



GLOBAL ENTREPRENEURSHIP MONITOR

2004 Financing Report

William D. Bygrave with Stephen A. Hunt





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Founding and Sponsoring Institutions

Babson College, Babson Park, MA, USA

London Business School, London, UK

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GEM Project Coordinator	University of Lausanne	Pia Arenius	GEM Global Consortium Executive Transition Committee
GEM Coordination Team	Babson College London Business School	William D. Bygrave Marcia Cole Michael Hay Stephen Hunt Neils Bosma Erkko Autio Caroline Johns Ingvild Rytter Nancy Chin	Babson College David Potter Foundation Fellow Francis Finlay Foundation Fellow

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EXECUTIVE SUMMARY

This report reviews and assesses the state of financing for entrepreneurs and their ventures around the world. It is based primarily on the findings from the Global Entrepreneurship Monitor 2004 study, augmented with some information from the previous five years of GEM studies. This is the first year that GEM has published a separate report on financing. In previous years financing was included in the annual GEM Report as a special topic.

Since the idea of GEM was launched in 1997 by scholars at Babson College and London Business School, the project has developed into one of the world's leading research consortia, concerned with improving knowledge about the relationships between entrepreneurial activity and national economic growth. To this end, the project has, from the start, been designed as a multinational research program providing annual assessments of the entrepreneurial sector for a range of countries.

The nations that participated in the GEM 2004 study were Argentina, Australia, Belgium, Brazil, Canada, Croatia, Denmark, Ecuador, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Jordan, New Zealand, Netherlands, Norway, Peru, Poland, Portugal, Singapore, Slovenia, South Africa, Spain, Sweden, Uganda, United Kingdom, and United States.

KEY FINDINGS: INFORMAL INVESTORS AND ENTREPRENEURS

- The prevalence rate of informal investors among the adult population of all the GEM nations combined is 3.6 percent and the total sum of money that informal investors provide to fund entrepreneurs is equal to 1.2 percent of the combined gross domestic product (GDP) of those nations.
- The entrepreneurs themselves provide 65.8 percent of the start-up capital for their new ventures.
- Financing from entrepreneurs themselves and informal investors pumps 3.5 percent into the GDP of the GEM nations because the

entrepreneurs spend it to pay wages and buy goods and services for their businesses.

- For all the GEM nations combined, the average amount needed to start a business is \$53,673 and, as expected, more is needed for an opportunity-pulled venture (\$58,179) than a necessity-pushed¹ one (\$24,467). The amount needed to start a business is highest in the business services sector (\$76,263) and lowest in the consumer-oriented sector (\$39,594). The businesses that need the most start-up capital are those started with the intent to grow and hire employees. For example, nascent businesses that expect to employ 10 or more persons five years after they open require an average of \$112,943 of start-up capital.
- Businesses started by men require more capital than those started by women (\$65,010 vs. \$33,201). A partial explanation is that women are more likely than men to start necessity-pushed businesses, which are more likely to be consumer-oriented and less likely to be business services.
- Entrepreneurs are four times as likely as non-entrepreneurs to be informal investors in another entrepreneur's business.
- Fifty-one percent of informal investors expect a negative or zero return and only 22 percent expect an annual return of 100 percent or more. By contrast, only 13 percent of entrepreneurs expect a negative or zero return but 53 percent expect an annual return on 100 percent or more.
- The average amount of an informal investment (\$24,202) is more than the average amount of external financing that entrepreneurs need (\$18,678). So for those entrepreneurs who are successful in raising money from informal investors the amount on average more than meets their need.

KEY FINDINGS: VENTURE CAPITAL

- In 2003, 74 percent of all the classic venture capital invested among the G7 nations was in the United States.
- The amount of classic venture capital² invested



EXECUTIVE SUMMARY

per company in the United States was \$8.1 million compared with an average of \$1.2 million per company in the other G7 nations.

- Ninety-one percent of the venture capital invested in the United States finances high-technology companies. By contrast only 29 percent of the venture capital invested in the other G7 nations is in high-technology companies.
- Beginning in the second quarter of 2003, the number of venture-capital-backed IPOs (initial public offerings) and the amount raised in the offerings in the United States began an upward trend that built substantial momentum through the third quarter of 2004.
- The upward trend in venture-capital-backed IPOs combined with Google's spectacular IPO in the third quarter of 2004 has boosted the confidence of the venture capital industry.
- Some industry leaders predict that 2005 will herald the start of a new cycle in venture capital investing with more money being invested in seed, start-up, and early stage businesses.

KEY IMPLICATIONS

- Close family members, friends, and neighbors are by far the biggest sources of informal capital for startups. Hence, entrepreneurs should look to family and friends for their initial seed capital to augment their own investments in their startups. Entrepreneurs must also understand that they themselves will have to put up about two-thirds of the initial capital needed to launch their ventures.
- Educators should put much more emphasis on financing from entrepreneurs themselves and informal investors and much less on the role played by venture capitalists – because fewer than one in 10,000 startups have venture capital in hand when they open their doors for business.
- Policy makers should pay more attention to start-up capital provided by entrepreneurs themselves and informal investors and less attention to venture capital. After all, financing from entrepreneurs and informal investors pumps

3.5 percent into the GDP of the GEM nations, compared with only 0.1 percent of classic venture capital.

- Researchers should put much more effort into studying entrepreneurs themselves and informal investors as sources of entrepreneurial financing, and much less into venture capital and public stock markets.
- 1 An opportunity-pulled business is started by a person who takes advantage of an opportunity, whereas a necessity-pushed business is started by a person because all other options for work are either absent or unsatisfactory.
 - 2 Classic venture capital is invested only in seed, start-up, early, and expansion stage companies.



FINANCING ENTREPRENEURIAL VENTURES

An entrepreneurial nation must have sufficient money available to finance new businesses. Most of the initial money comes from the founders of the businesses themselves and what we call informal investors: family, friends, neighbors, work colleagues, and strangers; some comes from lending institutions, primarily banks; and in very rare instances from formal investment by venture capitalists. This report examines funding from entrepreneurs themselves, informal investors, and venture capitalists.



ENTREPRENEURS AND INFORMAL INVESTORS

Self-funding by entrepreneurs, along with funding from informal investors, is the lifeblood of an entrepreneurial society. One of the most noteworthy findings of the GEM studies is the amount and extent of those sources of funding. The prevalence rate of informal investors among the adult population of all the GEM nations combined is 3.6 percent and the total sum of money that they provide to fund entrepreneurship is equal to

1.2 percent of the combined GDP of those nations. The entrepreneurs themselves provide 65.8 percent of the start-up capital for their new ventures, so assuming that the remainder of the funding comes from informal investors, the funding from entrepreneurs and informal investors combined amounts to 3.5 percent of the GDP of all the GEM nations.



