community of entrepreneurs critical to sustaining a local venture capital industry and encouraging the emergent ideas that come from such mixes of entrepreneurs and VCs.

For early-stage ventures, a firm must have the promise of growth in ways that allows it to scale, in turn, justifying valuations permitting outsized returns to investors. The returns on venture capital investments depend on the market value of a new company (via initial public offering (IPO) or acquisition) and, in new ventures, such valuations are typically multiples of revenues (rather than earnings) and reflect the anticipation of continued rapid growth. For this reason, investments have concentrated in particular industries or industry sub-segments undergoing rapid transformation, growth, or experiencing massive discontinuities. These sectors naturally change over time. Ultimately, the success of venture capital is predicated upon having investment opportunities with large enough potential markets and concomitant returns to compensate for the risks.

One of the shortcomings of venture capital is that highly profitable but small markets are not of interest to venture capitalists, because the firm cannot grow sufficiently large to ensure great enough capital gains. So when presented with a firm intent upon exploiting a potentially highly profitable but very small market, the venture capitalist might decide not to invest because the potential capital gain may be too small. And yet, from a societal perspective, it would be desirable for such firms to receive financing, but the private venture capital model cannot undertake the investment. In many economies, such opportunities would be taken by informal investors.

## Scalability

While rapid growth in customers is of great significance, the ability to scale the new firm sufficiently rapidly to meet the demand and out-strip competitors is critical. New ventures must be able to provision the rapidly growing market without a correspondingly growing need for capital investment; this *scalability* is a function of both the venture and the technical and market conditions.

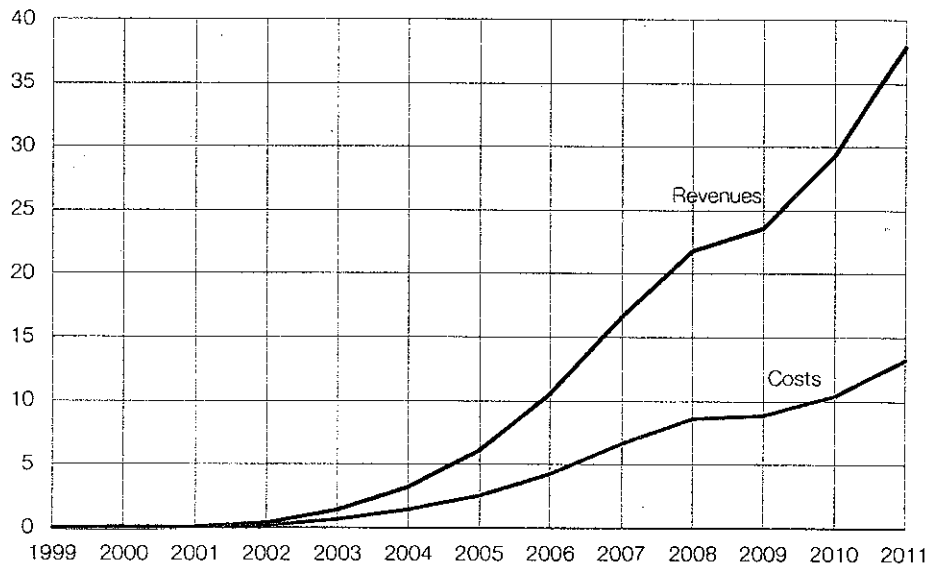
For example, in software and internet services customers can be provisioned without a corresponding large increase in capital investments. In the case of semiconductors, by contracting with a specialist fabricator, after designing the chip, the design firms can produce ever increasing numbers of them at only the incremental cost of production. The bulk of the chip's value is in the design - the profits for each incremental chip produced are enormous, so revenues and costs diverge rapidly, leading to enormous returns for successes.

Similarly, a new pharmaceutical, once proven to be safe and effective, can be produced in increasing quantities at only the incremental cost of production. This differential growth of costs and revenues is illustrated in Figure 10.1, which shows the divergence of growth of revenues and costs at *Google*.

Unless new companies can emerge and become dominant players by scaling faster than competitors (other new ventures and incumbents), there is little advantage to investing significant venture capital in them. Effectively, in markets such as the information and biomedical technologies, the returns on equity for successes are relatively decoupled from returns on assets.

In other words, the value of a company (and its growth) is exponentially larger than its capital requirements to achieve that growth. Scalability is a dominant feature of the information technology sector, and for successful VC investing it is a *prerequisite*. The ideal firm for venture capitalists is one capable of growing rapidly, while having revenues and costs diverge substantially.

Figure 10.1 Google Revenues and Expenditures, 1999–2011, billions of USD



Source: Google filings with U.S. Securities and Exchange Commission various years.

