Global Entrepreneurship Monitor

National Entrepreneurship Assessment
United States of America

2002 EXECUTIVE REPORT

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BABSON COLLEGE

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Executive Summary

Total entrepreneurial activity in the United States has decreased for the second consecutive year. The results are not surprising; the United States is continuing to feel the effects of the recession, Internet bust, and the fallout from failed companies in technology sectors, specifically information technology. The level of total entrepreneurial activity (TEA) in the United States for 2002 is 10.5 percent, representing a slight decrease from TEA in 2001 of 11.7 percent but a more substantive decrease from TEA in 2000 of 16.7 percent. In other words, 10.5 percent of the adult working population in the United States in 2002 was involved in the start-up process or in a business less than 42 months old.

The United States remains a global entrepreneurial leader, ranking 11th among the 37 countries represented in the Global Entrepreneurship Monitor (GEM) while ranking first among G7 countries. The entire world is suffering economic hardship, and the United States is no exception. Yet, the belief that entrepreneurial activity will increase and lend a hand in economic recovery is strong throughout all GEM countries, but perhaps strongest in the United States. Highlights of the United States Executive Report are as follows:

NATIONAL ACTIVITY

- Total entrepreneurial activity for 2002 is down 10.2 percent from 2001, but the 2002 level is still 50 percent higher than entrepreneurship levels reported in 1998. The perceived retrenchment may be an indicator that the United States is returning to normal levels of entrepreneurial activity.
- The drop in total entrepreneurial activity is attributed to a drop in the number of nascent entrepreneurs—those engaged in the start-up process. People perceive fewer business opportunities in the current economy.
- The interest in starting a business surged after 1998 and peaked in 2000, but this interest did not translate into more new businesses.

REGIONAL ACTIVITY

- There is little variation across major regions of the United States. However, counties considered more urbanized (higher-density populations), with significant recent job growth, are associated with higher levels of entrepreneurial activity.

DEMOGRAPHY

- There is a strong relationship among entrepreneurship, education, and job creation. Findings indicate that 30 percent of entrepreneurs with less than a secondary education expect to remain self-employed over the next five years, while 35 percent of the most highly educated entrepreneurs expect to employ 20 or more over the next five years.
- There are 1.6 men involved in entrepreneurship for every woman. Differences are much more pronounced in the 18- to 24-year-old category where men are three times as likely as women to start new businesses.

FINANCING

- Decline in entrepreneurial activity is mirrored by decreases in financing activity. Informal investment declined 19.5 percent in 2002, and venture capital fell 59.6 percent in 2001. Despite large declines in classic venture capital, 2001 remains the third strongest year on record for venture capital financing.
- Of the total venture capital invested in 31 GEM nations, 69 percent went to the United States, yet the United States experienced sharp declines in venture capital investment at the seed/start-up stage of the cycle.
- Informal investment exceeds classic venture capital in the United States, and 4.6 percent of U.S. adults have made informal investments in entrepreneurial firms: 50 percent of these investments are made in companies owned by relatives.

Entrepreneurship in the United States continues to thrive at very high levels, even in the wake of world economic decline. The United States outranks the rest of the world on key entrepreneurial framework conditions that are integral to the pervasiveness of entrepreneurship in America: financial support, entrepreneurship education and training, and culture. Though entrepreneurship in the United States peaked in the year 2000 at 16.7 percent, the decline reported by GEM 2002 may reflect a post-boom retrenchment rather than a structural decline.

About GEM

GEM is a joint research initiative between Babson College and London Business School, with sponsorship from the Ewing Marion Kauffman Foundation. Starting with 10 countries in 1999, the GEM consortium now encompasses 37 countries. From its inception, the global investigation was launched to answer three key questions:

(1) Does the level of entrepreneurial activity vary between countries, and if so, by how much?

(2) Are the differences in entrepreneurial activity associated with national economic growth?

(3) What national characteristics are related to differences in entrepreneurial activity?

The data collection process for the United States 2002 assessment involved (1) a telephone survey of 7,059 households, (2) structured questionnaires completed by 46 expert informants who have been interviewed in previous years, and (3) standardized national data assembled from various sources, including the National Venture Capital Association. The conceptual model guiding the GEM research and its explanation are included in the Appendix of this report.

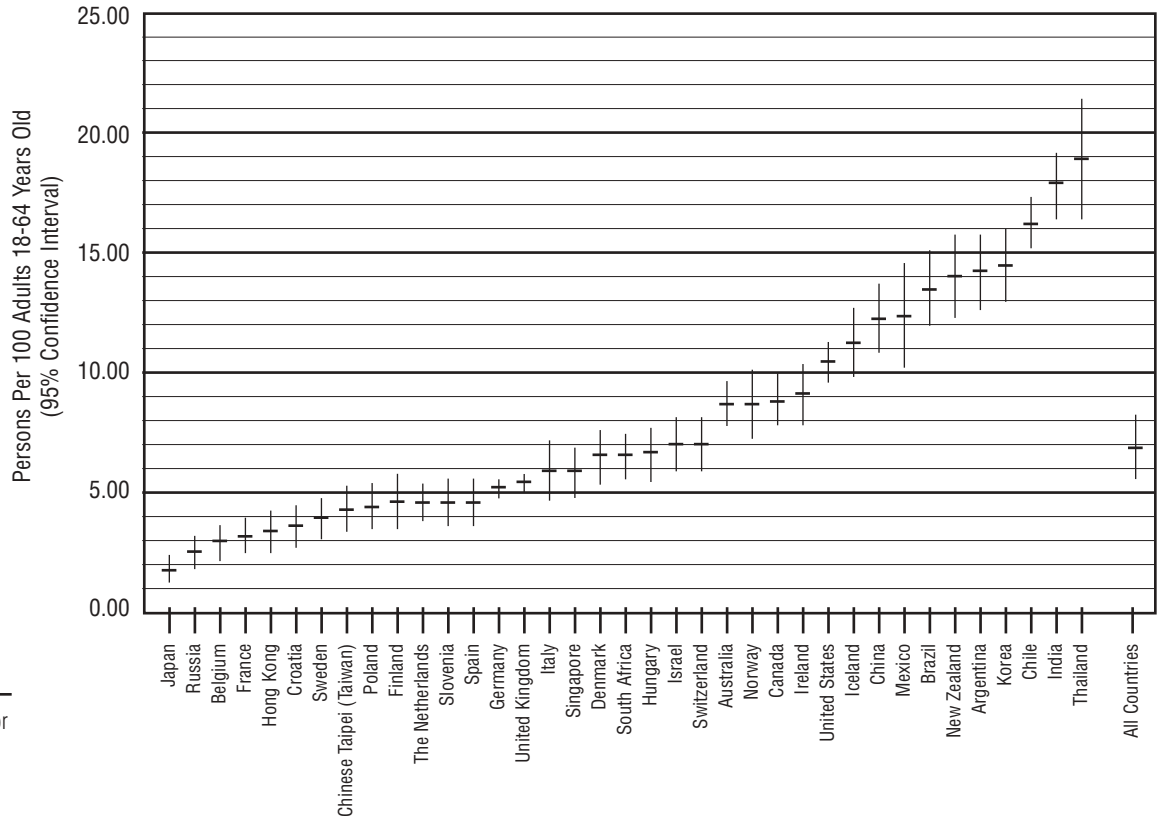
U.S. Entrepreneurial Activity in 2002—Retrenchment or Return to Normal?

In 2002, entrepreneurial activity in the United States fell for the second straight year, although the drop from 2001 was not statistically significant. In order to make cross-country comparisons, GEM uses a single measure—the Total Entrepreneurial Activity (TEA) Index—which reflects those 18 to 64 years of age in all national surveys who are 1) active in a start-up they expect to own (nascent entrepreneurs) or 2) currently managing a new business less than 42 months old or 3) one of 6 percent doing both.[1] This measure declined from 11.7 percent in 2001 to 10.5 percent in 2002. It is presented in comparison with 36 other countries involved in GEM 2002 in Figure 1, indicating that the United States is in the upper-third percentile, 11th from the top.

The United States remains the entrepreneurial leader among the G7 economies with Canada following in second place at 8.8 percent and Japan ranking last for the G7 at 1.8 percent. Of the 29 countries where data are available for 2001 and 2002, there has been a statistically significant decline for 21 countries, indicating a worldwide drop in entrepreneurial activity. This seems to reflect a widespread decline in GDP growth across all the countries involved in the GEM project in these two years.

The U.S. nascent rate is 7 percent, and the new business rate is 4.5 percent. As Figure 2 supports, the entire decline in TEA is attributable to a drop in nascent entrepreneurship. In 2002, the U.S. nascent rate fell to 7 percent from 8.2 percent in 2001, yet the new business rate of 4.5 percent in 2002 is up from the new business rate of 3.5 percent in 2001. The decline in nascent entrepreneurship is a function of opportunity perception. Survey respondents were asked, "In the next six

FIGURE 1
CROSS-NATIONAL COMPARISONS IN TOTAL ENTREPRENEURIAL ACTIVITY—2002

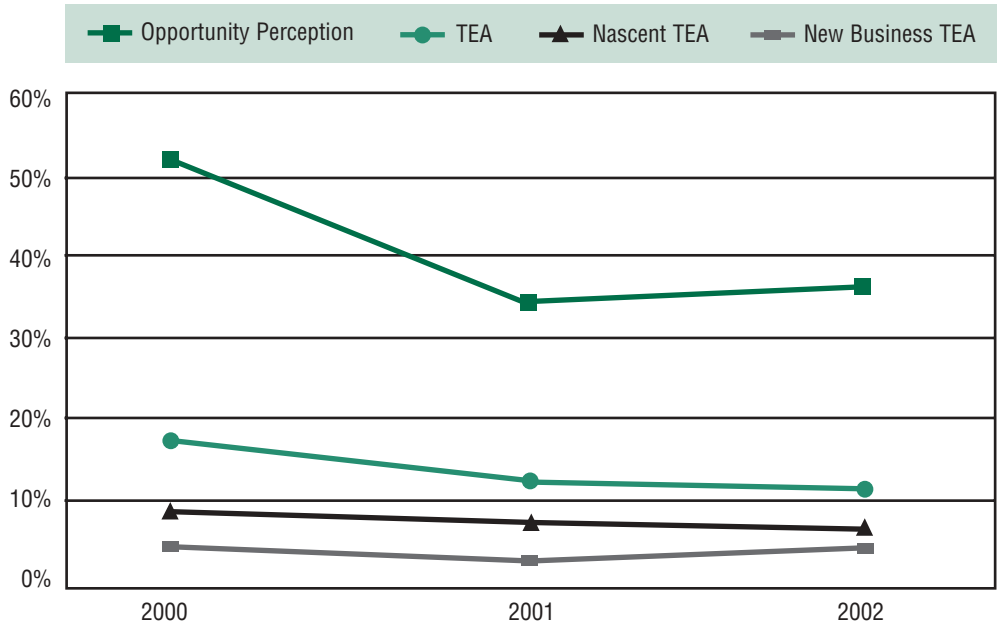


months will there be good opportunities for starting a business?" Figure 2 shows that only 37 percent of the population in 2002 perceives a good opportunity to start a business (basically unchanged since 2001, but much lower than the 52 percent level in 2000). Changes in perception of opportunities directly impact the level of nascent entrepreneurial activity. As the economy rebounds, increased levels of nascent entrepreneurship are expected.