Figure 1. Prevalence Rate of Informal Investors

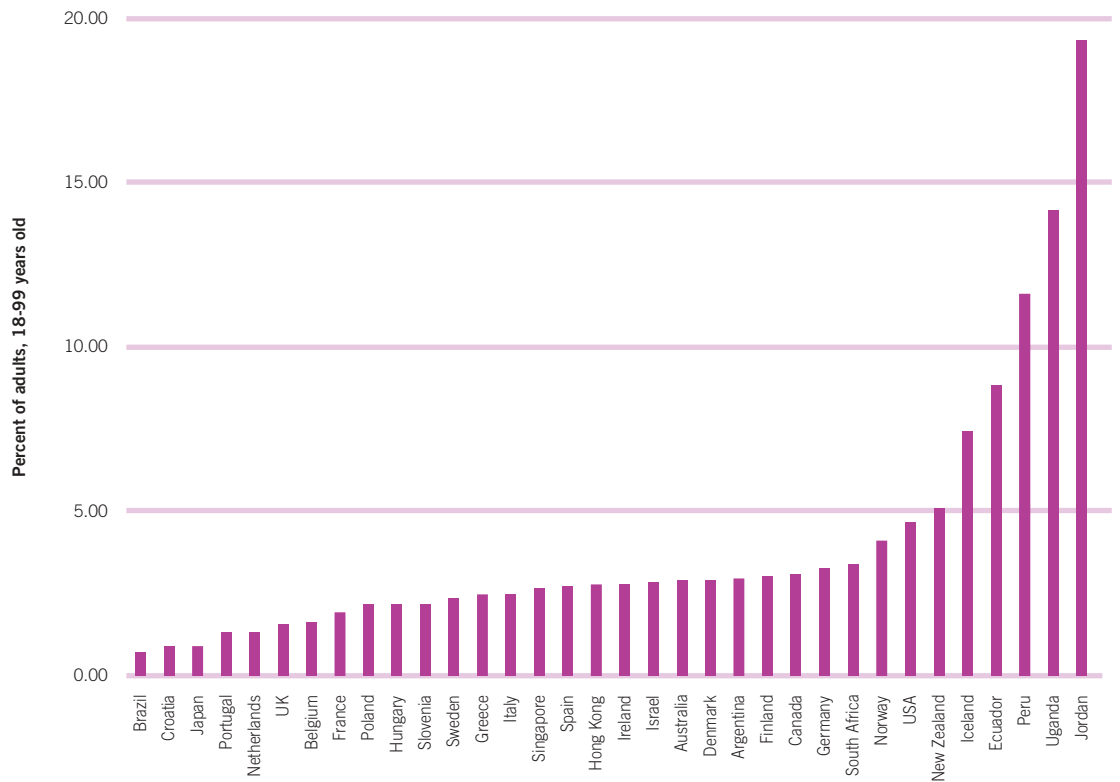
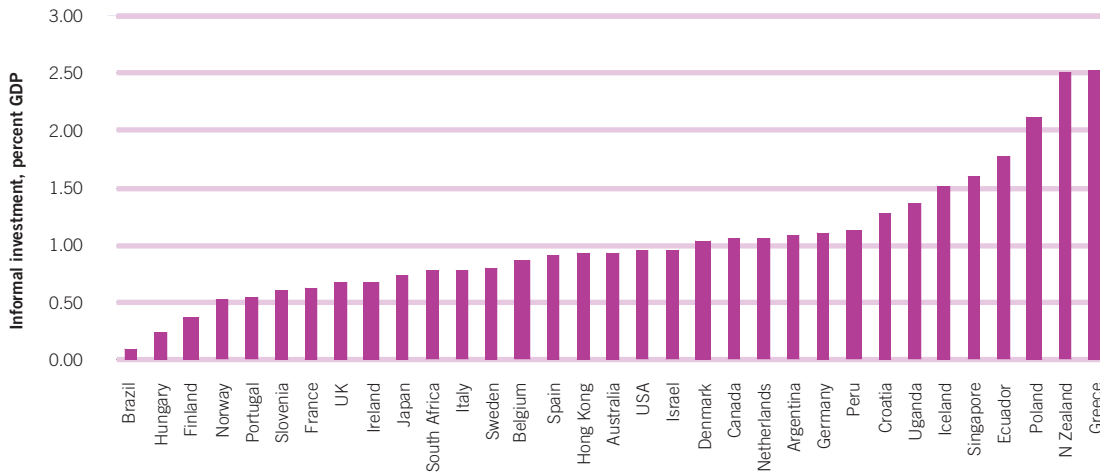


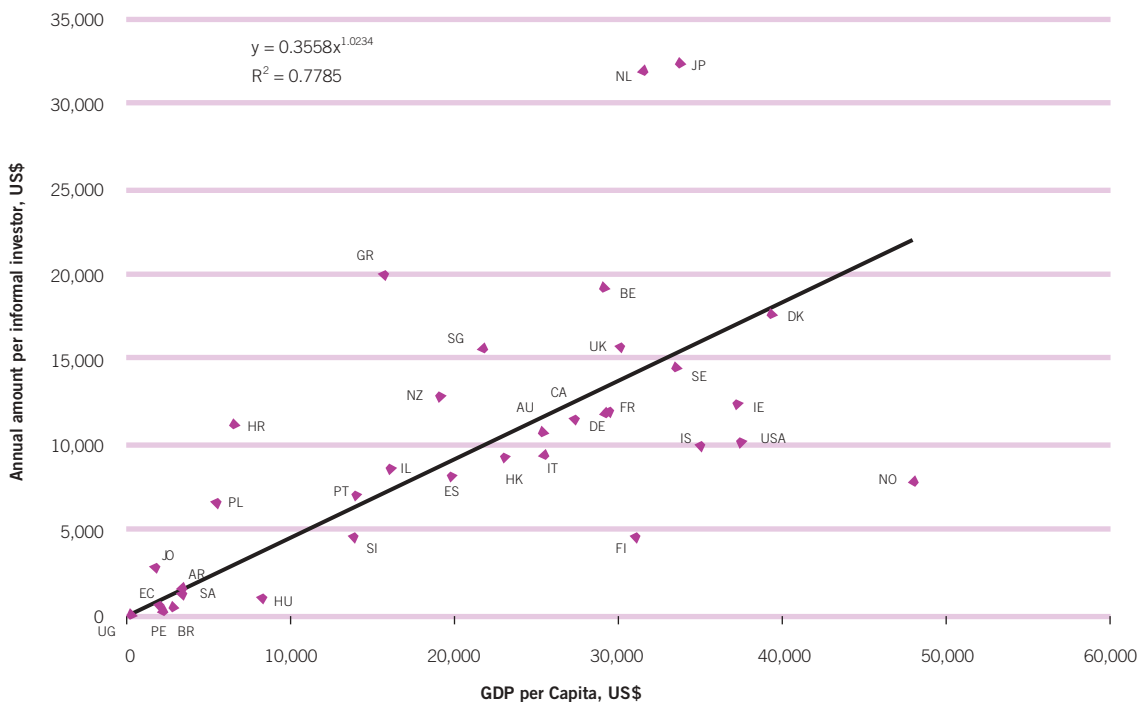
Figure 2. Total Informal Investment as Percent of GDP



The informal investor prevalence rate among the GEM nations participating in the 2004 study is shown in Figure 1. Among the G7 nations, the United States has the highest prevalence rate (4.7%) and Japan has the lowest (0.9%). Those two nations also have the highest and lowest TEA (Total Entrepreneurial Activity) rates – from which it might

be concluded that the prevalence rate for informal investors and the TEA rates among all nations are strongly correlated. However, it turns out that the correlation is not perfect. Brazil, for example, has a high TEA rate and a very low informal investor prevalence rate.