For this reason, even many fast-growing firms may not be attractive to venture capitalists because their costs grow roughly in proportion to revenues. Consulting firms are knowledge-intensive and can grow very rapidly. However, as they grow, they must hire new consultants roughly in direct proportion to their business growth. So the model is scalable, but rising revenues and costs are highly correlated. As a result, overall value growth is slower than is the case with business models such as that of *Google*. From an economic development perspective, firms exhibiting



such growth are desirable because the jobs are well paid. And yet, VCs are reticent to invest in these ventures because their scalability deviates from their ideal type.

## Rapid and Large Value Creation

Ultimately, VC investing is about large capital gains that typically are realized through an initial public stock offering or trade sale. What separates VC investment from *Ponzi* schemes is that the firms actually create value (though in periods when the stock market is frothy some firms sold to the public have *Ponzi*-like characteristics). The sheer size of the capital gains realized and the compound annual rate of increase are both significant. The amount is important because as active investors a venture capitalist can only monitor a finite number of firms, so there is an *opportunity cost* for each investment due to the active role VCs adopt. Put differently, this means that VCs *cannot* make very small investments that will have great returns but the overall size will remain small. The compound annual growth in value is important because the life of a VC fund is no more than ten years. Investors in VC funds expect high returns to compensate for the greater risks, and the successes must cover the failures. The best returns come during stock market *manias*, such as the Internet Bubble that collapsed in 2000. During these periods – and there have been a number of previous ones including the Biotechnology Bubble of the early 1980s (Kenney 1986), the hard disk storage bubble in the mid-1980s, (Bygrave and Timmons 1992), and clean technology bubble in the mid-2000s (Hargadon and Kenney 2012) – public investors will pay exorbitant amounts for fledgling firms; many of which are not, and some of which will never be, profitable.

This observation suggests that successful venture exits are dependent upon more than just the quality of the firm. The *cyclicity* to venture investment success suggests that returns to a particular fund may, in part, be due to when in the cycle that the particular fund was raised. During a mania, returns can be enormous attracting yet more investors and new venture capitalists, often unfortunately, the funds raised during such manias have sub-par returns.

The investment manias that occur are fascinating. For example, from 2009–2012 there has been a mania in the social media space. To illustrate, in January 2011 *Facebook*, a fast-growing social media website, raised capital from *Goldman Sachs* at a valuation of \$50 billion prior to filing any information with the Securities Exchange Commission. Established in a *Harvard* dormitory in February 2004, in September 2004 it received \$500,000 from a *PayPal* founder and a valuation of \$5 million; by December 2004 it had grown to one million users and raised its first round of venture capital in May 2005 valuing the firm at \$100 million. After a number of other rounds of venture capital investment, in August 2011, according to a pre-IPO share exchange, *Facebook* had increased in value to \$82 billion (Kroll 2011).

To provide a point of comparison, in August 2011 *Google* was valued at \$175 billion, thus the value of *Facebook* was nearly half of *Google*, and even while *Google's* annual

revenues in fiscal year 2010 were \$29 billion with profits of \$8.5 billion (*Google 2011*). In contrast, it has been estimated that in the first half of 2011, *Facebook* had revenues of \$1.6 billion with net income near \$500 million (*Reuters 2011*). At a minimum, comparison of the valuations of these two firms provides an indication of how great the capital gains for successful investments can be, but may also be an indicator of the hype that prevails during such manias.

In sum, the interplay of these three interdependent characteristics of markets - *growth*, *scalability*, and rapid and large *payoffs* - determine whether venture capital financing can successfully open new economic spaces by funding early-stage ventures in particular sectors and at particular moments. Absent a favorable constellation of characteristics, it is difficult for individual ventures to effectively transform markets by growing sufficiently in size and valuation to validate previous venture investments and attract the ones necessary to create a self-sustaining industrial transformation. Ultimately, it is such *returns* that drive venture capital investing. Quite simply put, *any* location capable of offering such returns will attract venture capitalists or, if firms can boot-strap such returns, then a local venture capital industry will emerge to assist such firms.

### In Love with VC?

The enormous successes of the *Googles* and *Facebooks* thrill politicians and government policy makers. Having a local venture capital industry is often believed to be vital for gestating such successes. Few consider that if such a promising opportunity is available, despite the fact that venture capitalists do not like to travel, VCs *are* more than willing to travel. The recent history of Helsinki-based *Rovio* attracting investment from U.S. and London-based VCs is ample evidence of this willingness. More problematic for smaller nations such as Finland, is what happens after the venture capital from abroad invests. The venture capitalists often suggest and even urge the firm to move to better environments (read Silicon Valley or possibly Boston for biotechnology) for undertaking the enormously rapid growth an extremely successful firm can experience. The result can be that the entrepreneurs are assimilated into the foreign ecosystem and their role in their original location is significantly dampened. There is little that the home nation can do to prevent any such exodus. For smaller markets, success can be a two-edged sword.