COMPARING GEM DATA TO U.S. NATIONAL REGISTRY DATA

Figure 3 and Figure 4 illustrate comparisons among GEM survey data for the United States with various measures of U.S. national registry data, including registrations on new businesses, self-employment, IRS business returns, etc.

FIGURE 2
IMPACT OF OPPORTUNITY PERCEPTION ON ENTREPRENEURIAL ACTIVITY



In addition to breaking the TEA rate into nascent and new business opportunities, TEA is further analyzed by motivation. Are Americans pursuing business opportunities or are they involved in entrepreneurship out of necessity as they can find no better choice for work? The U.S. opportunity TEA rate is 9.1 percent and ranks fourth in the world only behind Thailand, India, and New Zealand. The opportunity component encompasses 87 percent of TEA in the United States. Conversely, the necessity TEA rate of slightly more than 1 percent is a minor portion of the U.S. TEA rate. Americans are predominantly opportunity entrepreneurs due to plentiful employment opportunities in the United States (relative to other countries) and a strong social safety net (welfare and unemployment benefits).

National registry data have no age restrictions, so to best make these comparisons, the U.S. GEM data (which are based on adults aged 18 to 64 years) were recomputed to include a larger age range. Therefore, all measures in Figure 3 and Figure 4 are presented in terms of the number of individuals per 1,000 aged 18 to 74 years. Lower TEA rates are shown in Figure 3 and Figure 4 due to the expansion of the age category and the addition of older, entrepreneurially inactive Americans.

Various measures of entrepreneurial activity from 1998 to 2002 are presented in Figure 3.

VARIABLE LABEL

BABYBUSO
Currently owner and manager of business with salary and wage payments for 3-42 months

BJOBST
Employer-sponsored start-up activity

BSTART
Personally initiated start-up activity

FrmBrth
New employer firms for year; new firms based on filing of federal social security taxes

IRS Corp
Total corporate income tax returns for all types of corporations

IRS Part
Total partnership tax returns file, forms 1065 and 1065B

IRS SchC
Total business returns filed as a Schedule C or Schedule CZ accompanying an individual tax return, Form 1040, 1040A, 1040EZ, and 1040PC

Self-Emp
Self-employment in the civilian labor force from Bureau of Labor Statistics

SUBOANW
Personally initiated or employer-sponsored start-up that involved recent activity, expectation of ownership, and no salary payments for more than 3 months

SUBOWNACT
Personally initiated or employer-sponsored start-up that involved recent activity and expectation of ownership

SUNENI
Personally initiated or employer-sponsored start-up activity (BSTART or BJOBST)

TEA
Active in start-up or as new business owner (SUBOANW or BABYBUSO)

FIGURE 3
U.S. ENTREPRENEURIAL ACTIVITY—1998-2002

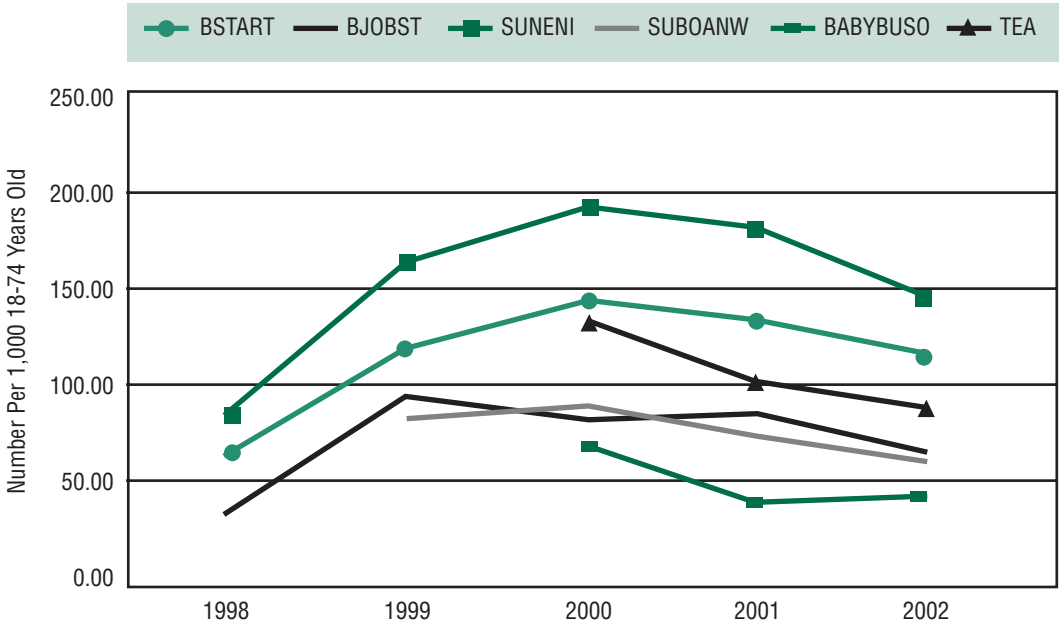
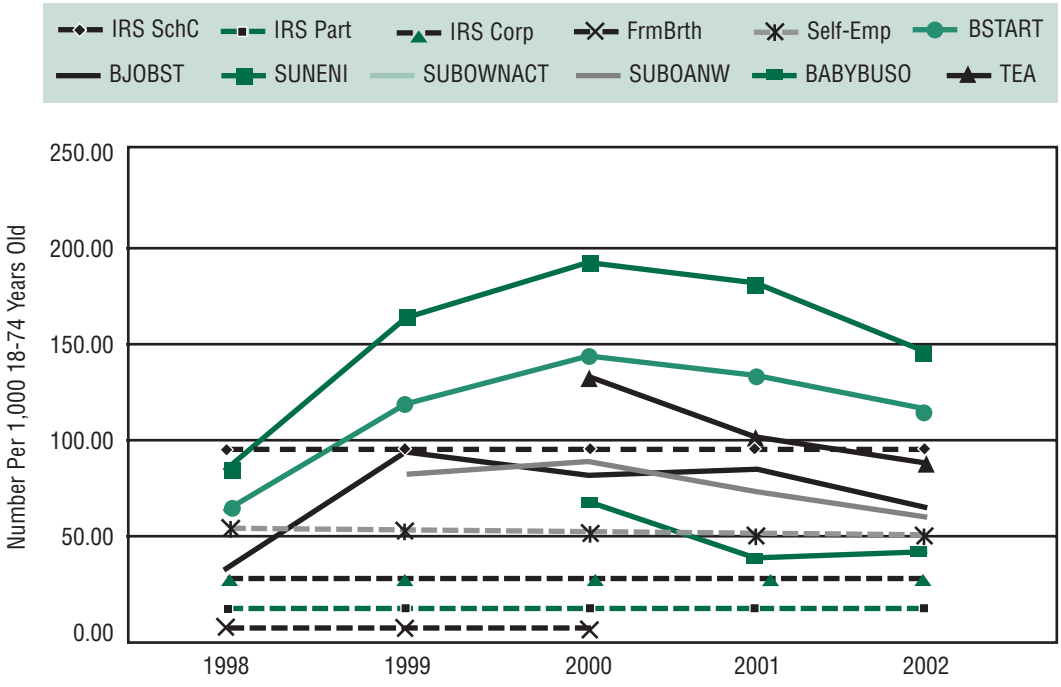


FIGURE 4
U.S. ENTREPRENEURIAL ACTIVITY AND MEASURES OF BUSINESS PRESENCE—1998-2002



Three of the reported variables have been identified for all five years: those reporting activity in an autonomous start-up (BSTART), those reporting starting a business as part of their job (BJOBST), and those reporting either or both (SUNENI). All three show a dramatic rise from

1998 to 2000, with annual declines for 2001 and 2002. The importance of this longitudinal view of U.S. entrepreneurial activity is that the 2002 level is 50 percent higher than the level in 1998.

As the GEM project developed, more sophisticated measures of entrepreneurial activity were introduced, which are also presented in Figure 3: individuals starting a nascent business (SUBOANW), individuals managing new businesses less than 42 months old (BABYBUSO), and a measure of both (TEA).

All measures are highly correlated and indicate a decline from 2000 to 2002.

Are changes in entrepreneurial activity associated with changes in business registrations? After all, if more people are trying to start a new business and the conversion rate from start-up to an ongoing business remains the same, then the number of new firm registrations should increase. Figure 4 presents a time series comparison of the measures of entrepreneurial activity with five measures of business presence. The dotted lines represent, in terms of numbers per 1,000 adults who are 18 to 74 years of age, annual Schedule C federal tax filings, annual federal partnership tax filings, annual federal corporation tax filings, self-employment, and measures of new firms with employees (based on new federal social security payments).

All measures of the prevalence of business activity are relatively constant in terms of prevalence in the population aged 18 to 74 years. It seems reasonable to conclude, therefore, that there was a surge of interest in starting new firms after 1998 that peaked in the year 2000, but this increase did not translate into more new businesses. This may have reflected a fad among the enthusiastic but unskilled or inexperienced. The proportion that was able to convert a start-up effort into a growing concern may have declined. As a consequence, the proportion of the population paying social security and unemployment insurance or filing tax returns did not change. On the other hand, the entrepreneurial activity measures for 2002 are still higher than for 1998—40 percent higher. There may be a further decline in the future if the national economy stagnates.

