A study of informal investing in 29 nations composing the Global Entrepreneurship Monitor (GEM)

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ABSTRACT

This study examined informal investment in the 29 nations that participated in the Global Entrepreneurship Monitor (GEM) study in 2001. Investment was tabulated by gender, age of investor, and amount invested for the 29 nations combined. Prevalence of opportunity-pull entrepreneurship was correlated with informal investment, entrepreneurial capacity, and perception of startup opportunities in a subset of 18 GEM nations. In contrast, necessity-push entrepreneurship had no significant correlation with those same variables.

INTRODUCTION

The Global Entrepreneurship Monitor (GEM) is a research initiative conducted by a consortium of more than 100 scholars from 38 nations. It is led by Babson College and the London Business School, with the Kauffman Center for Entrepreneurial Leadership as the charter sponsor. GEM's principal purpose is to examine the complex relationship between entrepreneurship and economic growth in many nations with a longitudinal study, which annually collects and analyzes data. Argentina, Australia, Belgium, Brazil, Canada, Denmark, Finland France, Germany, Hungary, India, Ireland, Israel, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Russia, Singapore, South Africa, South Korea, Spain, Sweden, the United Kingdom, and the United States participated in the third annual study, completed in 2001. The combined GDP of those 29 nations was 85 percent of the GDP of all the nations in the world.

The essence of the GEM model is that a nation's entrepreneurial framework conditions (education, finance, R&D, infrastructure, government policies, etc.) create opportunities that are pursued by would-be entrepreneurs with both the motivation and the potential to develop them. Subsequently, the ventures that they start contribute to economic growth.

In the paper presented at the Babson Kauffman Entrepreneurship Research Conference in 2001, we analyzed relationships among framework conditions, opportunity, entrepreneurial motivation and potential, formal venture capital investment, and high-growth startups (Bygrave et al., 2001). In the paper we are presenting here, we examine informal investment and show that it correlates with the prevalence of opportunity-pull entrepreneurship, entrepreneurial capacity, and opportunity perception.

We believe that the main contribution of our research is fourfold: It is an extensive international comparison of informal investing in a relatively large number of countries. It is the first conceptual model supported by empirical evidence that links the prevalence of opportunity-pull entrepreneurship with informal investment, entrepreneurial capacity, and perception of

opportunities for starting businesses. It found no significant links between necessity-push entrepreneurship and those same variables. And in so doing, it demonstrated the importance of differentiating opportunity-pulled from necessity-pushed entrepreneurs.

INFORMAL INVESTORS

The systematic study of informal investments in early-stage companies can be traced to the work of William Wetzel at the beginning of the 1980s. At the very first annual Babson Entrepreneurship Research Conference, Wetzel presented what was to become a series of BERC papers by himself and his coauthors at the University of New Hampshire. That initial paper was on informal risk capital in New England (Wetzel, 1981). A year or so later, Wetzel's study was replicated in California by Tynes and Krasner (1983). Towards the end of the 1980s, Colin Mason and Richard Harrison began to study informal investments in the United Kingdom. Rather as Wetzel and his associates pioneered informal investor research in the U.S.A, so too Harrison and Mason lead the way in the United Kingdom. Harrison and Mason first presented a paper dealing with informal investments at the BERC in 1988 (Harrison and Mason, 1988). Again, just like Wetzel and his associates, Harrison and Mason, subsequent to their initial paper in 1981, presented a succession of papers at the annual Babson Entrepreneurship Research Conference.

Based on the ground-breaking studies of Wetzel and his associates in the U.S.A. and Harrison and Mason in the U.K., van Osnabrugge (1999) wrote that "the BA [business angel] market in UK and the USA is the largest single source of risk financing for entrepreneurial firms, exceeding the institutional VC industry (Mason and Harrison, 1996). In fact, estimates in the UK and the US suggest that BAs fund an annual amount of two to five times more money to entrepreneurial firms than the VC industry (Wetzel, 1987; Freear et al., 1996; Mason and Harrison, 1993)… it is 'guesstimated' that BAs fund between 30-40 times the number of entrepreneurial firms financed by the formal VC industry (Wetzel and Freear, 1994)."

Most of the research on informal investments has 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 Inc500 "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 (Inc., 2000). We believe it is very unlikely that companies starting with $20,000 or less received seed money from business angels. Granted, when both seed and post-startup 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 startup capital "by tapping assets of family and friends."