Figure 3. Annual Amount per Informal Investor vs GDP per Capita, US\$



R^2 is the proportion of the variation that is explained by the trend line. An R^2 of 0.7785 indicates that 77.85 percent of the variation in annual amount per informal investor is explained by GDP per capita.



ENTREPRENEURS AND INFORMAL INVESTORS

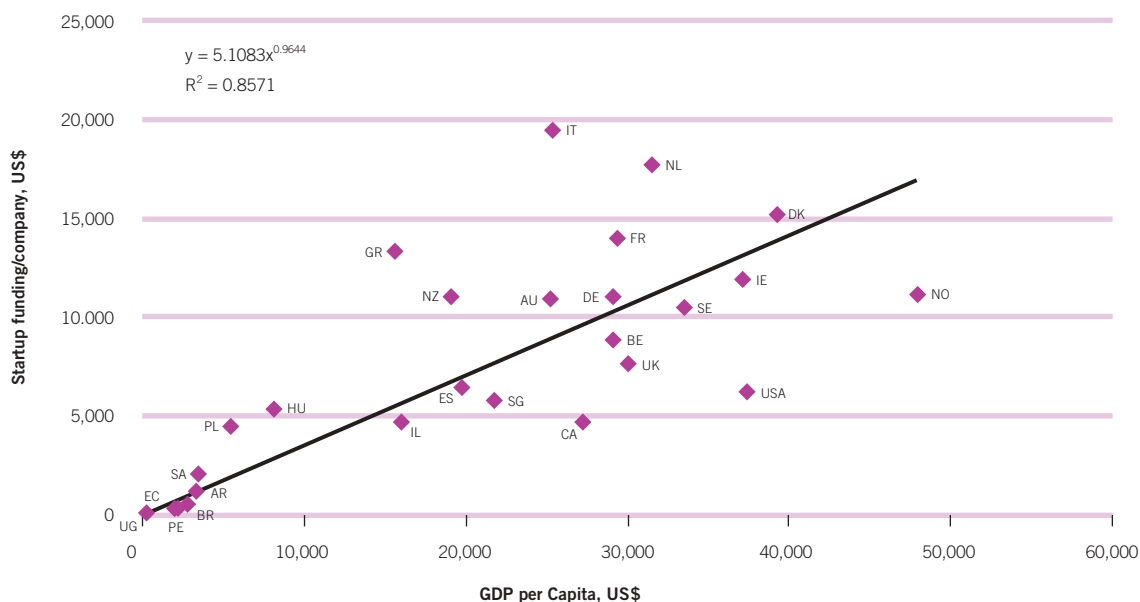
The annual amount of funding provided by informal investors as a percent of the GDP of the GEM 2004 nations is shown in Figure 2. The total amount of funding is the product of the number of informal investors and the average amount that each investor provides annually. Hence, a nation with a high prevalence rate and a high average amount per informal investor relative to its income per capita (New Zealand, for instance) ranks high on Figure 2. Norway, on the other hand, ranks low because although it has a high prevalence rate, it has a low average amount per informal investor relative to its GDP. Of course, it is to be expected that in general, the wealthier a nation, the higher the average amount per investor. Nonetheless, there is considerable variation as can be seen in Figure 3, which compares the average amount per investor with GDP per capita. Informal investors in nations above the trend line provide more investment per capita than predicted and those below the trend line provide less; for example, Japan and the Netherlands provide more, and Norway, Finland, and the United States less.

AMOUNT OF CAPITAL TO START A BUSINESS

The amount of capital that entrepreneurs need to start their ventures depends, among other things, on the type of business, the ambitions of the entrepreneur, the location of the business, and the country where it is started. For all the GEM nations combined, the average amount needed to start a business is \$53,673 and, as expected, more is needed for an opportunity-pulled venture (\$58,179) than a necessity-pushed one (\$24,467). The amount needed to start a business is highest in the business services sector (\$76,263) and lowest in the consumer-oriented sector (\$39,594). The businesses that need the most start-up capital are those created with the intent to grow and hire employees. For example, nascent businesses that expect to employ 10 or more persons five years after they open require an average of \$112,943 of start-up capital. Business started by men require more capital than those started by women (\$65,010 vs. \$33,201); a partial explanation is that women are more likely than men to start necessity-pushed



Figure 4. Startup Funding per Company vs GDP per Capita



R^2 is the proportion of the variation that is explained by the trend line. An R^2 of 0.8571 indicates that 85.71 percent of the variation in startup funding per company is explained by GDP per capita.

Table 1. Relationship of Informal Investor to Investee

Relationship Investor-Investee	Percent total	Mean Amount Invested US\$	Median Payback time	Median X return
Close family	49.4%	23,190	2 years	1x
Other relative	9.4%	12,345	2 years	1x
Work colleague	7.9%	39,032	2 years	1x
Friend, Neighbor	26.4%	15,548	2 years	1x
Stranger	6.9%	67,672	2-5 years	1.5x
Average		24,202	2 years	1x

businesses, which are more likely to be consumer-oriented and less likely to be business services. Entrepreneurs themselves provide 65.8 percent of their start-up capital.

To put nations on an approximately equal footing on the basis of wealth, the amount of funding needed to start a business is plotted against a nation's GDP per capita, as seen in Figure 4. Entrepreneurs in countries falling below the trend line have a comparative advantage over entrepreneurs in countries above the trend because it costs less to start a business relative to the income per capita in those countries, all other things being equal. It partially explains why the United States and Canada have the highest TEA rates among the G7 nations, and Italy has the second lowest rate. It might also explain to some extent why Norway has a higher TEA rate than its Scandinavian neighbors Sweden and Denmark.

CHARACTERISTICS OF INFORMAL INVESTORS

Entrepreneurs provide 65.8 percent of their start-up capital; hence others, principally informal investors, provide the remaining 34.2 percent.

Who are informal investors? First and foremost they are broken down as follows: close family relatives of the entrepreneurs (49.4%); next are friends and neighbors (26.4%); these are followed by other relatives (9.4%), work colleagues (7.9%), and strangers (6.9%) as shown in Table 1.