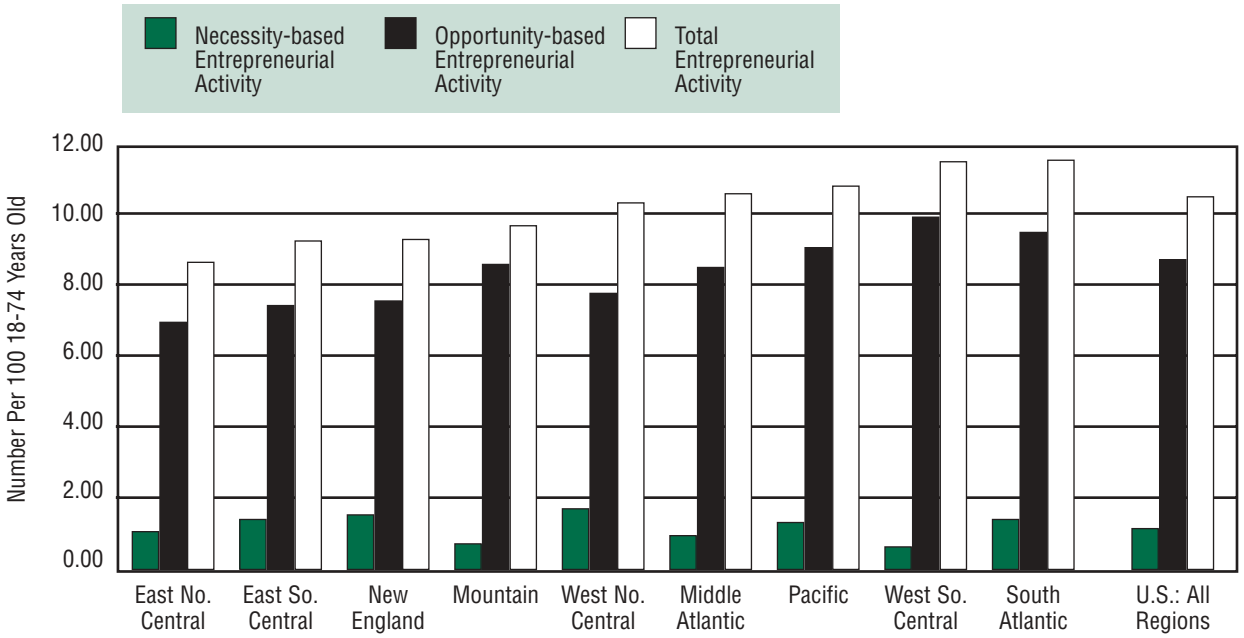
Regional Variation Within the United States

There is modest regional variation across the United States as presented in Figure 5, with the TEA levels in the South Atlantic region (the coastal states of Delaware to Florida plus West Virginia) almost 40 percent higher than those in the East North Central region (Illinois, Indiana, Michigan, Ohio, and Wisconsin). These differences are marginally statistically significant, reflecting the uniformity in diversity across these nine regions. Differences that do exist are mostly a reflection of differences in opportunity entrepreneurship; necessity entrepreneurship is more uniform across regions.

More variation is present if the nature of the county in which the respondent lives is taken into account. The county of residence is known for all 10,000 respondents to the 2000, 2001, and 2002 surveys. These counties are considered in terms of the annual change in jobs from 1993 to 1998—which is one measure of economic growth. The respondents are classified into five categories based on relative annual job growth in their home counties, from 0.7 percent to 5.8 percent—an eightfold difference. The same strategy was followed in computing population density; the number of county residents per square mile was computed for 1998. Respondents fell into five groups with measures from 38 to 6,300 persons per square mile—a sixteen-fold difference. The density measure effectively separates those living in low-density rural areas from those in high-density urban areas. The joint effect of these two contextual features—recent job growth and current population density—is presented in Figure 6.

Both of these contextual factors have a statistically significant impact on entrepreneurial activity. It is

FIGURE 5
U.S. REGIONAL ENTREPRENEURIAL ACTIVITY—2000-2002 COMBINED



EAST NORTH CENTRAL
Illinois
Indiana
Michigan
Ohio
Wisconsin

EAST SOUTH CENTRAL
Alabama
Kentucky
Mississippi
Tennessee

NEW ENGLAND
Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

MOUNTAIN
Arizona
Colorado
Idaho
Montana
Nevada
New Mexico
Utah
Wyoming

WEST NORTH CENTRAL
Iowa
Kansas
Minnesota
Missouri
Nebraska
North Dakota
South Dakota

MIDDLE ATLANTIC
New Jersey
New York
Pennsylvania

PACIFIC
California
Oregon
Washington

WEST SOUTH CENTRAL
Arkansas
Louisiana
Oklahoma
Texas

SOUTH ATLANTIC
Delaware
Florida
Georgia
Maryland
North Carolina
South Carolina
Virginia
West Virginia

No Data for Alaska & Hawaii

clear that recent job growth (an indicator of increases in the demand for goods and services) has a systematic effect on entrepreneurial activity. In addition, higher population densities (a good measure of the extent to which an area is urbanized) is also associated with more activity. Once again the data indicate that a higher percentage of people in cities are involved in entrepreneurship. The joint effects are quite uniform, with few exceptions. There is, however, very high activity in counties with the lowest job growth but with the highest density. The range of differences is significant, from six per 100 involved to almost 14 per 100—a variation greater than a factor of two.

It can be assumed that dense entrepreneurial activity reflects the perception that business opportunities may be present. All respondents were asked: "In the next six months, will there be good opportunities for starting a business in the area where you live?" The same classification of survey respondents in terms of their host county—recent job growth and current population density—is used to consider variation in the perception of opportunity in Figure 7. Patterns here mirror those regarding entrepreneurial activity.

More recent job growth and higher population densities lead to a higher proportion of residents that perceive good business opportunities. This appears to be related to higher proportions of residents actually engaged in entrepreneurial activity. These differences in recent job growth and population densities are found in all U.S. regions and within most states, which is why there is not more regional variation. Entrepreneurial activity reflects promising conditions in the immediate neighborhood or community, and high- and low-potential situations are present across the United States.

TEA Rates Examined by Demographics

GENDER

There are 1.6 men involved in entrepreneurship for every woman (TEA rates of 12.9 percent versus 8.1 percent of the population), which is basically the same as in 2001 and in line with the worldwide average of 1.5. However, the distribution of TEA rates varies by age (see Figure 8).