In comparison with previous studies of informal investors that concentrated mainly on business angels, the research described in this paper encompasses all men and women who had personally invested in a business startup that was not their own, excluding stocks and mutual funds. Thus, informal investments in our study range from tiny amounts put into micro-ventures to huge sums invested in high-potential ventures. Hence, we believe that our study gives a more comprehensive picture of informal investors and their effect on entrepreneurship because it comprises all sizes of informal investments in all types of companies, of which business angel investments are just one—albeit very important—subset.

GEM CONCEPTUAL MODEL[1]

The central argument of the GEM model is that national economic growth is a function of two parallel sets of interrelated activities: those associated with established firms and those related directly to the entrepreneurial process. A simplified version of the model is shown in Figure 1. Activity among established firms only explains part of the story behind variations in economic growth. The entrepreneurial process may also account for a significant proportion of the differences in economic prosperity among countries. For example, it is estimated that nearly a third of all real GDP growth in the USA between 1995 and 2000 was driven by the technology sector—which is laden with entrepreneurial companies—even though that sector accounted for only 8 percent of the US economy (Eisenach, 2001.) As another example, a recent study by the DRI-WEFA (formerly Wharton Econometric Forecasting Associates), which was supported by the National Venture Capital Association, found that venture capital invested during the period 1970 - 2000 created 7.6 million U.S. jobs and more than $1.3 trillion in revenue as of the end of 2000. Put another way, venture-capital-backed companies represented 5.9 percent of the total jobs in the USA and 13.1% of the GDP (NVCA, 2001).

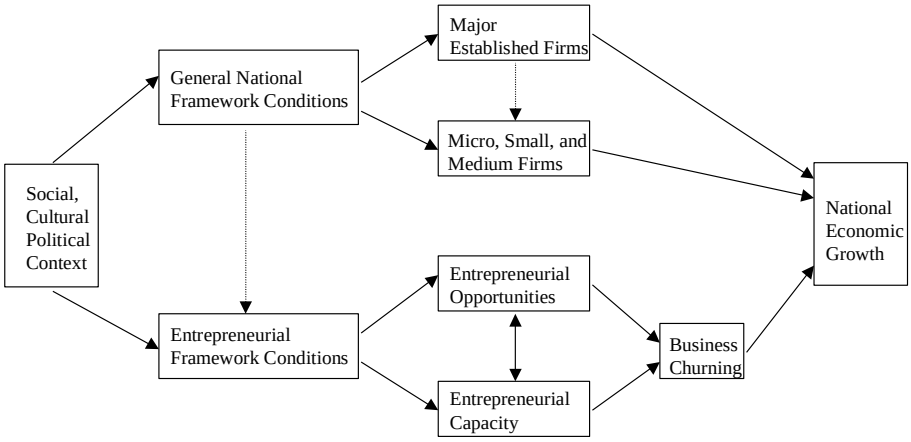
When considering the nature of the relationship between entrepreneurship and economic growth, it is helpful to distinguish between entrepreneurial opportunities and entrepreneurial capacity. What drives entrepreneurial activity is the perception of entrepreneurial opportunities combined with the skills and motivation to exploit them. When opportunities are met with skills and motivation to pursue them, the outcome is the creation of new firms and, inevitably, the destruction of existing firms; new firms frequently displace inefficient or outmoded existing firms. This process of Schumpeterian "creative destruction" is captured in the model by business churning. Despite its negative connotation, creative destruction actually has a positive impact on economic growth as declining businesses are phased out as new start-ups competitively maneuver their way into the market. These dynamic transactions occur within a particular context, which is referred to in the GEM Model as Entrepreneurial Framework Conditions. These conditions include variables such as availability of finance, government policies and programs designed to support start-ups, R&D transfer, commercial infrastructure, social and cultural norms, internal market openness, education in general, and specific education and training in entrepreneurship.

Economic growth encompasses both sets of processes, although the mix or relative contributions may vary among countries. A fundamental aim of GEM is to understand how the entrepreneurial process operates and how its contribution to economic growth varies across countries.

[1] Parts of this section are excerpted from the Global Entrepreneurship Monitor: 2000 Executive Report, Reynolds, P. D., Hay, M., Bygrave, W. D., Camp, S. M., and Autio, E.