Using the GEM 1999 – 2003 data for the United States, Bygrave and Reynolds¹ developed a model that predicted whether or not a person was an informal investor. They found that the informal investor prevalence rate among entrepreneurs was 4.3 times the rate among non-entrepreneurs. With just one criterion, whether or not someone was an entrepreneur, their model correctly classified 86 percent of the entire population as being or not being informal investors. And with just two criteria, whether or not a person was an entrepreneur and that person's income, the model correctly identified an informal investor 56 percent of the time out of the entire population, of which slightly less than 5 percent were informal investors. Looked at another way, their model was 11 times better than a random choice at singling out an informal investor from the entire adult population.

FINANCIAL RETURNS

What financial return do informal investors expect?

The median expected payback time, as seen in Table 1, is two years and the median amount returned is one times the original investment. In other words, there is a negative or zero return on investment for half the informal investments. Interestingly, the payback time and times return are the same for all types of investees except strangers. What's more the amount invested in strangers is the highest. The most likely reason is that investments in strangers are made in a more detached and



ENTREPRENEURS AND INFORMAL INVESTORS

business-like manner than investments in relatives and friends.

There is a big variation in the times return expected by informal investors: 34 percent expect that they will not receive any of their investment back whereas 5 percent expect to receive more 20 or more times the original investment. Likewise there is a big variation in the payback time: 17 percent expect to get their return in six months whereas 2 percent expect to get it back in 20 years or longer.

Entrepreneurs are much more optimistic about the return on the money that they themselves put into their own ventures: 74 percent expect the payback time to be 2 years or sooner, and their median times return is 2, with 15 percent who expect 20 or more times on their original investment.

The expected IRR (compound annual return on investment) is calculated from the expected payback time and the times return for informal investors and entrepreneurs who reported both (Figure 5). The returns expected by entrepreneurs are almost the reverse of those expected by informal investors: 51 percent of informal investors expect a negative or zero return and only 22 percent expect a

return of 100 percent or more; by contrast, only 13 percent of entrepreneurs expect a negative or zero return but a whopping 53 percent expect a return of 100 percent or more.

SUPPLY AND DEMAND FOR START-UP FINANCING

Is the amount of funding sufficient to supply the external capital that entrepreneurs need to finance their new ventures? The average amount of an informal investment (\$24,202) is more than the average amount of external financing that entrepreneurs need (\$18,678). So for those entrepreneurs who are successful in raising money from informal investors, the amount on average more than meets their need. But is there enough informal investment to supply all the nascent entrepreneurs in a given country? The percentage of nascent businesses that could be funded with the available informal investment, assuming that it all went to nascent businesses, is shown in Figure 6. Singapore has the highest percent of nascent businesses that could be funded, and Brazil has the lowest. Of course, not all nascent businesses deserve to get funded. Without knowing the merits of each nascent business, and hence whether or not it deserves to



Figure 5. Expected IRR for Entrepreneurs and Informal Investors

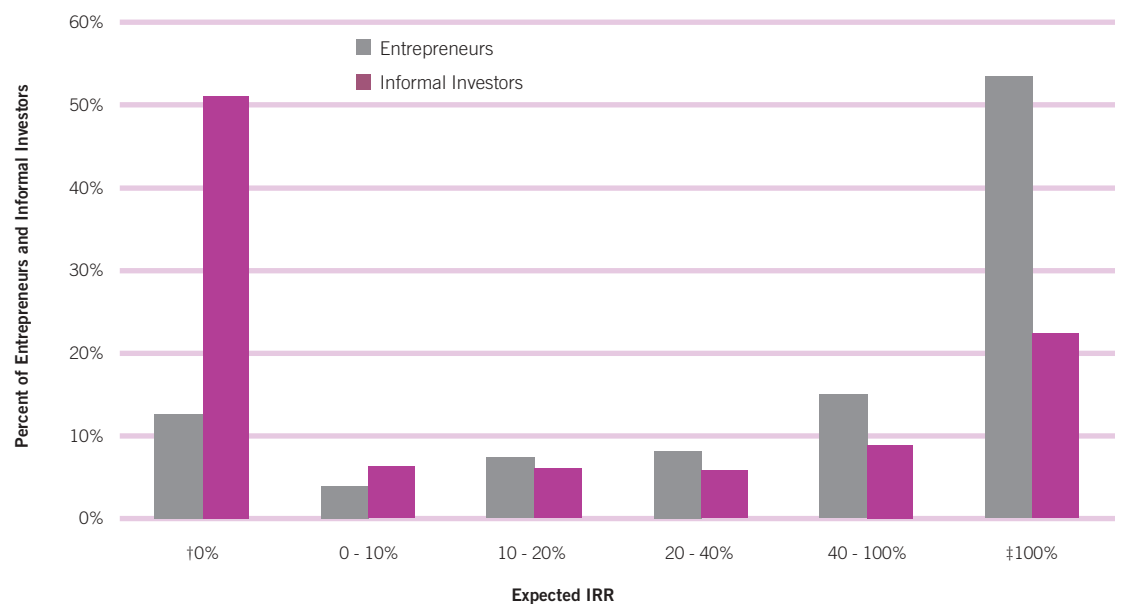
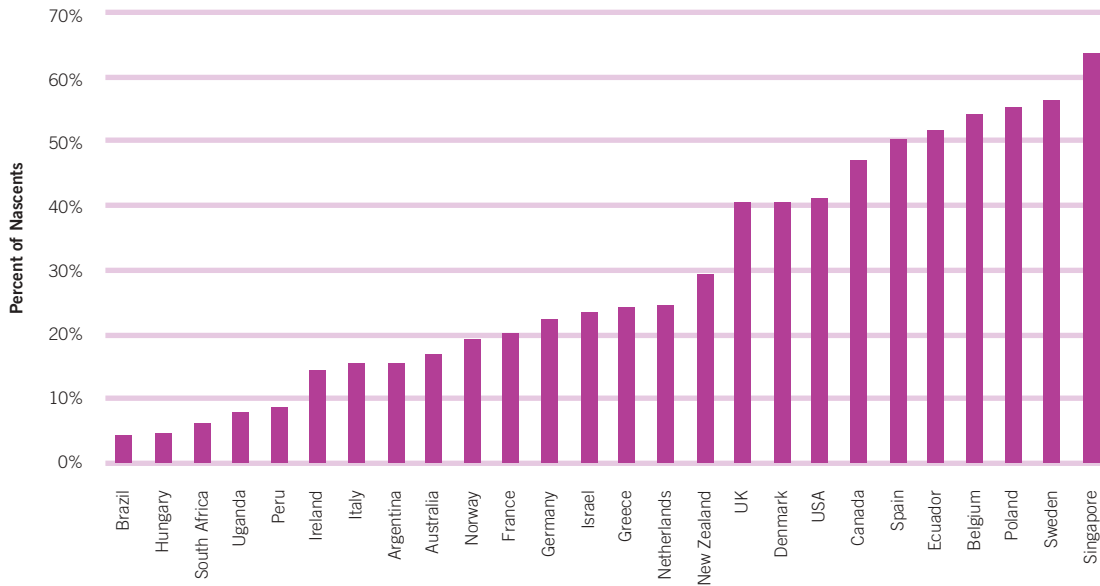


Figure 6. Percent of Nascent Businesses that Could Be Funded by Available Informal Investment



be funded, it is impossible say whether the available informal investment is adequate. But it seems likely that a country with enough informal investment to fund 40 percent or more of all its nascent entrepreneurs probably has sufficient informal investment because, in the end, the majority of new businesses never become viable in the long-termⁱⁱ and they fail to produce a satisfactory return on investment for either their owners or their investors.