FIGURE 6
EFFECTS OF RECENT JOB GROWTH AND POPULATION DENSITY ON ENTREPRENEURSHIP—2000-2002

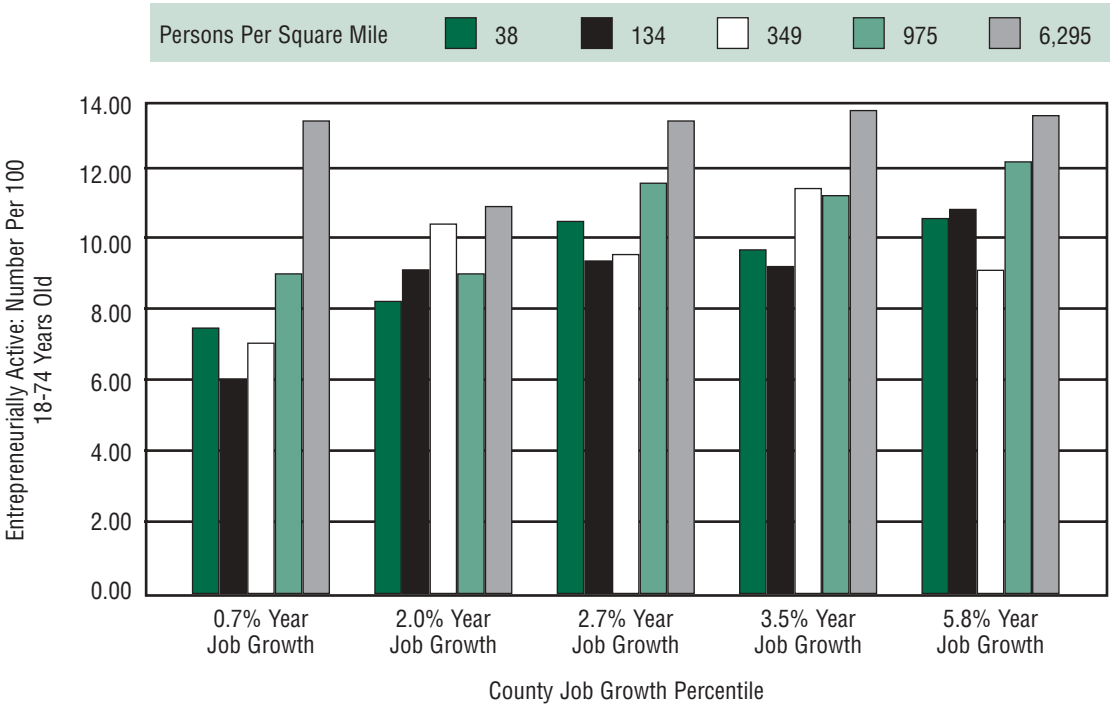


FIGURE 7
EFFECTS OF RECENT JOB GROWTH AND POPULATION DENSITY ON PERCEPTION OF OPPORTUNITY—2000-2002

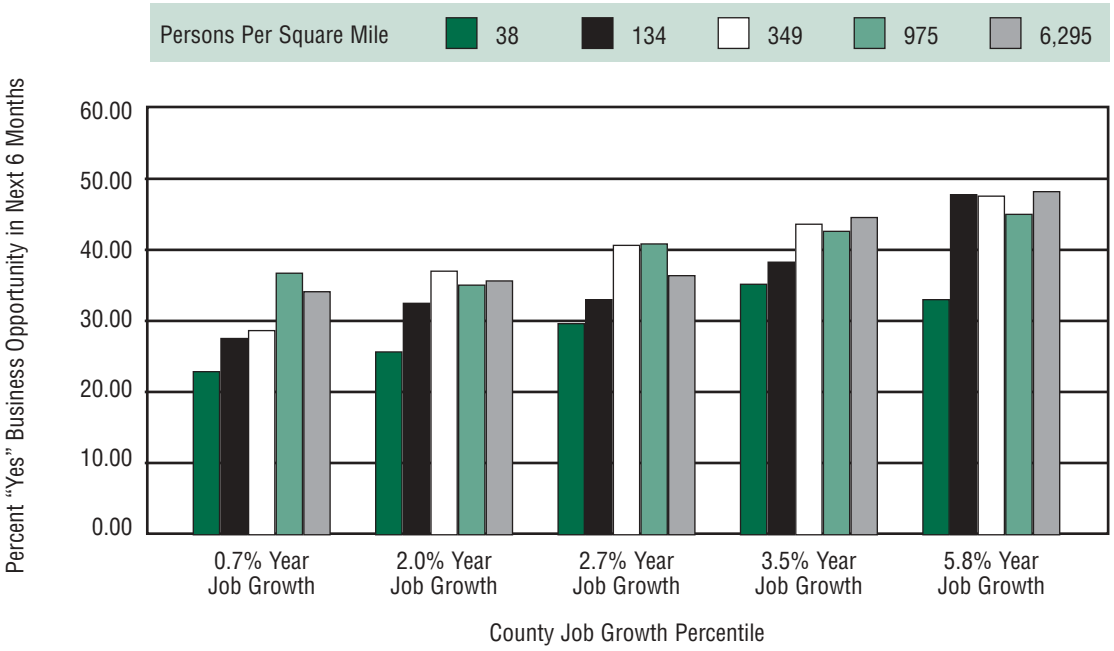


FIGURE 8
TEA RATES BY GENDER

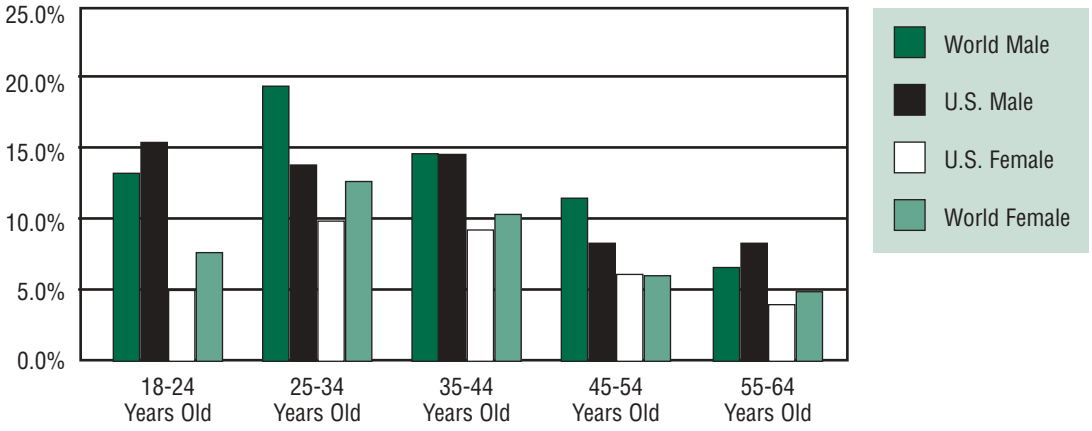


FIGURE 9
NASCENT TEA RATES BY GENDER

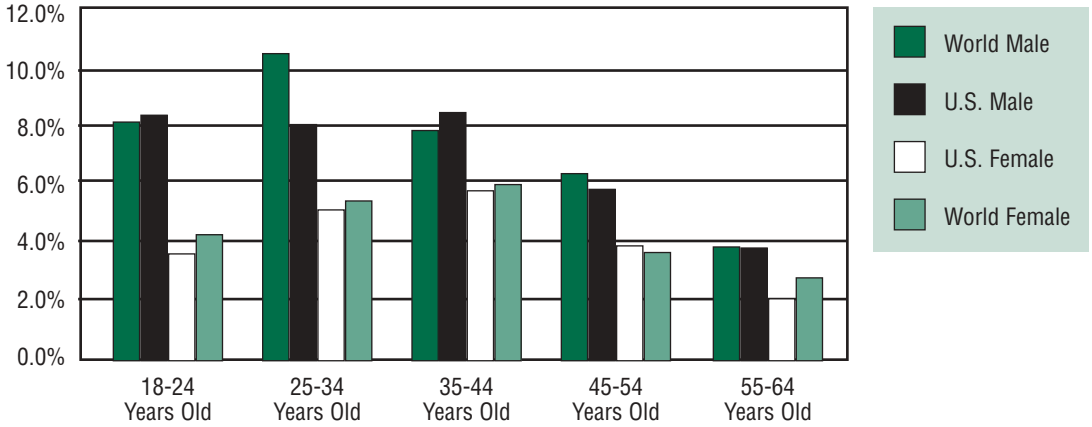
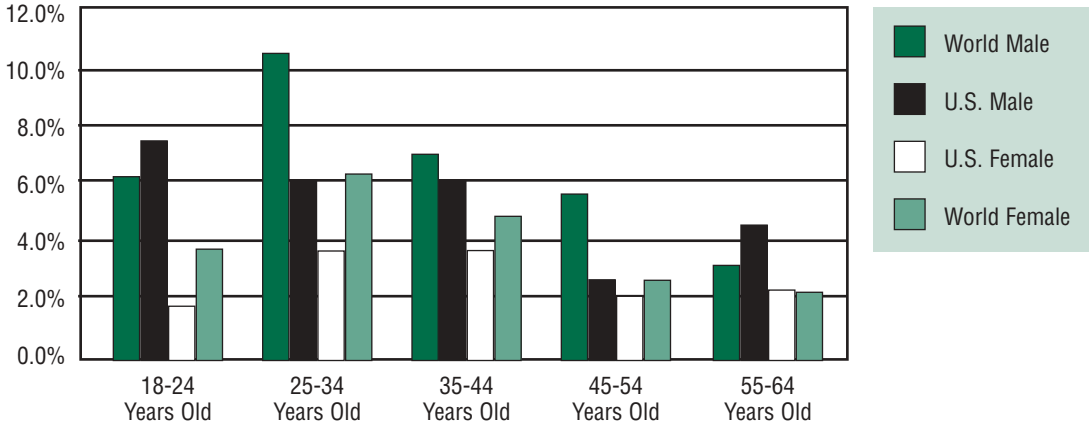


FIGURE 10
NEW FIRM TEA RATES BY GENDER



Although the overall ratio is 1.6 men for every woman, it is much more pronounced in the 18- to 24-year-old category where U.S. men are three times as likely to be entrepreneurs as are women. U.S. women tend to become actively engaged in entrepreneurship later in life than U.S. men, who tend to be more active in their earlier years compared with the worldwide average. Between the ages of 25 and 44, the TEA rate for U.S. women is almost 10 percent. One possible explanation is the type of entrepreneurship in which U.S. men are engaged. For instance, many young men might have self-employed ventures in the construction and trade industries. These industries require less education and experience to successfully launch.

Figure 9 and Figure 10 capture the relative nascent and new firm TEA rates by gender. The nascent and new firm TEA rates move in a similar manner to the overall TEA rates; however, the 55 to 64 age category differs for both genders. There are more new businesses in this age category than nascent entrepreneurs; an intuitive finding given that this age group is most likely to be involved in, rather than in pursuit of, entrepreneurship.

Nascent female entrepreneurs are most prevalent in the 25 to 34 age group; approximately 7 percent of women in this category are actively pursuing a start-up. New business formation rates, however, are highest for women ages 35 to 44 (4 percent). Nascent male entrepreneurs, on the other hand, are not prevalent in any particular category. Rather, nascent male entrepreneurs are strong across all age groupings up to 44 years old. Nascent male entrepreneurship decreases in later age categories, as does the number of new businesses. In general, both men and women are most involved in entrepreneurial activity beginning in their late 20s through their early 40s.

EDUCATION

The more education an American has, the more likely the person will pursue entrepreneurship. As shown in Figure 11, the TEA rate increases with more education, peaking at 11 percent for those with post-secondary degrees. The TEA rate drops for those Americans who have graduate experience. The U.S. relationship differs from the world TEA totals. For the world totals, high TEA rates are most prevalent for those without a high school degree. This is primarily attributable to the high necessity rates in less developed countries. Furthermore, world TEA rates continue to increase with education, whereas U.S. rates fall for the highest education level.

Although overall necessity TEA rates are low in the United States, the highest necessity rates are found among those without a high school degree (1.7 percent versus the overall average of 1.0 percent). This implies that those with more education are less likely to be forced into necessity entrepreneurship.

FIGURE 11
TEA RATES BY EDUCATION

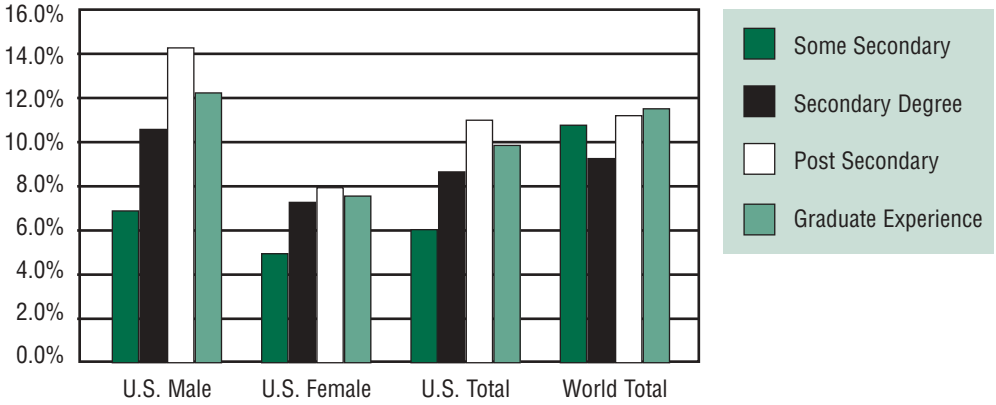
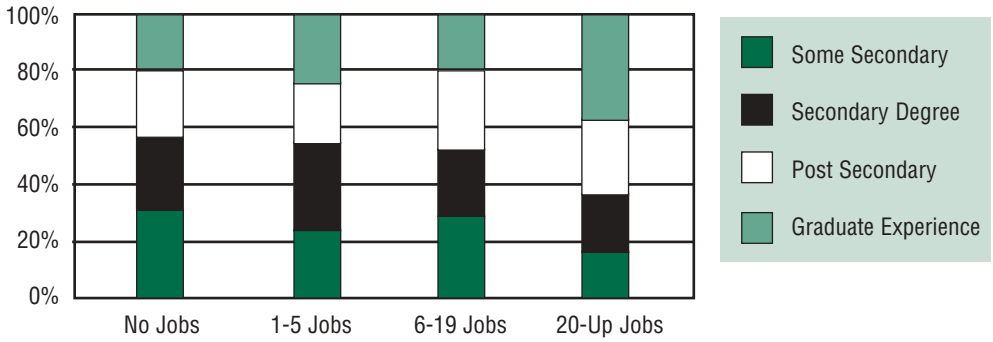


FIGURE 12
JOB CREATION IN 5 YEARS BY EDUCATION



Respondents were asked to estimate the number of additional jobs (besides the founder) that their entrepreneurial venture would have in five years. The more educated the entrepreneur, the more jobs they expect to create (see Figure 12). Although self-employment is a worthy cause, those entrepreneurs who create jobs have a greater impact on the economy. Almost 30 percent of those entrepreneurs with less than a secondary education expect to remain self-employed, as opposed to more than 35 percent of the most highly educated entrepreneurs who expect to employ more than 20 people by year five.