Figure 1

GEM Conceptual Model



Financial support

Entrepreneurs are the engines that drive new companies, and financing is the fuel that propels them. Hence, financial support, especially equity finance for starting a company, is an important entrepreneurial framework condition. The source of financing depends on where a startup sits on the entrepreneurship spectrum. At one end of that spectrum is a lone, self-employed person in an impoverished region for whom eking out a subsistence living from a micro-business is better than no work at all. At the other end is a team of high-tech superstars in a technology metropolis with a high-potential opportunity that they believe will change the way in which we work, live, and play. In the middle are startup ventures founded on opportunities that are more limited than high-potential ones but have the prospect of developing into viable companies that will eventually provide a comfortable living for the entrepreneur and, in some cases, full-time employees.

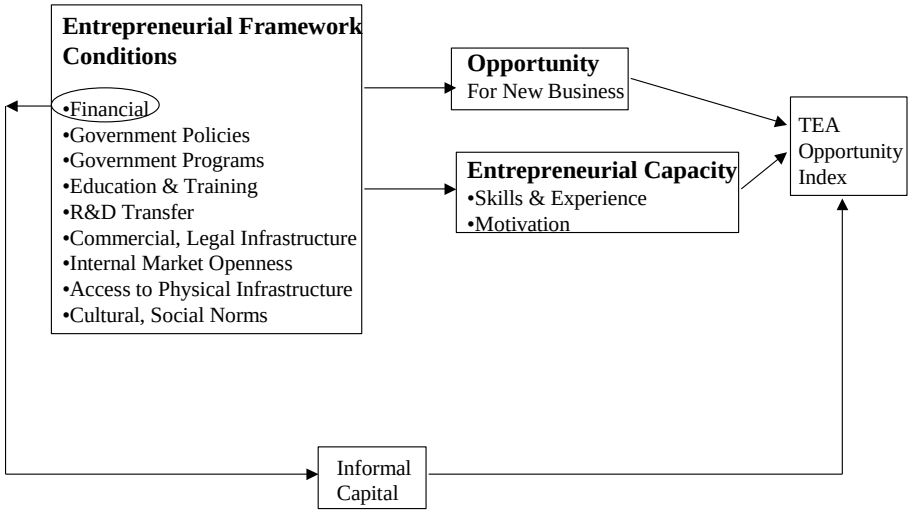
At the bottom end of the spectrum, micro-entrepreneurs pushed into self-employment to survive have no choice other than self-financing. In the middle, entrepreneurs pulled into a startup by an opportunity with ordinary potential usually get financing from informal investors—the so-called 4Fs: Founders, Family, Friends, and Foolhardy investors. At the top end, superstars with extraordinary opportunities launch their businesses with financing from professional venture capital, strategic partners, and business angels, as well as the 4Fs.

The GEM study includes key elements across the spectrum of startup financing. We estimate the extent of informal investments from the household surveys. And we gather data from industry sources on investments by professional venture capital firms.

In a previous paper, Bygrave, Hay, Lopez, and Reynolds (2001) developed a partial model for the role of formal venture capital in the GEM Model for economic growth. In the present paper, we develop a partial model to examine the role of informal investment in the prevalence of opportunity-pull entrepreneurship. The partial model is shown in Figure 2.

Figure 2

GEM Model for Informal Investment



In the model, entrepreneurs are motivated by what they perceive to be opportunities to start a new business, and believe that they have the necessary knowledge, skills, and experience to develop those businesses. The principal source of external financial support to launch many of those new businesses is informal investors (more on this later in the paper). The prevalence of opportunity-pulled entrepreneurs is measured with the Total TEA (Opportunity) index, described in the following section.

Prevalence of entrepreneurship

The Total Entrepreneurial Activity (TEA) index is based on the prevalence of nascent firms that are in the process of being set up, but have not yet opened for business, and the prevalence of new firms that are less than 42 months old. Entrepreneurs who are engaged in both activities are counted only once. We differentiate entrepreneurs, and hence the TEA index, according to whether they are motivated to start a new business to take advantage of an opportunity, or driven to start a business out of necessity because of lack of suitable employment. Put another way, the TEA (Opportunity) index measures the prevalence of opportunity-pulled entrepreneurs, the TEA (Necessity) index measures necessity-pushed entrepreneurs, and TEA (Overall) measures both types combined.