### Nice-Growth Firms and Funding

The emphasis on venture capital-funded entrepreneurship misses an entire genre of firms that undertake knowledge-based work, can generate substantial employment growth, but normally *neither* experience Silicon Valley-style growth, the necessary rapid growth in value, *nor* have the scalability features attractive to venture capital. And yet, such entrepreneurial startups can generate significant positive employment

impacts, contribute to the local tax base, and are not nearly at as great of a risk of being relocated. Despite the attractiveness of such firms from an economic development perspective, there has been little academic research upon them. This section describes some of the industrial sectors that have these types of characteristics and reflects upon how the formation of these types of firms might be encouraged.

## Medical and Scientific Devices

The first group of such firms is in the medical and scientific device and instrument fields. Though venture capitalists have invested in these industries, often the market such firms address is too small and their growth not sufficiently rapid to justify venture investing. Their employment profile is interesting, because it usually requires a mix of scientists or engineers, and skilled craftsperson, and, increasingly, software programmers. If the product is sufficiently original, profit margins can be high generating welcomed tax receipts. Also, these industrial sectors can lead to new rounds of entrepreneurship. Here, the lessons of regions such as the medical device clusters in Jena, Germany (Menzel 2005); Tuttlingen, Germany (Halder 2004); Minneapolis, Minnesota (Porter 1998); or Boston, Massachusetts (Best 2006) can be profitably applied.

Nice growth firms can be found in other industries besides medical and scientific instruments. Precision machinery firms are also often nice growth firms offering good jobs and positive local economic benefits. There are a number of examples of such firms already in Finland. For example, a Tampere firm, *Robit Rocktools*, employs 70 persons in a technologically sophisticated operation focused on rock drilling. Many of these firms will be purchased by larger firms, but frequently the skill levels of the work force are so high that the acquirer does not close the factory and relocate production. A social benefit is that this type of work force is dedicated to quality and has a sense of pride and responsibility - valuable building blocks for a good society. While most such firms are too small and grow too slowly to be of interest to venture investors, their economic benefits are obvious.

## Consulting and Design Services

Another group of nice firms is in consulting and design services. This is an eclectic group, but draws upon higher level labor-force skills. Some of these types of firms can grow very large. For example, the two largest Silicon Valley design consulting firms, *Ideo* and *frog design*, employ 550 and 1,600 employees respectively, and have grown to be multinational firms. Such firms provide extremely high value-added work and create externalities for firms in a wide variety of other industries that may contract for their services.

While most academic research on university spin-offs has focused on biotechnology and, to a lesser degree, on computer science and electrical engineering (Grimaldi et

al. 2011; Kenney and Patton 2011), spin-offs occur from a wide variety of academic disciplines. For example, statistics, which strikes many as very esoteric, can generate significant new firms. Two illustrations, both in North Carolina, provide excellent examples. The first firm is SAS, which was established in 1976 by North Carolina State University biostatisticians, and has become one of the world's most widely used statistical packages and currently has over 12,000 employees worldwide (SAS 2011). Another firm, *Quintiles*, which today employs 22,000 persons globally, evolved from a University of North Carolina biostatistics professor's consulting that began in 1974 and formally incorporated in 1982 (*Quintiles* 2011). What this suggests is that too narrow a focus upon specific university disciplines may miss other opportunities. To make the point more strongly, both SAS and *Quintiles* have more employees than *any* university biotechnology spin-off. As interesting, neither of them received *any* venture capital as they were both built by boot-strapping. Despite these examples, which are not alone, there has been little interest in supporting entrepreneurship in university-statistic departments. These examples illustrate the problems of targeting specific fields, especially if it discourages or devalues other less visible sources of entrepreneurs. This suggests that the best strategy for universities may be one of supporting entrepreneurship *generally* and *removing barriers*.

The field of consulting-related firms is so broad that it is probably impossible to categorize them all. Because of the sheer number and variety of opportunities, the possibilities for innovation and entrepreneurship seem endless. While many of these firms are extremely profitable and excellent sources of employment, they are not attractive for venture capital investment because few grow sufficiently large, many can fund their growth internally, and there is a fairly linear relationship between business expansion and employment growth.