HOUSEHOLD INCOME

Based on the level of household income, respondents to the adult population survey were divided into thirds. Global findings reveal that the higher the income level, the higher the TEA rate (13.1 percent). The world average for the lowest third is next highest at 11.1 percent, while the middle third is 7.7 percent. The U.S. averages are almost the mirror opposite of the global results, with the middle third having the highest TEA rate of 11.2 percent (Figure 13). The explanation for this disparity is that the United States is predominately opportunity-based. The world average for the lower third is high due to the influence of necessity-based entrepreneurship and the lack of equity capital available outside the United States. Equity capital is confined to personal resources and close family members. Thus, those in the richest third are better able to fund their own ventures.

Although the middle third is highest in the overall U.S. TEA rate, the greatest percentage of new firm owners is in the upper third. The greater level of new firm ownership by higher-income individuals may partially be explained by the likelihood that higher-income individuals have (or have access to) the seed financing needed to launch a business. The more income a family earns, the more likely they are to personally know an entrepreneur, who not only provides a role model for launching a venture, but may also act as an informal adviser. For example, only 28 percent of people in the lower third personally knew an entrepreneur, compared to 50 percent in the middle third and 72 percent in the upper third (Table 1). Furthermore, nascent entrepreneurs and new business owners are more apt—than the population as a whole—to know other entrepreneurs. Thus, the upper third has more advantages for actually launching business than the rest of the population.

TABLE 1
PERCENTAGE OF ADULTS WHO KNOW ENTREPRENEURS

	Total Sample	Entrepreneurs
Lowest Income	28.4%	58.1%
Middle Income	50.3%	67.7%
Upper Income	71.9%	67.8%

Expert Opinion and Entrepreneurial Framework Conditions

Since 1999, GEM has built a compelling story supporting the notion that total entrepreneurial activity is a function of "entrepreneurial framework conditions."[2] This year, structured questionnaires were completed by expert informants who had been interviewed for the U.S. GEM in previous years. This section highlights the expert view on the state of entrepreneurship in the United States.

STRENGTHS AND WEAKNESSES

Figure 14 provides a quick scorecard of the United States' performance within the entrepreneurial framework conditions during the past three years compared with other participating GEM countries in 2002. Overall, the United States has seen few significant changes during the past three years. The framework conditions, with the exception of financial support, are perceived as stronger than ever. The perceived strength of education and training in 2002 is viewed by the experts as a positive force. They suspect that the United States is experiencing the result of the surge in entrepreneurship education during the past 10 years.

Table 2 shows the United States' ranking on each entrepreneurial framework condition. The United States is the lead country in financial support, education and training, and culture and social norms, but its areas for improvement appear to be in government policy and programs that support new and growing firms, and barriers to entry.

During interviews, experts were asked to identify three critical issues facing entrepreneurship in the United States. Responses are coded to capture the experts' views of both the strengths and weaknesses of entrepreneurship in the United States. Table 3 and Table 4 reflect the interview responses of the U.S. experts versus the average response of experts from all participating GEM countries.

As Table 3 reflects, the United States' greatest strength lies in its culture followed by government policies and financial support. The U.S. pattern closely parallels the world pattern, yet the greatest source of variance separating the United States from others is financial support. Though access to physical infrastructure was not mentioned as a critical issue during the interview process of past years, the survey results indicate the United States is quite strong relative to the world in terms of communications, roads, and basic utilities (see Figure 14). Given the United

FIGURE 13
TEA BY INCOME

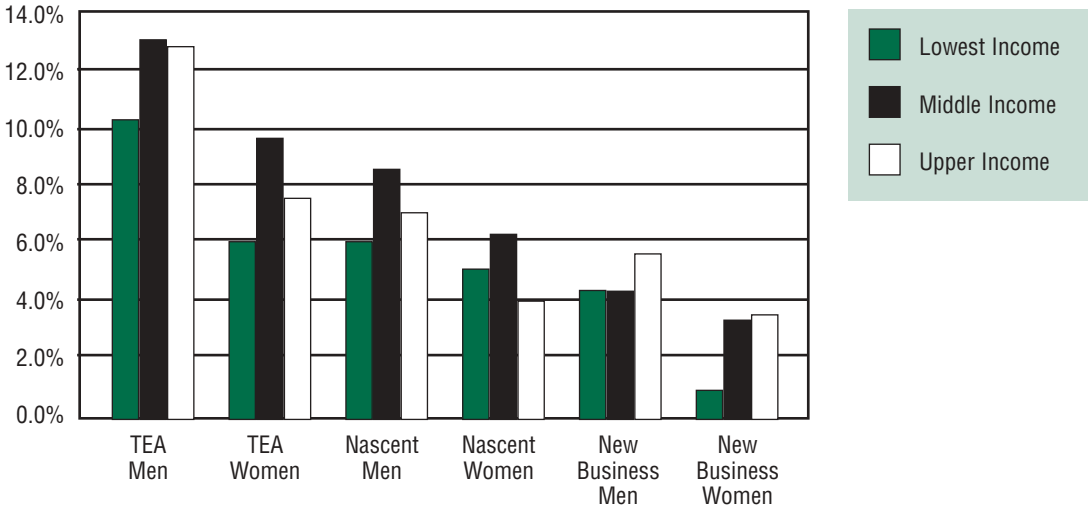
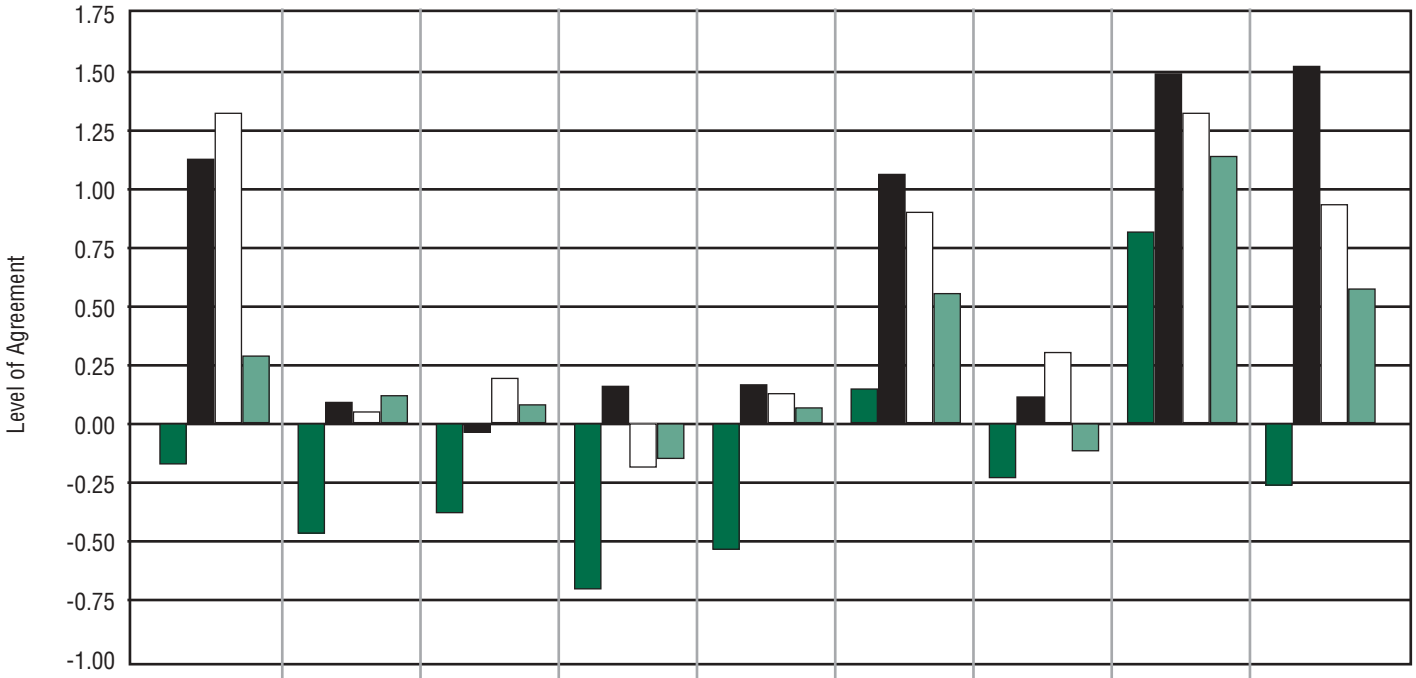


FIGURE 14
ENTREPRENEURIAL FRAMEWORK CONDITIONS



	Financial Support	Government Policies	Government Programs	Education and Training	R&D Transfer	Commercial/ Professional Infrastructure	Barriers to Entry Market	Access to Physical Infrastructure	Cultural and Social Norms
GEM 2002	-0.18	-0.48	-0.37	-0.72	-0.51	0.13	-0.23	0.83	-0.26
U.S. 2002	1.12	0.07	0.00	0.13	0.16	1.06	0.11	1.49	1.52
U.S. 2001	1.30	0.04	0.19	-0.19	0.15	0.91	0.32	1.33	0.92
U.S. 2000	0.31	0.12	0.07	-0.16	0.10	0.54	-0.10	1.15	0.57

States' obvious strengths in this area, infrastructure rarely appeared in the face-to-face interviews as an issue of discussion.