The partial model for the prevalence of opportunity-pulled entrepreneurs is based on the proposition that the TEA (Opportunity) index is related to perception of good opportunities, the prevalence of entrepreneurs with the knowledge, skills and experience to develop those opportunities, and the availability of informal investment.

TEA (Opportunity) = *f*(opportunity perception; knowledge, skills and experience; informal investment)

On the other hand, necessity-pushed entrepreneurs—in contrast to opportunity-pulled entrepreneurs—are not starting businesses because they perceive good opportunities and believe that they have the necessary skills and experience to develop those opportunities. Instead they are starting businesses almost as a career of last resort because they have no better choice for work. Hence, we would expect that TEA (Necessity) would not be correlated with opportunity perception, entrepreneurial skills and experience, and informal investment. Thus we expect that the above model for opportunity-pulled entrepreneurship will not hold for necessity-pushed entrepreneurship.

TEA (Necessity) ≠ *f*(opportunity perception, skills and experience, informal investment)

Economic growth

Where does economic growth fit into the partial model? As stated earlier, one of the principal objectives of the GEM research is to examine the link between entrepreneurship and economic growth. It seems reasonable to expect that opportunity-pull entrepreneurship and economic growth form a virtuous circle: Opportunity-pull entrepreneurship contributes to economic growth, which in turn creates opportunities for more entrepreneurship. On the other hand, it is possible that necessity-push entrepreneurship—at least in developed nations—increases when the economy is in a prolonged slump and unemployment is persistently high so that starting a business is better than no job at all. Thus entrepreneurship and economic growth are intertwined, and to tease out cause from effect requires a longitudinal study over many years. In 2001, we have three years of annual data for 10 nations, two years of data for 21, and one year of data 29, hence it is premature to attempt to look for causal effects with a longitudinal study. Nevertheless, because we think that economic growth and entrepreneurship influence each other, economic growth is included in the regression models that we present later in this paper. At this stage of the GEM project we believe it is prudent to regard economic growth as a control variable instead of an explanatory one.

METHOD

The empirical research had three major parts: (1) Surveys of 2,000 or more adults in each of the GEM 2001 countries to gauge respondents' involvement in and attitude toward entrepreneurship. (2) A wide selection of standardized national data assembled from a variety of sources. (3) One-hour, face-to-face interviews with approximately 35 experts on the entrepreneurial framework conditions in each country. Experts completed a brief questionnaire that involved standardized assessments of important aspects of their country's entrepreneurial sector. In summary, more than 74,000 individuals were surveyed in 29 nations and nearly 950 experts were interviewed in those same nations.

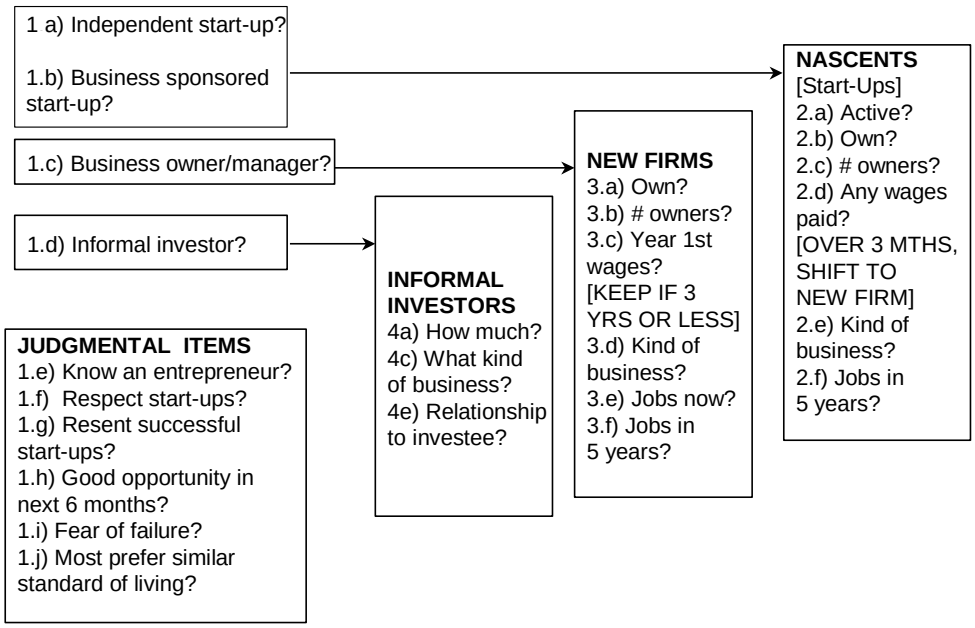
Professional survey research firms in each country administered the adult population surveys. Sampling procedures varied somewhat, but all the research firms provided samples that when properly weighted were representative of the adult population, both urban and rural, in each country. Telephone interviews were utilized in the more developed countries where most