However, just because a country has sufficient start-up capital overall, it does not mean that every deserving nascent business gets funded. An entrepreneur's search for start-up capital from informal investors is a haphazard process. If an

entrepreneur is unable to raise sufficient money from relatives, friends, and acquaintances, there is no systematic method of searching for potential investors who are strangers. Granted, there are organized groups of informal investor (usually called business angels) in many nations, but the number of companies they finance is tiny in proportion to the number of entrepreneurs who seek capital. In addition, most business angel networks in developed nations look for high-potential startups that have prospects of growing into substantial enterprises of the sort that organized venture capitalists would invest in at a subsequent round of funding.



By far the rarest source of capital for nascent entrepreneurs is classic venture capital. In fact, nascent companies with venture capital in hand before they open their doors for business are so rare that even in the United States (which has two-thirds of the total of classic venture capital in the entire world) far fewer than one in ten thousand new ventures get their initial financing from venture capitalists. In general, venture capital is invested in companies that are already in business, rather than in nascent companies with products or services that are still on paper. In GEM reports, investments in seed, start-up, early, and expansion stage companies are classified as classic venture capital.

CLASSIC VENTURE CAPITAL

While classic venture capitalists finance very few companies, some of the ones that they do finance play a very important role (many say crucial role) in the development of knowledge-based industries, such as biotechnology; medical instruments and devices; computer hardware, software, and services; telecommunications hardware and software; Internet technology and services; electronics; semi-conductors; and nanotechnology. Venture capitalists like to claim that the companies they invest in have the potential to change the way in which people work, live, and play. And indeed, an elite few have done just that worldwide; famous examples are

Intel, Apple, Microsoft, FedEx, Cisco, Genentech, Amazon, eBay, and Google.

It is not by chance that almost all of the venture-capital-backed companies with global brand names are American; rather it is because the United States is the predominant nation with classic venture capital investments. In 2003, 74 percent of all the classic venture capital invested among the G7 nations was in the United States. The amount of classic venture capital as a percent of GDP for the GEM nations is shown on Figure 7. Israel, which of all the GEM nations has a venture capital industry most like that in the United States, has the highest amount of venture capital in proportion to its GDP, while Japan has the lowest among the G7 nations.

While 74 percent of the classic venture capital invested in the G7 nations was in the United States, only 29 percent of the companies that received that investment were in the United States, because the amount invested per company in the United States was \$8.1 million compared with an average of \$1.2 million per company in the other G7 nations. Figure 8 shows the amount invested per company for all the GEM nations, including the G7. It is hard to see how companies in Japan, for example, that received on average \$535,000 of venture capital, can hope to compete in the global market against companies in the United States that received \$8.1 million.

Figure 7. Classic Venture Capital as a Percent of GDP, 2003

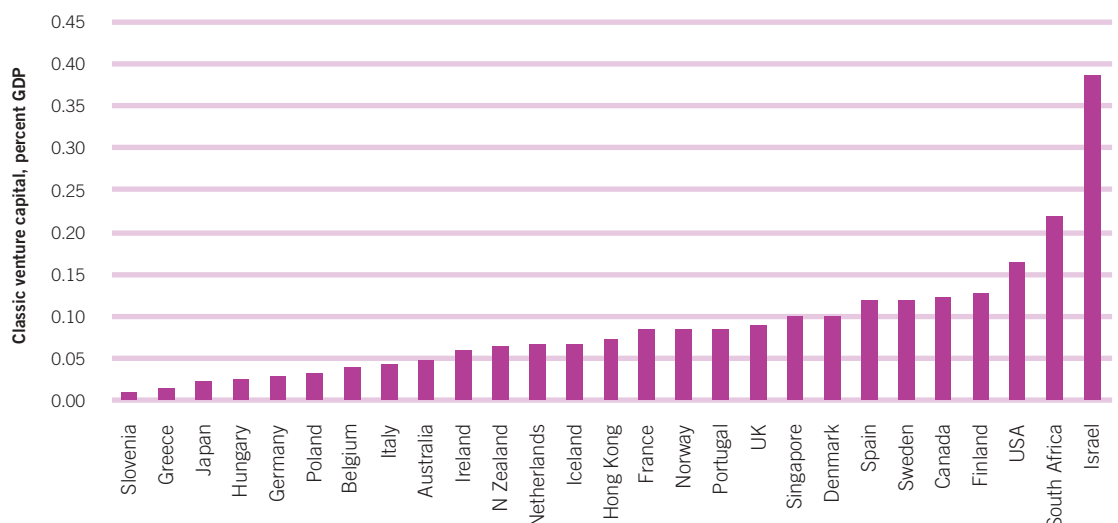
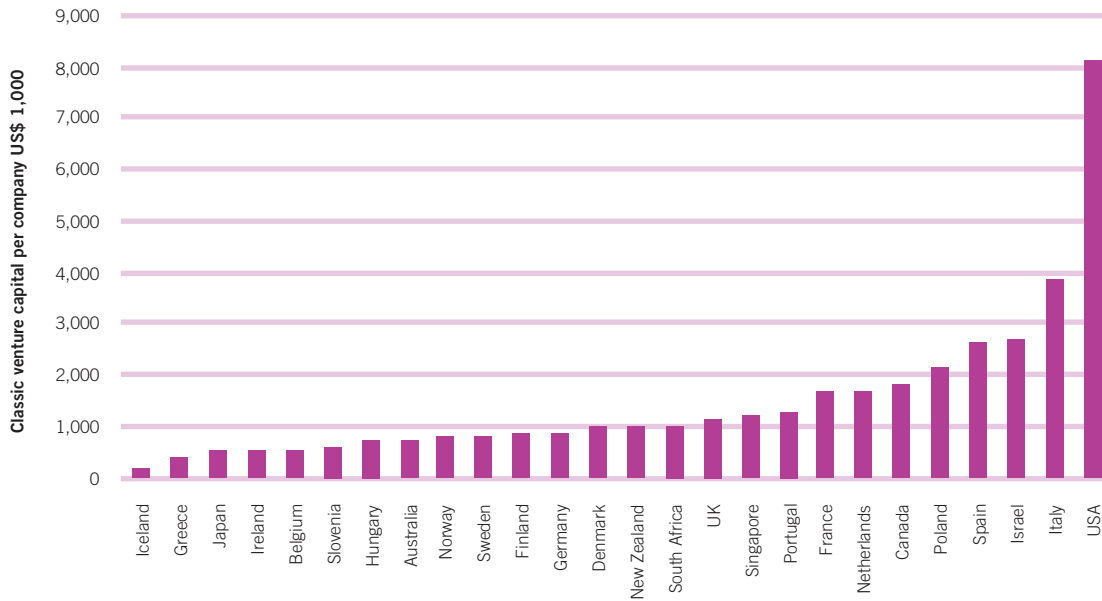