Table 4, however, suggests that the areas of weakness in the United States mirror the areas of strength. The contradiction is not surprising. Areas of strength, such as financial support, need to be improved and, as economic growth continues to be slow, the entrepreneurship community will continue to feel the effect of the ever-shrinking pool of available capital. Education and training emerged as a greater weakness than strength among the experts, signaling that the field of entrepreneurship remains an emerging but necessary discipline at all education levels. Quantity of programs developed over the past 10 years does not necessarily reflect quality.

A more in-depth look at the data will help make sense of the apparent contradictions in Table 3 and Table 4. The following sections detail select entrepreneurial framework conditions that emerged as significant strengths and/or weaknesses.

FINANCIAL SUPPORT

Financial support determines the availability of

TABLE 2
U.S. RANK ON ENTREPRENEURIAL FRAMEWORK CONDITIONS

Framework Condition	U.S. Rank	Higher Ranked Countries
Financial Support	1	—
Government Policies	6	Singapore, Hong Kong, France, Ireland, Iceland
Government Programs	9	Ireland, Singapore, Germany, Canada, Chinese Taipei (Taiwan), Finland, Denmark, France
Education and Training	1	—
R&D Transfer	3	Canada, Chinese Taipei (Taiwan)
Commercial/Professional Infrastructure	2	Canada
Market Openness/Barriers to Entry	8	Chinese Taipei (Taiwan), China, Korea, Iceland, Hong Kong, Japan, New Zealand
Access to Physical Infrastructure	2	Canada
Cultural and Social Norms	1	—
Countries Reporting = 34		

TABLE 3
U.S. NATIONAL STRENGTHS

	TEA 2002	Financial Support	Government Policies	Government Programs	Education and Training	R&D Transfer	Commercial/ Professional Infrastructure	Barriers to Entry Market	Access to Physical Infrastructure	Cultural and Social Norms
World Average	6.9	X	XXX	XX	XXX	X	X	XX	X	XXXXX
United States	10.5	XXX	XXX	X	XX	X	X	X	X	XXXXXXXX

Note: "X" = about 5% of the row total; n=40, based on face-to-face interviews

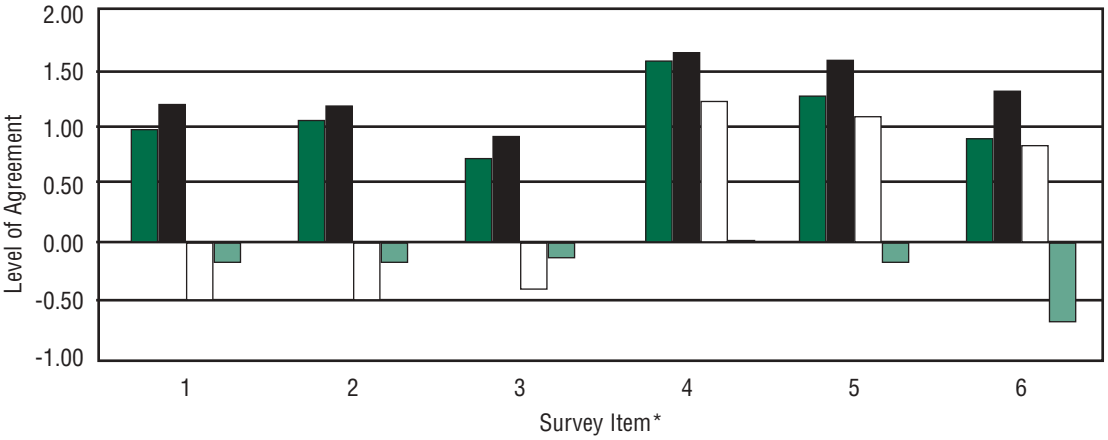
TABLE 4
U.S. NATIONAL WEAKNESSES

	TEA 2002	Financial Support	Government Policies	Government Programs	Education and Training	R&D Transfer	Commercial/ Professional Infrastructure	Barriers to Entry Market	Access to Physical Infrastructure	Cultural and Social Norms
World Average	6.9	XXXX	XXXX	X	XXX	X	X	X	X	XXXX
United States	10.5	XXXXX	XXXX	X	XXXXX	X	X	X	*	XX

Note: "X" = about 5% of the row total; *=less than 2.5% of the row total; n=40, based on face-to-face interviews

financial resources, including grants and subsidies; equity; and debt for new and growing firms. Expert confidence in the sources of start-up and growth financing has decreased slightly from 2001. As expected, financial support for new and growing firms is strong in the United States relative to the world average (see Figure 15), but the decrease is due to a sluggish economy and more conservative or traditional investment approaches. Venture capital flows declined 60 percent in the United States.[3] An impressive 5 percent of the U.S. population has made informal investments (angel) in entrepreneurial ventures, which is relatively unchanged from 6 percent in 2001. The United States ranks seventh in percentage of adults investing in new firms; only Iceland, Mexico, Thailand, China, Korea, and Norway have a greater percentage of their populations investing in entrepreneurial ventures.

FIGURE 15
FINANCIAL SUPPORT—UNITED STATES VS. OTHER GEM COUNTRIES



U.S. 2002
U.S. 2001
U.S. 2000
Other GEM Countries 2002

*Items:
1. There is sufficient equity funding available.
2. There is sufficient debt funding available.
3. There are sufficient government subsidies available.
4. Private individuals (other than founders) are an important source of financial support.
5. Venture capitalists are an important source of private support for new and growing firms.
6. Initial public offerings are an important source of equity.

GOVERNMENT SUPPORT

Government support includes the extent to which government policies are size-neutral or encourage new and growing firms. This includes such things as taxes and regulations imposed on business, and the possible variation of these based on organization size. Second, government support includes the presence of direct programs at all levels of government, both national and local, to assist new and growing firms. In general, the U.S. government is supportive of entrepreneurial activity. People in the United States are free and able to start a business. Taxes, as reported in previous GEM reports, continue to burden small and growing businesses. The tax issue is often stated as one of unequal treatment between small and large firms. On a more positive note, government policies and programs that support entrepreneurship are stronger than the world average. Ongoing analysis of existing programs is essential to meeting the needs of the small and growing business—the driver of job creation (see Figure 16 and Figure 17).

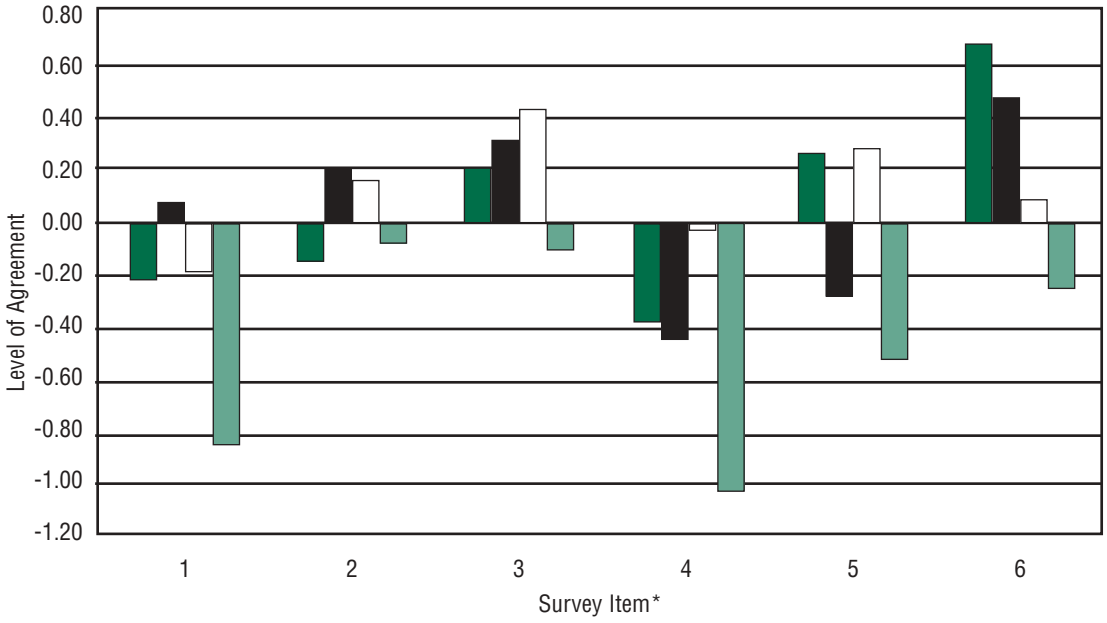
EDUCATION AND TRAINING

Education and training refers to the extent to which all levels of the education system are effective in providing instruction and experience in the creation or management of new, small, or growing businesses. The United States continues to be a world leader in entrepreneurship education and training. The United States is ranked first in post-secondary education, and second only to Canada in primary and secondary education.

Though the United States is a leader in entrepreneurship education, GEM experts were very critical of its state of practice. Experts had varying levels of disagreement with survey items involving primary and secondary education (see Figure 18). As reported in the United States assessment last year, there is a need to increase entrepreneurship education in K-12 levels.

A couple of trends in entrepreneurship education are worth noting. First, there is the growing number of entrepreneurship courses offered in higher liberal arts education. Colleges primarily

FIGURE 16
GOVERNMENT POLICIES—UNITED STATES VS. OTHER GEM COUNTRIES



U.S. 2002
U.S. 2001
U.S. 2000
Other GEM Countries 2002

*Items:
1. Government policy consistently favors new firms.
2. Support of new and growing firms is high priority for policy at the national government level.
3. Support of new and growing firms is high priority for policy at the local government level.
4. New firms can obtain most of the required permits and licenses in about one week.
5. The amount of taxes is not a burden.
6. Taxes and other government regulations are applied to new and growing firms in a predictable and consistent way.