### Do Not Suffocate Nice-Growth Firms

These two examples of knowledge-based economy sectors that can generate positive and desirable outcomes are, for the most part, not amenable to VC financing, but from an employment and industrial growth perspective should be very attractive. The sources of such entrepreneurs can be many. For the medical and scientific equipment and device fields, university faculty and staff are an important source of many such firms. For example, a recent study of U.S. medical device startups found that 20 percent could be traced to universities. Generally, because of the limited market size such firms can attract only minimal amounts of capital. In the case of the university-based firms, requiring them to go through a formal university bureaucracy demanding large licensing fees and/or large amounts of paperwork may be sufficient to discourage potential entrepreneurs.

Nice-growth firms may need an initial investment to be launched, and funding such new firms is always difficult. While the returns may not be attractive to a venture capitalist, they could be for informal investors. For such investors, exit might

be realized through earn-out investment contracts. Currently, the capital market for these types of firms is not well developed, but it may be possible to experiment with alternative capital provision mechanisms.

One U.S. model that has had significant success in encouraging technological commercialization is the *Small Business Innovation Research Program* (SBIR), which was mandated by Congress in 1982. The award process is decentralized to each funding agency and within the larger agencies. The award decision is based upon the technical merits of the proposals and not directly upon the commercial potential. The dispersion, relative small size, and evaluation upon technical merits limit any politicization of the process (Lerner 1999).

Nearly all SBIR Program evaluations have been positive. For example, Lerner (1999: 315) found that awardees were *significantly more likely to receive VC funding* after the award. However, he also found that the superior performance of SBIR recipients was *confined to firms based in ZIP codes with substantial venture capital activity*, and was greater in high-technology industries. David Audretsch *et al.* (2002) show that the SBIR Program stimulated technological innovation, private sector commercialization of the innovations generated through federal R&D, and had positive social benefits. In the case of *National Institutes of Health* (NIH) SBIR awardees, in terms of follow-on venture capital funding, SBIR program completion, and patenting, firms affiliated with academic scientists performed significantly better than other non-linked SBIR firms (Toole and Czarnitzki 2007). A 2008 *National Research Council* reported similarly positive results from the SBIR Program. SBIRs appear to have been particularly effective in facilitating the movement of research results from academic laboratories to commercialization.

The positive results of the SBIR Program suggest that *decentralized, diverse*, relatively *small* investments can produce significant benefits in commercializing technology. The other advantage of both the SBIR efforts is that they invest relatively small amounts in a *wide range* of industries and technologies.

## Creating an Environment for Entrepreneurship?

Finland does not need yet another article describing the Finnish problem regarding entrepreneurship. When considering the encouragement of any type of social action, it is interesting to consider *barriers* and *incentives*. These may be located in a variety of aspects of the political, economic, and social system. Moreover, they are also often mutually reinforcing and, in nearly each case, there are concrete reasons for the barriers and incentives. Prior to discussion of changes, it is important for those discussing change to consider what they are doing that is *right*, and what they do not want to lose and what can be *improved*. As such decisions are made; they may also preclude and impede the achievement of other desired outcomes.

To illustrate let me begin with the typical US entrepreneurial story. An engineer at a high-tech firm in California has an idea for a new product that is so much

better than his current employer's product that he is convinced he can build a new firm on the basis of this idea. As she considers this new product, perhaps already experimenting in her garage, she speaks to one of the hot shot marketing managers at the firm and they decide this is their chance to resign and establish their own firm. They both decide to take the plunge, so they talk to a lawyer who informs them on how to legally leave the firm. They raise their preliminary capital by taking out second mortgages on their homes and incorporating their firm. With perseverance, skill, and luck their venture can have a number of outcomes. Consider the binary outcomes: First, their firm succeeds, they repay their mortgages, and have now created the next *Intel*. But, the second and most common result is that they fail. In this case the bank would repossess their homes, and three years of their lives would be gone. Since they are in California, their home mortgage debt no longer exists. They can get new jobs and start over. So, one legal change would be to ease *bankruptcy law*, but would that be good for the rest of society - there is no easy answer for other societies and cultures.

California has other rules that encourage entrepreneurship. For example, in California, firms *cannot* enforce *employee non-compete agreements*. Employees that have done everything legitimately are free to start a firm. Moreover, it has become so common and accepted that none of their co-workers at the original firm feel badly toward them. The roots of this lenient culture toward entrepreneurs can probably be traced to *William Hewlett* and *David Packard* who had a principle that as long as you did not take HP property or act unethically, if your startup failed they would hire you back - you might even get a promotion! So the barriers to exit are relatively low and no one considers you a traitor or renegade. In Silicon Valley the legal system and the culture are aligned to encourage entrepreneurship.