households have telephones. Face-to-face interviews were employed in developing countries to minimize bias toward higher income households.

The actual GEM interview was conducted in the native language of each country and the average time was two minutes, with a range of 60 seconds to 15 minutes, which depended on the extent of a respondent's involvement in entrepreneurship. The first four items of the interview (Figure 3) are related to participation in entrepreneurial activities: starting a new firm, owning and managing a new firm, and informally investing in someone else's new firm. Respondents engaged in any of those activities were asked for additional details about that activity. The last six items assess attitudes toward and knowledge of the entrepreneurial climate. The complete survey instrument is published in (Reynolds, Camp, Bygrave, Autio, and Hay, 2001).[2]

Figure 3

Adult Population Survey Interview Schedule



Standardized cross-national data on a variety of national characteristics and attributes (e.g., GDP growth) were assembled from an assortment of harmonized international sources, including the United Nations, Eurostat, ILO, national venture capital associations, U.S. Census International Data Base, World Bank, and International Monetary Fund, among others.

[2] Data from the expert interviews and questionnaires were not needed for the analyses described in this paper, so we will not describe the procedure, details of which can be found in (Reynolds, Camp, Bygrave, Autio, and Hay, 2001).

Variables

The dependent variables are the TEA (Opportunity) and TEA (Necessity) indices for each nation. Nascent and startup entrepreneurs were classified according to how they answered the question:
"Are you involved in this firm to take advantage of a business opportunity or because you have no better choices for work?"

Perception of entrepreneurial opportunity was determined by how respondents answered the following:
"In the next six months there will good opportunities for starting a business on the area where you live."
The percentage of nascent and startup entrepreneurs answering "yes" was computed for each nation.

Entrepreneurial capacity was determined by answers to the following:
"You have to the knowledge, skill, and experience to start a new business."
The percentage of nascent and startup entrepreneurs answering "yes" was computed for each nation.

The amount of informal capital as a percentage of GDP for each nation was estimated as follows:
The prevalence rate of informal investors and the average annual amount invested per year by an investor was determined from the adult population survey. This was then extrapolated to a nation's entire adult population aged 18 years and older. We had data on informal investors in every one of the 29 nations in the GEM 2001 study, but except where we state otherwise we included only the 18 nations where 40 or more respondents reported the amount that they had invested. To increase the number of responses, we combined data from the 2000 and 2001 surveys for nations where we had data for both years. Respondents were asked how much they had invested in the last three years, so where 2000 and 2001 responses were combined, we were agglomerating data for four years 1997-2001 instead of three years 1998-2001 for nations where we only had surveys for 2001.

Real growth of GDP in 2000—the latest year for which data were available when this paper was being prepared—was taken from the IMF: World Economic Outlook Data Base 2000.

RESULTS AND DISCUSSION

Two of the most striking findings of the GEM household surveys are that informal investing is very extensive and the amount invested per year is enormous. The overall prevalence rate of informal investors 18 years of age and older among the 18 GEM nations for which we have data from 40 or more informal investors is 3.4%, with a range from 6.2% in New Zealand to 1.4% in Brazil. Informal investors provided $196 billion per year to startup and growing companies in those 18 GEM countries (Table 1). In the context of national economies, the total informal investment was 1.1% of the GDP of all the GEM nations combined, with a range from 3.7% for South Korea to 0.14% for Brazil. Viewed from another perspective, the amount of informal investment per adult 20 years old and older in the 18 GEM nations was $314, with a range from $653 in New Zealand to $9 in Brazil. When informal investment is one or two percent of GDP, it has a noticeable, swift impact on the economy because money put into startup and young ventures is spent almost immediately on wages, materials, and plant and equipment.