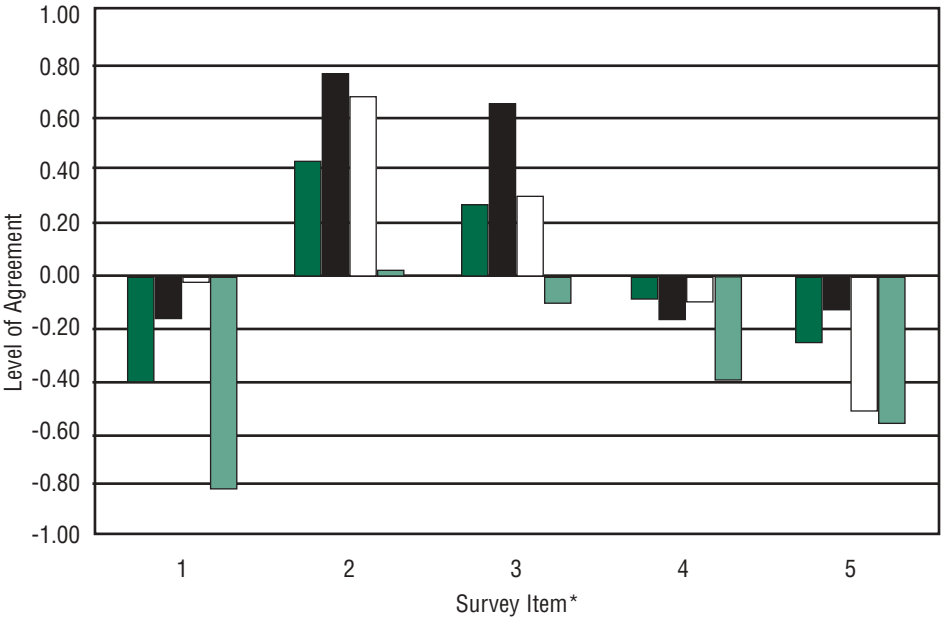
known for liberal arts are adding entrepreneurship courses to increase their offering of "practical" education.[4] The exponential growth in entrepreneurship education is evident. In 1970, there were 16 courses in entrepreneurship nationwide; today there are more than 1,500 entrepreneurship courses offered at U.S. universities and colleges.[5]

The trend in online education will likely have an impact on entrepreneurship education. Courses will reach a broader audience and, thus, have a farther-reaching impact. Web-based education is a powerful forum that is expected to play an increasingly important role, as technology can be used to create and expand educational opportunities and access. With 120,000 students currently enrolled in online degree programs, growth forecasts indicate that 10 percent of higher education enrollments will be online by 2007.[6] Many universities and colleges are trying to stake a claim in the market, but transferring traditional course content to virtual space is proving difficult. Future GEM reports will continue to monitor the effect of online learning models on entrepreneurship education.

RESEARCH AND DEVELOPMENT TRANSFER

Research and development transfer is the extent to which national research and development will lead to new commercial opportunities, and whether or not these are available for new, small, and growing firms. The federal government spent $81.6 billion for federal research, including grants and contracts during 2001.[7] However,

FIGURE 17
GOVERNMENT PROGRAMS—UNITED STATES VS. OTHER GEM COUNTRIES



U.S. 2002
U.S. 2001
U.S. 2000
Other GEM Countries 2002

*Items:

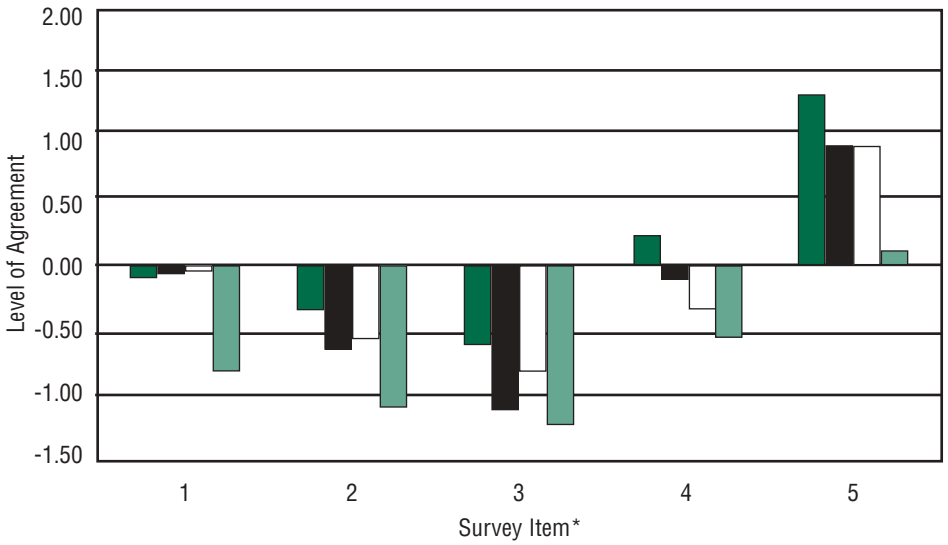
1. A wide range of government assistance for new and growing firms can be obtained through contact with a single agency.
2. Science parks and business incubators provide effective support for new and growing firms.
3. There are an adequate number of government programs for new and growing businesses.
4. The people working for government agencies are competent and effective in supporting new and growing firms.
5. Almost anyone who needs help from government programs for new and growing businesses can find what they need.

experts believe that new and growing firms do not have access to the latest technology, nor can they afford the latest technology. Thus, the emphasis here needs to be on transfer from the labs to the private sector. Specific pieces of legislation have been enacted since 1980 to encourage not only invention but also commercialization and availability to the private sector. More recently, Congress passed the Technology Transfer Commercialization Act in 2000. The legislation is designed to assist federal agencies in licensing technology created in federal facilities such as government research labs, but little is known about its effectiveness. If small business cannot keep pace with the technology accessible to the large, deep-pocketed corporations, the impact on the small, new, and growing businesses could be detrimental (see Figure 19).

CULTURAL AND SOCIAL NORMS

The national culture determines the extent to which existing social and cultural norms encourage or do not discourage individual actions that may lead to new ways of conducting business or economic activities, which, in turn, lead to greater dispersion of wealth and income. Through this framework condition, the entrepreneurial orientation of a country can be assessed. The United States ranks first in culture, which is indicative of the country's distinct entrepreneurial orientation. The culture of the United States is one of seeking opportunity, pursuing adventure, and taking risks. Figure 20 shows distinct and positive increases on support, self-sufficiency, and risk-taking, respectively. The entrepreneurial culture of the United States has always been, and continues to be, a strong and differentiating factor when compared with other GEM countries.

FIGURE 18
EDUCATION AND TRAINING—UNITED STATES VS. OTHER GEM COUNTRIES



*Items:

1. Teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative.
2. Teaching in primary and secondary education provides adequate instruction in market economic principles.
3. Teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation.
4. Colleges and universities have enough courses and programs in entrepreneurship.
5. The level of business and management education is truly world-class.

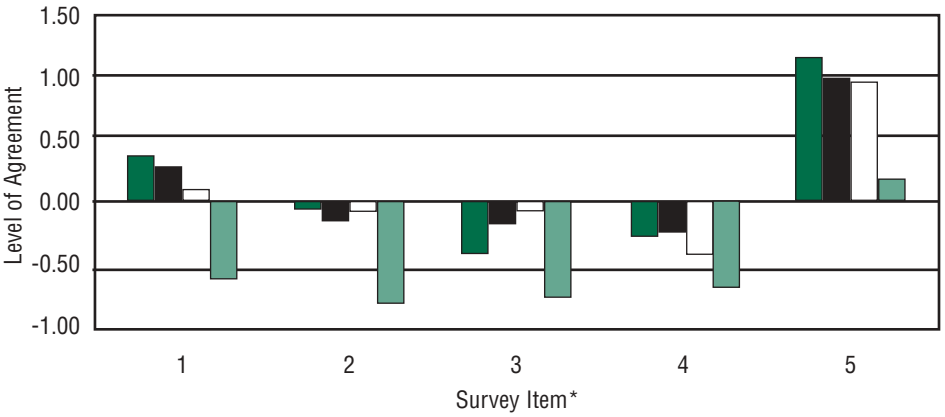
Classic Venture Capital[8] and Informal Investment

When fewer new businesses are being started, the demand for financing should decrease. As expected, the decline in entrepreneurial activity in 2002 was accompanied by a fall in financing activity. The amount of informal investment declined by 19.5 percent, from $129 billion in 2001 to $104 billion in 2002; the amount for classic venture capital dropped by 59.6 percent, from $101 billion in 2000 to $41 billion in 2001.

The precipitous fall in classic venture capital investment was caused by the huge disappointments in the performance of high-technology companies—especially those in the information technology sector—that were backed by venture capital in the 1998-2000 period. It was compounded by disasters that hit IT giants. Some, such as WorldCom and Global Crossing, went bankrupt, while others such as Lucent and Nortel suffered dramatic setbacks. Stock prices collapsed as highly publicized setbacks of IT companies panicked investors. Consequently, the window for initial public offerings (IPOs) in the IT sector nearly slammed shut in 2001 and remained barely ajar in 2002. In 2001, there were only seven IPOs of venture-capital-backed IT companies, down from 83 in 2000 and 155 in 1999. The pace slowed even more in 2002. To make matters worse, valuations of venture-capital-backed companies that were merged with other companies continued to decline from an average of $221 million per company in 2000 to $51 million in 2001 and to $25 million in 2002.

The abysmal performance in the IT sector has battered the returns on venture capital funds because they are so heavily invested in that sector. As

FIGURE 19
RESEARCH AND DEVELOPMENT TRANSFER—UNITED STATES VS. OTHER GEM COUNTRIES

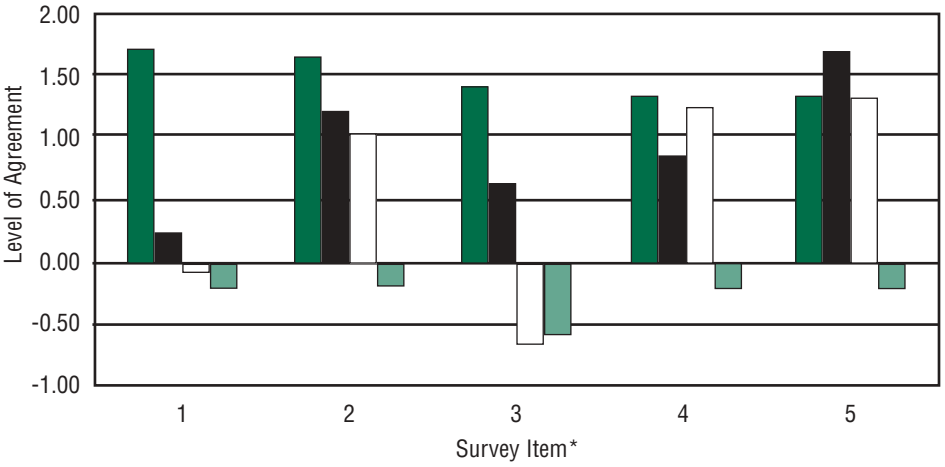


U.S. 2002
U.S. 2001
U.S. 2000
Other GEM Countries 2002

*Items:

1. New technology, science, and other knowledge is efficiently transferred from universities and public research centers to new and growing firms.
2. New and growing firms have just as much access to new research and technology as large established firms.
3. New and growing firms can afford the latest technology.
4. There are adequate government subsidies for new and growing firms to acquire new technology.
5. The science and technology base efficiently supports the creation of world-class, new technology-based ventures in at least one area.