Now let us consider the negative outcome of our entrepreneurs' venture. First, while the house was lost with it went the mortgage. The bank got the house, and our entrepreneurs no longer have any mortgage obligation. A terrible loss, but if they earn enough money they will be able to buy another one. If they are good enough engineers, there will always be someone in Silicon Valley that will hire them. If venture capitalists invested in them, paraphrasing Jim Swartz, a founding partner at *Accel*, *the money is gone why would I try to extract the money from them. It is not worth our time and more important it makes no sense*. Everyone had an expensive lesson, but, more important, when increased entrepreneurship is the goal and it is known that failure is a frequent outcome, punishing entrepreneurs will discourage entrepreneurship. If *Accel* punishes the entrepreneur, other entrepreneurs will know to avoid *Accel*. There is a business logic for *not* punishing failure that reinforces local social values.

Switching gears to the nice-growth firms, not punishing failure and weakening non-compete agreements would assist here also. But another problem these firms face is *raising the initial capital*. One solution would be to provide *tax benefits* for those willing to invest in such small firms. This would lower the down-side risk for

potential funders and might operate to free up small amounts of capital that can be deployed by friends, family, and angels. There are obviously many other schemes, but schemes to solely improve VC availability will *not* assist the nice-growth firms.

Encouraging firms to take a more lenient attitude to their employees becoming entrepreneurs, and even seeing that as a positive, would contribute greatly to increasing entrepreneurship. The source firm might benefit from failed entrepreneurs returning with new ideas and successful entrepreneurs could become new customers or suppliers. Another benefit would be that the source firm would be attractive to the highest energy individuals who might join because it would help them actualize their dreams. Would it be possible to develop policies to compensate firms that lost their employees to entrepreneurship? This might be an opportunity for the Finnish government to develop some startling new initiatives.

## Conclusion

Recently in Finland there has been an atmosphere of celebration because a number of Finnish firms have received VC funding, much of it from outside the nation. A number of these have been in the mobile games sector, and it is *vitally important to celebrate success*. Raising VC is, of course, a signal that the recipient ventures are judged to have significant opportunity for success. However, ultimately all VC success is judged by *return on capital at the time of exit*. Given the failure rate of VC investors, it is important to not count successes before they have been actualized. VC invested is only an *interim* metric, successful firms built is the *ultimate* metric.

Building a successful domestic venture capital industry in Finland will be *difficult* because there is unlikely to be sufficient *internal deal flow* to ensure attractive investment opportunities. This insufficient deal flow will stymie local VCs from developing the seasoning necessary to become veterans. However, today the VC market is *global* and venture capitalists search internationally for promising investments.

Attractive young Finnish firms *are* likely to have access to international VC sources, even if local sources are unavailable. The historical record suggests that, while some government support for VC may be wise, large government investments may do *more harm than good* (Lerner 2009). Regardless of what form of governmental VC support programs are implemented, it will be important to monitor and evaluate them periodically. Unsuccessful programs that do not meet expectations should be *terminated* and other ideas should be explored.

Finland might consider whether developing *strategies to encourage nice-growth firms* might better fit its unique set of advantages and social values. Unfortunately, there has been little attention given to policy-making for such firms. It might be possible to initiate efforts in this area by encouraging university research-related spin-offs and providing SBIR-type funding. Within universities it might be possible to develop a program of special research prototyping grants for interdisciplinary teams

consisting of say, a medical school researcher and an engineering professor, with the goal of proving a product concept. Whether the further research should be done in university labs, specially built incubators, or in private rental quarters should be decided by the research team. It might be superior to have them exposed directly to the market, as all firms must be prepared for market exposure and not coddled indefinitely in incubators. The goal of incubators must be *hatching eggs*, not merely keeping them warm.

With its high-quality, white- and blue-collar human capital, but small internal market and limited VC industry, *nice-growth firms might better fit Finland's profile*. The problem is to identify policies encouraging their formation and nurturing and financing such firm's growth. This is further complicated by the fact that such firms will draw upon many differing knowledge bases and be in quite different industries. Much of the current literature considers firm formation through the lens of cluster studies. However, it is possible that in regional terms many of these nice-growth firms will *not* be located in identifiable industrial clusters, so cluster strategies may miss a number of such promising opportunities.

For Finland it is important to develop strategies and policies that *fit* within the unique assets and capabilities that it has or can reasonably build. There is a universe of possibilities for high value-added entrepreneurship that fall outside those opportunities normally funded by venture capitalists. From a social perspective entrepreneurship can be understood as individuals undertaking the opportunity discovery process for society. Encouraging this process by lowering entry barriers and decreasing, but not eliminating, the penalties for failure would seem to be worthy social goals.