Table 1

Informal Investment per Year (1997-2001)

	Prevalence of Informal Investors 18 & older Percent	Annual Informal Investment per investor (1997-2001) US$	Total Informal for country by adults 20 & older US$ million	Total Informal Investment per capita US$	Total Informal Investment per GDP Percent
Argentina	2.0	2,724	1,323	54	0.45
Australia	3.3	10,573	4,869	347	1.26
Brazil	1.4	690	998	9	0.14
Canada	3.0	5,953	4,177	178	0.61
Denmark	3.4	6,899	957	235	0.59
Finland	3.6	2,257	315	80	0.26
Germany	3.7	4,506	10,902	167	0.55
Ireland	3.2	7,595	654	243	0.72
Israel	3.8	7,070	1,023	269	0.98
Mexico	4.3	1,370	3,372	59	0.63
New Zealand	6.2	10,476	1,789	653	3.54
Norway	4.1	5,414	732	219	0.50
Singapore	1.5	14,335	702	215	0.79
S. Africa	2.2	1,182	650	26	0.50
S. Korea	3.8	13,391	17,121	506	3.66
Sweden	2.7	3,892	709	105	0.30
UK	2.8	13,860	17,026	381	1.20
USA	6.1	10,628	129,180	648	1.31
All Nations	3.4	8,109	196,499	314	1.13

This table includes only nations for which we have data from 40 or more informal investors.

Informal investors in the 29 GEM nations were 67.7% male and 32.3%. The breakdown of female investors by the amount invested in the 29 nations combined, and the USA, UK, and Germany separately is shown in Table 2. Their age distribution was 40.1% between 18 and 34, 43.7% between 35 and 54, and 16.2% 55 and older. The distribution of the amount invested annually per investor by age group is shown in Table 3. As might be expected, the amount invested per year increases with age: 18.2% of informal investors aged 55 and older invested at least $16,667 per year compared with only 4.8% of those between 18 and 34; conversely, 30.3% between 18 and 34 invested no more than $333 compared with only 18.2% of those 55 years of age and older.

Table 2

Female Informals by Annual Amount Invested in 29 Nations				
Annual Amount	Percent Female			
US$	29 Nations	USA	UK	Germany
<=1,666	35.0%	42.5%	30.5%	19.2%
>=$1,667	26.0%	27.5%	35.5%	28.6%
All amounts	30.1%	34.1%	32.2%	24.1%

This comprises only informal investors who specified the amount invested.
For all informal investors in 29 nations, 32.3% were female.

Table 3

Distribution of Amount Invested by Age of Investors			
Annual Amount $US	18-34	35-54	55 & older
1-333	30.3%	19.9%	18.2%
334-1,666	31.8%	28.0%	19.8%
1,667-6,666	21.3%	26.3%	28.1%
6,667-16,666	11.8%	16.2%	15.6%
>=16,667	4.8%	9.7%	18.2%
	100.0%	100.0%	100.0%

Table 4 shows that 25% of informal investors put less than $341 into ventures, 50% less than $1,548, 75% less than $6,192, and 95% less than $32,520. One percent invested $280,536 or more. The distribution shows that the GEM adult surveys capture a spectrum of informal investments from tiny sums invested by family and friends to huge sums invested by business angels. Through the 75th percentile there is reasonable consistency among the U.S.A., the U.K., and Germany. But the amount invested at the 99th percentile is very much less in Germany than in the U.S.A. and the U.K. We have no definite explanation of this, but it might be caused by the a belief—widely held by the media and researchers—that wealthy Germans are very reluctant to reveal details of their personal income and net worth.

Table 4

Annual Amount per Informal Investor 1998-2001				
	$US			
	29 Nations	USA	UK	Germany
25th percentile	341	400	474	722
50th percentile	1,548	1,667	1,421	2,167
75th percentile	6,192	5,000	5,682	5,778
95th percentile	32,520	33,333	28,412	14,446
99th percentile	280,536	200,000	94,707	21,668

The relationship of informal investors to the entrepreneur who they invested in is shown in Table 5. Forty-eight percent invested in a relative's business, 28.9 percent in a friend's or neighbor's, 10.6 percent in a work colleague's, and 8.4 percent in a stranger's.