Figure 8. Amount of Classic Venture Capital per Company



It is just as costly, if not more, to operate a company in Japan as in the United States. Entrepreneurs work just as long hours in the United States as they do in Japan. Furthermore, the home market where start-ups initially sell their products and services is more than twice as big in the United States as in Japan. Although the average amount of venture capital per company in Germany (\$0.93 million) and the United Kingdom (\$1.19 million) is higher than in Japan, it still appears to be wholly inadequate in comparison with the United States. Since the main purpose of classic venture capital is to accelerate the commercialization of new products and services, US companies have a very considerable advantage in the global market place. What's more, successful US companies can build on their venture capital backing by subsequently raising very substantial financing with IPOs in the stock market.

Ninety-one percent of the venture capital invested in the United States finances high-technology companies; by contrast only 29 percent of the venture capital invested in the other G7 nations is in high-technology companies. Seventy-three percent of the venture capital invested in high-technology companies at all stages from seed through buyouts in the G7 nations goes to companies in the United States.

But when the investment is narrowed down to only classic venture capital, it is estimated that the proportion invested in US high-technology companies increases to at least 80 percent, with the US share of classic venture capital invested in biotechnology at 81 percent and in computer hardware and software at 83 percent. When it comes to investment in all stages of consumer-related companies the situation is reversed, with only 13 percent of them in the United States and 87 percent in the other G7 nations.

GEM has five years of classic venture capital data for 16 nations. The data set begins in 1999, which was when the Internet bubble was inflating, as seen in Figure 9. Classic venture capital investments in those 16 nations peaked at \$120.4 billion in 2000 (the year when the Internet bubble burst); plummeted to \$50.1 billion in 2001; declined again to \$30.3 billion in 2002; and to \$27.5 billion in 2003. The fall from the peak in 2000 was much steeper in the United States than in the other 15 countries (82 percent compared with 53 percent), with the US share of the classic venture capital in the 16 nations falling from 83 percent in 2000 to 66 percent in 2003. Among the G7 nations, however, the fall in the US share was not as pronounced: 86 percent in 2000 to 74 percent in 2003.



VENTURE CAPITAL

GOLDEN ERA 1996 TO 2000 AND BEYOND

The period 1996 through 2000 was a golden era for classic venture capitalists and the entrepreneurial companies they invested in. Golden both metaphorically and literally, as more and more venture capitalists and entrepreneurs seemed to have acquired the Midas touch. Some of the financial gains from venture capital backed companies were indeed of mythological proportions. For instance, Benchmark Capital's investment of \$6.7 million for 30 percent of eBay multiplied 10,000-fold in just two years. True, Benchmark's investment in eBay set the all-time record for Silicon Valley, but there were plenty of instances where investments increased at least a hundred-fold and in some cases a thousand-fold or more. With investments such as those, overall returns on US classic venture capital soared with the one-year return peaking at 143 percent at the end of the third quarter in 2000, compared with average annual returns in the mid-teens prior to the golden era.

As returns increased dramatically, the amount of classic venture capital invested in US companies shot up from about \$5 billion in the mid-1990s to \$101 billion in 2000. Investments in Internet-related companies skyrocketed from \$0.56 billion in 1994 to \$84.6 billion in 2000. By the end of the 1990s, Internet-related investments were driving the classic venture capital industry in the United States and were attracting more and more attention throughout the world. Public investors' appetite for shares of venture-capital-backed IPOs of Internet-related companies seemed to be insatiable. In the United States, 231 venture-capital-backed IPOs raised a record \$22 billion in 2000. But as demand for shares in IPOs escalated, the quality of many of the companies floating those shares deteriorated, none more so than dot-com ventures, which was an increasing cause of concern to some observers, including GEM researchers.



Figure 9. Trend in Domestic Investment of Classic Venture Capital 1999-2003



This is what was written in the GEM 2000

United States report:^{iv}

Some pessimists are fretting that the new economy boom may end rather suddenly with a bust.^v

The gist of their argument is that the old economy business cycle has been replaced by a new economy technology cycle driven by financial markets. So when the financial markets for technology stocks turn bearish, the stocks prices of new economy companies – none more so than venture-capital-backed firms will nosedive, the window for IPOs will close, venture capital returns will suffer a steep decline, and in turn commitments of new venture capital will dry up. This will shut off the principal source of cash that fuels the growth of young companies that are the leading innovators in the new economy. Hence the rate of innovation will slow, and along with it the rate of productivity growth. When productivity slows, inflation will rise, and a recession will follow.^{vi}

Late in 2000, a number of icons of the so-called new economy (Intel, Dell, and Cisco among others) announced that incoming orders were slowing down. Likewise, up-and-coming public venture-capital-backed companies such as Akamai, Sycamore, Ariba, Ciena, and Juniper announced in the first quarter of 2001 that their revenue was growing at a slower rate than had been expected just a few months earlier, or (even worse) was actually shrinking. Internet-related share prices tumbled. The investors' retreat from public dot-coms, which began in the spring of 2000, became a rout by early 2001. Many were merged at fire-sale prices, and others shut their doors with huge losses to public investors and venture capital firms. As a result returns on classic venture capital turned negative for the first time in the history of the industry. The IRR on US classic venture capital, from January 1, 2001 through December 31, 2003 was – 18.9 percent, which meant a 41 percent loss on investment over a two-year period.

Not surprisingly, US venture capitalists lost their appetite for Internet-related investment, which plummeted from \$84.6 billion in 2000 to \$8.1 billion in 2003. There was a spillover effect on all classic venture capital investments, but in some industry segments it was not nearly as severe;

biotechnology, where capital investment fell from \$4.3 billion in 2000 to \$3.4 billion in 2003, was the shining example. It is important to keep in mind that although there was far less classic venture capital invested in 2003 than in 2000, the amount invested in all the GEM nations in 2003 was still the sixth highest in the history of the industry. Looked at another way, the total amount of classic venture capital invested 10 years ago, in 1994, in the United States was only \$4.1 billion compared with 18.1 billion in 2003.

One concern is that the amount of investment in seed, start-up, and early stage companies has fallen from \$29.1 billion in 2000 to \$3.7 billion in 2003 in the United States. In the other G7 nations, in contrast to the United States, the fall from \$6.9 billion in 2000 to \$2.6 billion in 2003 was not nearly as precipitous. The closing of the gap between the amount of seed, start-up, and early stage investment in the United States and the other G7 nations might herald an increase in the proportion of venture-capital-backed companies with global brand names that will be founded outside the United States; or it might just be that the US investment is still recoiling from the crash of 2000 and 2001.