Table 5

Informal Investors in 29 Countries Relationship to Investee	
Close family member	40.3%
Other relative	7.6%
Friend/Neighbor	28.9%
Work colleague	10.6%
Stranger	8.4%
Other	4.2%

Correlations and Regressions

The correlations between the variables in the models are shown in Table 6. Correlations between the TEA (Opportunity) index and skills and experience to do a startup and informal investment per GDP are significant at the 0.1 level or better. In contrast, none of the correlations with the TEA (Necessity) index are significant.

The regressions, Table 7, show that for the 18 nations in the data set, the prevalence of opportunity-pulled entrepreneurs correlates at the 0.003 level with entrepreneurial capacity (knowledge, skills, and experience), at the 0.03 level with entrepreneurial opportunity (good opportunities in the next six months), and at the 0.002 level with the amount of informal investment as a percentage of GDP. The correlation with growth of the GDP in 2000 is significant at the 0.075 level. The adjusted R-square is 0.724; and the significance is 0.000.

In contrast, the prevalence of necessity-pushed entrepreneurship does not correlate with any of the variables in the model. These findings support the two models proposed earlier in this paper.

The regression analyses clearly demonstrate that it is important to separate opportunity-pull from necessity-push entrepreneurship. We expect that this simple dichotomous classification of entrepreneurship will prove to be valuable in developing models for the role of entrepreneurship in economic growth.

Table 6

Correlations

	1	2	3	4	5
1. TEA Opportunity (% adults 18-64)					
2. TEA Necessity (% adults 18-64)	**0.38**				
3. Informal Investment per GDP (%)	**0.462'**	**0.241**			
4. Skills & experience to do startup (%)	**0.675****	**0.271**	**0.133**		
5. Good opportunity next 6 months (%)	**0.395**	**-0.237**	**-0.216**	**0.35**	
6. Real GDP growth 2000	**0.155**	**0.193**	**-0.093**	**-0.233**	**-0.047**

' Correlation is significant at the 0.1 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 7

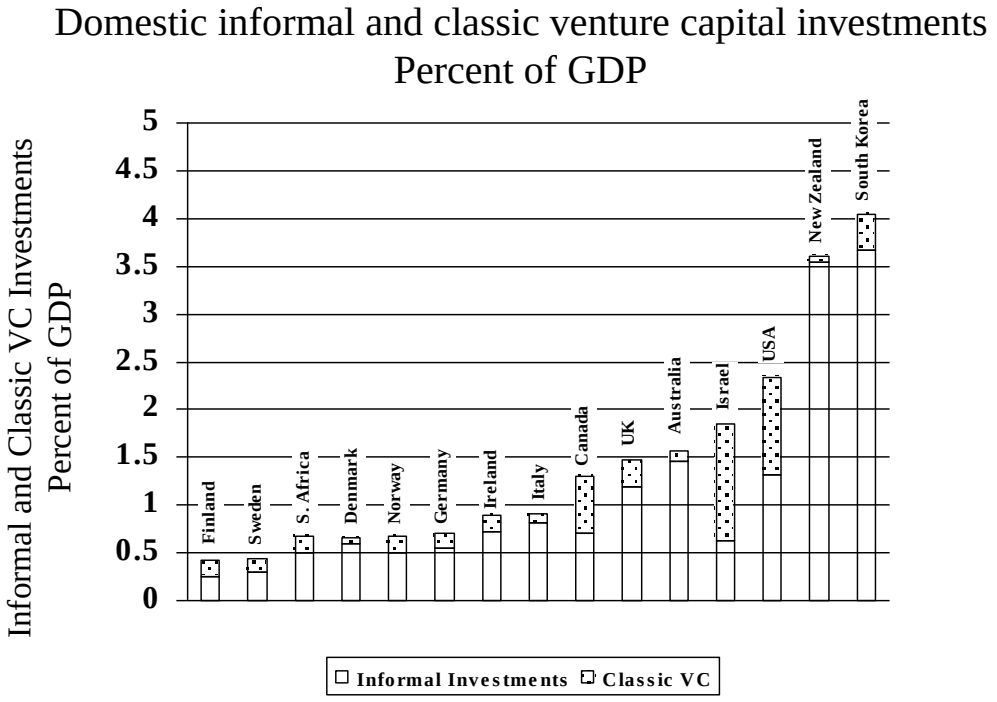
	TEA Opportunity (% adults 18-64)	TEA Necessity (% adults 18-64)
Intercept	**-4.813**	**-0.575**
	(0.035)	**(0.815)**
Real GDP growth in 2000 (%)	**0.554**	**0.407**
	(0.075)	**(0.247)**
Good opportunity in next 6 months (%Yes)	**8.223**	**-5.149**
	(0.026)	**(0.202)**
Skill & experience to do startup (% Yes)	**14.768**	**7.415**
	(0.002)	**(0.115)**
Annual informal investment per GDP (%)	**1.528**	**0.269**
	(0.003)	**(0.545)**
Adjusted R square	**0.724**	**0.073**
df	**4,13**	**4,13**
F	**12.152**	**1.337**
Significance	**0.000**	**0.308**

Significance level (2-tailed) in parentheses

CONCLUSIONS AND IMPLICATIONS

As mentioned previously, when the amount of informal investment for startup and growing businesses is as much as one or two percent of a nation's GDP, it is a significant factor in that nation's economy. For all countries except Israel, informal investors put up more money than professional venture capital firms for startups and growing businesses in 2000 (Figure 4). Indeed, for the 15 GEM nations where we have data for amounts of both informal investment and classic venture capital, the amount of informal investment was 62% of informal and classic venture capital combined. So for every dollar of classic venture capital there was approximately 1.6 dollars of informal capital. The highest proportion of informal capital was in New Zealand, Australia, Denmark, and South Korea where at least 90% of informal and classic venture capital investments combined came from informal investors. The lowest proportion was in Israel, USA, and Canada, where the proportion of informal was less than 60% of the total. The ratio of informal investment to formal venture capital was 1.27 in the U.S.A. That finding appears to contradict van Osnabrugge's (1999) claim that business angels fund an annual amount of two to five times more money to entrepreneurial firms than the VC industry in the U.S.A. He was, however, referring to an earlier period when the amount of formal venture capital invested each year was considerably less than in 2000, when venture capital investments hit a record high.

Figure 4



Classic venture capital comprises investments in seed, early, startup, and expansion stage companies.

We believe that the findings from this study have important implications for entrepreneurs, policy makers, educators, researchers, and journalists. In a nutshell, they should pay more attention to the critical role of informal investors in startup ventures.

Entrepreneurs

Close family members and friends and neighbors are by far the two biggest sources of informal capital for startups (Table 5). This is in line the Inc500 finding that the most common sources of startup capital after the founder and cofounder 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.

Policy Makers

A 1.5% rise in informal investment increases the TEA Opportunity index by 1% among the 18 nations in our regression analysis. Thus, informal investment is a crucial component of the entrepreneurial process. What's more, based on our results and the Inc500 findings, small investments primarily by family and friends are crucial in funding not only micro-companies but also future superstars. In comparison, formal venture capital and business angel investments are very rare at the seed stage of a new venture. For example, the GEM reports (Zacharakis et al. 2002) indicate that literally several million Americans are nascent entrepreneurs attempting to start new ventures. In a typical year, however, only a few hundred of them have formal venture

capital and another 10,000 or so have business angel investments in hand when they launch their businesses. (The number of startups backed by business angels was derived by multiplying the number of companies launched with formal venture capital by 40, which is van Osnabrugge's (1999) "guesstimate" of the ratio of the number of firms backed by business angels to the number backed by formal venture capital.)

Hence, it is guesstimated less than 0.5 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.

Educators

We believe that 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 a some examples where evidence of this can be found: new venture syllabi at leading business schools, including some at our own institutions; entrepreneurship teaching cases; 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, for instance, approximately 15 percent of the papers presented focused on formal venture capital investing, five percent on IPOs, and three percent on business angels, but only one 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 their importance to nascent entrepreneurs.

Journalists

It seems to us that the mass media give more prominence to stories on venture capital and IPOs than other forms of entrepreneurial financing. We believe that those stories, though they might be glamorous, tend to give neophyte entrepreneurs a misleading impression of the relative importance of the sources of venture financing. We need more articles about raising money from family and friends, even if such articles seem to be unexciting compared with stories on venture capital and IPOs

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