So far Michael Mandel's dire prediction^{vii} that in the aftermath of the collapse of the Internet bubble, innovation would slow and along with it the rate of growth of productivity, which in turn would lead to inflation and a recession, has not come about. The reason is that although classic venture capital investment has plunged from its peak in 2000, it is substantially above its level in the period 1993 through 1997 when the first investments were being made in Internet-related companies – a group that included future superstars such as Netscape, Yahoo, Amazon, and eBay. For example, the amount invested in seed, start-up, and early stage US companies in 2003 was more than double the amount that was invested in 1994 (\$3.7 billion vs. \$1.6 billion). Thus it is likely that there is sufficient classic venture capital today to finance tomorrow's superstars. It's just that the venture capitalists are being much more selective than they were in 1999 and 2000 when they funded too many marginal startups.



FACTORS AFFECTING AVAILABILITY OF FINANCING^{vii}

The three fundamental elements of an entrepreneurial society are an abundance of would-be entrepreneurs, plenty of market opportunities for new ventures, and sufficient resources – of which financing is a major component – for entrepreneurs to launch their new ventures. Numerous environmental and societal factors affect the three basic elements, and in combination with these basic elements determine the degree of entrepreneurial activity in a region.

This section of the report focuses on one of the three fundamental elements: financing. It examines how financing correlates with entrepreneurial activity and what factors affect the availability of financing. It is based on a cross-sectional study across the 37 nations in the GEM 2002 data set. In investigating the relationship between TEA indices and availability of informal investing, the research controlled for whether or not a nation was a member of the Organization for Economic Cooperation and Development (OECD).

TOTAL ENTREPRENEURIAL ACTIVITY (TEA) AND INFORMAL INVESTING

The prevalence of informal investors correlated positively with the overall TEA index and three component TEA indices—opportunity, market expansion potential, and high job growth potential. And the amount of informal investment as a percent of GDP correlated positively with two TEA indices – necessity and high job growth potential. Those correlations are convincing evidence that nations with more informal investing have more entrepreneurial activity, but they do not separate cause from effect. Informal investing and entrepreneurship depend on each other: informal investment facilitates entrepreneurship, and entrepreneurship brings about a need for informal investment.

FACTORS AFFECTING INFORMAL INVESTING

Money for informal investing comes from a person's after-tax income and savings, which more often than not are accumulated from after-tax income. Thus, it

seems reasonable to hypothesize that the higher the rate of taxation, the less likely that a person will have discretionary money to invest and vice versa. In many nations, especially developed ones, the biggest taxes are social security, income taxes, indirect taxes such as sales tax on goods and services, and taxes on capital and property.

As noted in the preceding section, informal investing correlated with the TEA index. Hence, when examining the effects of taxation on informal investing, GEM controlled for both total entrepreneurial activity (overall TEA index) and whether or not a nation was a member of the OECD. Here are the findings:

For all the GEM nations for which data were available, the prevalence rate of informal investors was negatively correlated with social security taxes and with taxes on capital and property. For nations with an income of at least \$5,000 per capita the amount of informal investment per GDP correlated negatively with social security taxes, highest marginal income tax rate, indirect taxes, and taxes on capital and property. Stated another way, nations with higher taxes on individuals have lower rates of informal investing.

It could be argued that nations with higher taxes provide more generous support benefits such as unemployment payments for their citizens, who therefore are less inclined to become entrepreneurs – particularly necessity entrepreneurs. Indeed, that might be true, but because the statistical analysis controlled for variation in entrepreneurial activity among nations, a conclusion can be drawn that there is a relationship between the prevalence of informal investing and levels of taxation. Simply put, high tax rates inhibit informal investing.

FACTORS AFFECTING CLASSIC VENTURE CAPITAL

In contrast to informal investing, the analysis found no correlations between the amount of classic venture capital per GDP and taxes on individuals or corporations. The explanation is that only a small proportion of classic venture capital comes directly



from individuals and corporations. Far more comes from pension funds, which are essentially investing money that has been entrusted to them by others, and hence they are not directly affected by taxes nearly as much as individuals are.

The amount of classic venture capital per GDP correlated with the amount of informal investment per GDP. This is because almost all companies start out with informal investment, then if they show superstar potential, they attract classic venture capital. Thus vigorous informal investing paves the way for robust classic venture capital investing. So although the analysis did not find a direct link between classic venture capital investment and taxation, it is acknowledged that there is an indirect link via informal investors, who are influenced by how much they pay in taxes.

The amount of classic venture capital per GDP also correlated with the belief of the key informants that IPOs are an important source of finance. This is consistent with Bygrave's^{ix} finding that from 1985 through 2002, the annual returns on US venture capital correlated strongly with the annual amount raised by IPOs of venture-capital-backed companies.



CONCLUDING COMMENTS

Financing is a necessary but not in itself a sufficient ingredient for an entrepreneurial society. It goes hand in hand with entrepreneurs and opportunities in an environment that encourages entrepreneurship.

CRUCIAL ROLE OF SELF-FINANCING AND INFORMAL INVESTING

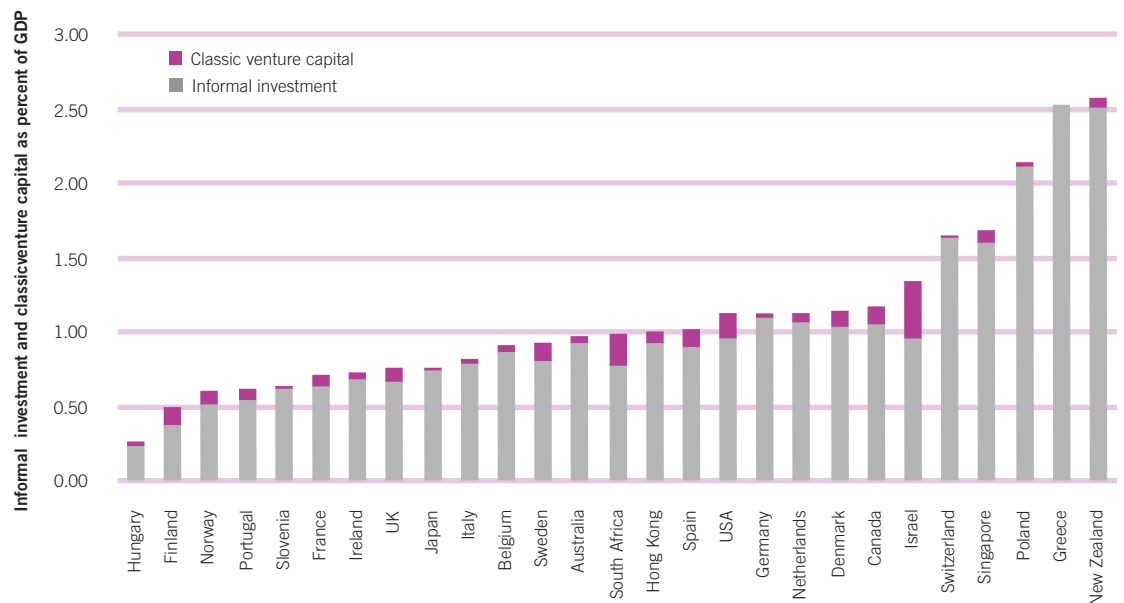
GEM believes that a very important finding from these studies is that grass-roots financing from the entrepreneurs themselves and informal investors is a crucial ingredient for an entrepreneurial society. Before the GEM studies, almost all research on informal investments focused on business angels who invest comparatively large sums of money in entrepreneurial ventures with the potential to become substantial companies. It is probable that studies of investments by business angels miss not only, as expected, micro-companies that are destined to stay tiny, but also many (perhaps most) companies that grow to become superstars. For instance, according to an analysis of the Inc 500, “America’s fastest growing private companies” in 2000, 16 percent started with less than \$1,000; 42 percent with \$10,000 or less; and 58 percent with \$20,000 or less.^x It is very unlikely

that companies starting with \$20,000 or less received seed money from business angels. True, when both seed and post-start-up rounds of investment are combined, 12 percent of the 500 companies received financing from business angels. But looked at another way, 88 percent of “America’s [500] fastest growing private companies” never received financing from business angels. In contrast, 33 percent of the same 500 companies raised start-up capital “by tapping assets of family and friends”.

These findings have important implications for entrepreneurs, policy makers, educators, researchers, and journalists. In a nutshell, these parties should pay more attention to the critical role of self-financing and informal investment in start-up ventures; after all, if self-funding by entrepreneurs and informal investments dried up, entrepreneurship would wither and die. Figure 10 shows that in every nation the amount of informal investment is much greater than the amount of classic venture capital; in addition, for every new venture that starts life with classic venture capital there are more than 10,000 that start with financing only from entrepreneurs themselves and in many cases informal investors.



Figure 10. Informal Investment and Classic Venture Capital, Percent of GDP



Entrepreneurs. Close family members and friends and neighbors are by far the two biggest sources of informal capital for startups. This is in line with the Inc500 finding that the most common sources of start-up capital after the founder and cofounders themselves were family and friends (Inc. 2000). Hence, entrepreneurs should look to family and friends for their initial seed capital to augment their own investments in their startups. Many entrepreneurs waste a lot of valuable time by prematurely seeking seed capital from business angels and even from formal venture capitalists – searches that come up empty-handed almost every time. Entrepreneurs must also understand that they themselves will have to put up about two-thirds of the initial capital needed to launch their ventures.

Policy Makers. Fewer than 0.01 percent of nascent entrepreneurs launch their new ventures with formal venture capital or business angel investments. But in most developed nations, formal venture capitalists get a disproportionate amount of attention from policy makers, whereas informal investors (other than business angels) are almost ignored. Therefore, it seems as if public policy initiatives aimed at various sources of seed-stage financing are inversely related to their importance for nascent entrepreneurs raising funds to launch their ventures. It is time for policy makers to pay more attention to start-up capital provided by entrepreneurs themselves and informal investors and less attention to venture capital. After all, financing from entrepreneurs and informal investors pumps 3.5 percent into the GDP of the GEM nations, compared with only 0.1 percent of classic venture capital.

Educators. Entrepreneurship educators often put too much emphasis on venture capital and perhaps business angels as sources of funds for would-be entrepreneurs and not enough on family and friends. Here are some examples where evidence of this can be found: new venture syllabi at leading business schools, entrepreneurship case studies,

some entrepreneurship text books, and business plan competitions where participants have little chance of being prize contenders unless they target venture capitalists and business angels for their seed-stage funding.

Researchers. In recent years, research on formal venture capital has increased substantially, likewise research on business angel investing and initial public offerings, but there is little research on investing by family and friends. At the 2002 Babson-Kauffman Entrepreneurship Research Conference,^{xi} for instance, approximately 15 percent of the papers presented focused on formal venture capital investing, 5 percent on IPOs, and 3 percent on business angels, but only 1 percent dealt substantially with informal investors other than business angels. Again, similar to public policy, research interest in various sources of funding is inversely proportional to the importance of those sources to nascent entrepreneurs.

CLASSIC VENTURE CAPITAL

Since the mid-1990s, venture capital grew rapidly as most of the GEM nations strived to emulate the impact that classic venture capital was having on the US economy. It has happened before; at the end of the 1960s when the United States enjoyed a boom in classic venture capital; and again at the start of the 1980s as the rest of the world marveled at the success of the personal computer industry and the emerging biotech sector in the United States. Unfortunately, in both instances it turned out to be a false dawn. Returns on classic venture capital outside the United States were (to say the least) disappointing and classic venture capital floundered. One of the principal reasons for the failure of classic venture capital in Europe at the start of the 1990s was the failure of the secondary markets after the general stock market crash of October 1987. The launch of the Unlisted Securities Market in London, the Second Marché in Lyon, the Marché Hors-Côté in Paris, the Mercato Restretto in Milan, and the Secondary Market in Brussels had been significant contributors and enabling factors



CONCLUDING COMMENTS

for the introduction of venture capital in those European countries in the early 1980s, because they provided ready markets for floating IPOs of venture-capital-backed companies. Unfortunately, those European secondary markets, unlike the Nasdaq in the United States, did not recover and so they faded, which left European venture capitalists without their favorite and most bountiful exit route from their investments: IPOs.^{xii}

In the late 1990s, markets for IPOs in Europe started to prosper, especially the AIM in the United Kingdom, but just as in the United States since 2001, it is again very difficult to float venture-capital-backed IPOs in Europe; consequently classic venture capital returns have fallen, and investments have declined. Once more it demonstrates that classic venture capital cannot do well without a robust IPO market.

Beginning in the second quarter of 2003, the number of venture-capital-backed IPOs and the amount raised in the offerings in the United States began an upward trend that built substantial momentum through the third quarter of 2004. With 81 venture-backed-companies in registration with the Securities and Exchange Commission (SEC) at the start of the fourth quarter of 2004, the positive trend should continue, which together with Google's spectacular IPO in the third quarter of 2004 has boosted the confidence of the venture capital industry. Some industry leaders predict that 2005 will herald the start of a new cycle in venture capital investing with more money being invested in seed, start-up, and early stage businesses.





END NOTES

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CONTACTS

For more information on this report, contact:

William D. Bygrave
Babson College
bygrave@babson.edu
www.babson.edu/entrep

Country participants:

ARGENTINA
AUSTRALIA
BELGIUM
BRAZIL
CANADA
CHILE
CHINA
CROATIA
DENMARK
ECUADOR
FINLAND
FRANCE
GERMANY
GREECE
HONG KONG
HUNGARY
ICELAND
INDIA
IRELAND
ISRAEL
ITALY
JAPAN
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