FIGURE 20
CULTURAL AND SOCIAL NORMS—UNITED STATES VS. OTHER GEM COUNTRIES



U.S. 2002
U.S. 2001
U.S. 2000
Other GEM Countries 2002

*Items:

1. National culture is highly supportive of individual success achieved through own personal efforts.
2. The national culture emphasizes sufficiency, autonomy, and personal initiative.
3. The national culture encourages entrepreneurial risk taking.
4. The national culture encourages creativity and innovativeness.
5. The national culture emphasizes the responsibility that the individual (rather than the collective) has in managing his or her life.

venture capital returns plunged under water and stayed submerged, venture capitalists put much less money in the IT sector, with investment falling from $88.6 billion in 2000 to $32 billion in 2001.

Disappointing as 2001 was for classic venture capital, it was still the third-best year on record for the amount invested. Besides, compared with other GEM nations, the United States ranked fourth in the amount of classic venture capital per GDP (Figure 21).

In 2001, the total amount of classic venture capital invested by domestic firms in GEM nations was $59 billion, of which $40.6 billion (69 percent) was invested in the United States and $18.4 billion (31 percent) in the other 30 nations. The distribution of classic venture-capital-backed companies among the GEM nations is shown in Figure 22. Of these companies, 3,798 (20 percent) are located in the United States and 14,973 (80 percent) are in other countries. There was a 28 percent drop in the number of companies located in the United States from 2000 to 2001.

Although only 20 percent of the companies are in the United States, they garner 69 percent of the venture capital invested in all the GEM nations. The average amount invested per company in the United States was $10.7 million compared with just $1.2 million outside the United States. (Figure 23). The amount invested per company in the United States fell by 44 percent, from $19.2 million in 2000 to $10.7 million in 2001.

The relatively huge disparity among nations in the amount invested in each company implies a lack of competitiveness among foreign companies competing with U.S.-based companies. The cost of starting and growing a business in, for example, France, Germany, Japan, The Netherlands, Sweden, and the UK, is probably about the same as in the United States, but on average, companies inside the United States have much more venture capital. In addition, the U.S. domestic market for products and services of venture-capital-backed companies is substantially larger. It seems that, on average, companies outside the United States—

FIGURE 21
DOMESTIC CLASSIC VENTURE CAPITAL INVESTED AS A PERCENT OF GDP

FIGURE 22
NUMBER OF COMPANIES RECEIVING DOMESTIC CLASSIC VENTURE CAPITAL—1999-2001

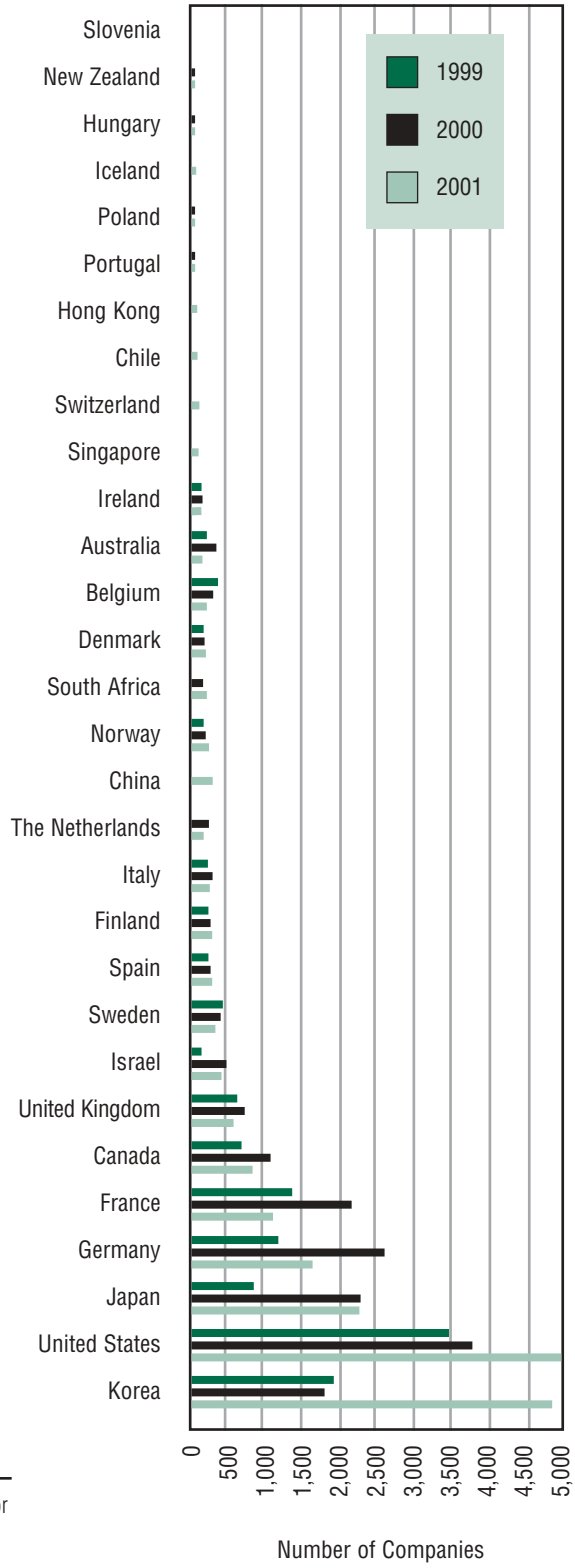


FIGURE 23
AMOUNT OF DOMESTIC CLASSIC VENTURE CAPITAL INVESTED PER COMPANY

TABLE 5
AMOUNT OF VENTURE CAPITAL INVESTED BY STAGE ($ MILLION)

Stage	1997		1998		1999		2000		2001	
Seed/Start-up	1,372	8.5%	1,850	8.6%	3,328	6.1%	3,101	2.9%	826	2.0%
Early-Stage	3,487	21.7%	5,438	25.3%	12,101	22.2%	25,878	24.4%	9,271	22.8%
Expansion	8,173	50.9%	10,840	50.5%	30,278	55.6%	60,992	57.6%	23,025	56.7%
Later	3,031	18.9%	3,333	15.5%	8,731	16.0%	15.938	15.0%	7,497	18.5%
Total	16,063	100.0%	21,461	100.0%	54,438	100.0%	105,910	100.0%	40,619	100.0%

none more so than those competing in global high-technology markets—are at a serious disadvantage compared with their U.S. counterparts.

One of the most discouraging trends for entrepreneurs in 2000 and 2001 was the sharp decline in the amount of classic venture capital invested in companies in the seed and start-up stage (Table 5). In 2001, only 2 percent of classic venture capital was invested in those two stages combined, down from 2.9 percent in 2000, 6.1 percent in 1999, and 8.6 percent in 1998. The proportion of classic venture capital invested in companies in the seed and start-up stage has been on a steady decline since 1981 when it was 26 percent of all the venture capital invested (Figure 24). In contrast, the proportion of early-stage investment has held fairly steady over the same period.

When the amount of classic venture capital in the United States increased from around 0.08 percent of the GDP in 1995 to 1.02 percent in 2000—a thirteen-fold increase in just five years—its positive effect on the economy was very noticeable. Its initial impact on the economy is very swift because the bulk of classic venture capital is used to add employees to companies that are growing rapidly or to purchase goods and services from vendors, which also add more employees to cope with the increased demand. Conversely, when venture capital investments fell from 1.02 percent of GDP to 0.4 percent—a drop of 60 percent in 12 months—the negative effects were brutal, as was seen in some new economy sectors such as Internet-related industries.

FIGURE 24
AMOUNT OF SEED/START-UP AND EARLY-STAGE INVESTED AS A PERCENT OF ALL VENTURE CAPITAL—1980-2001

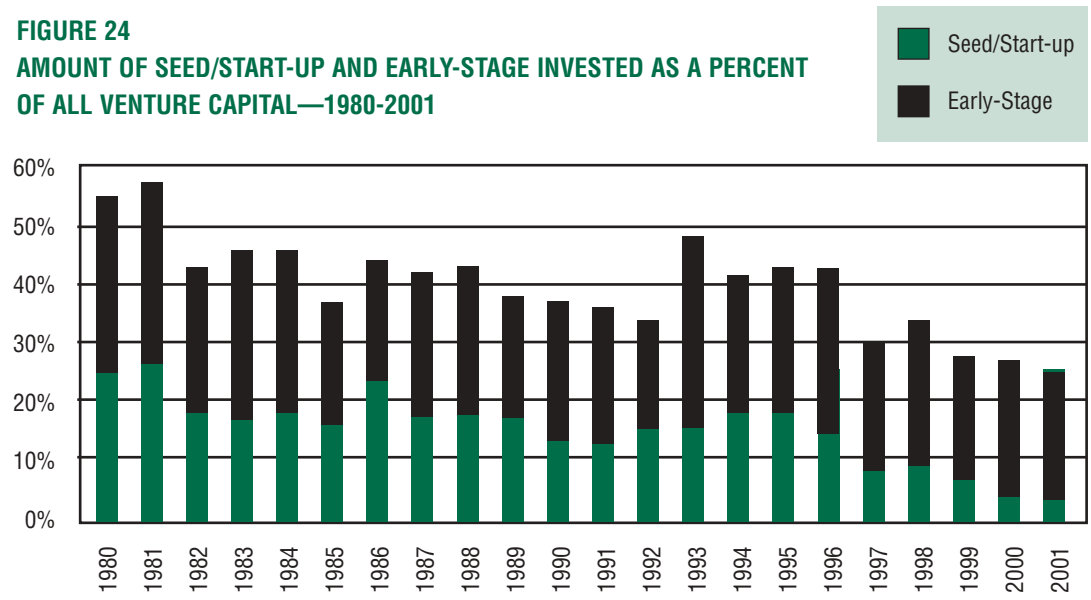
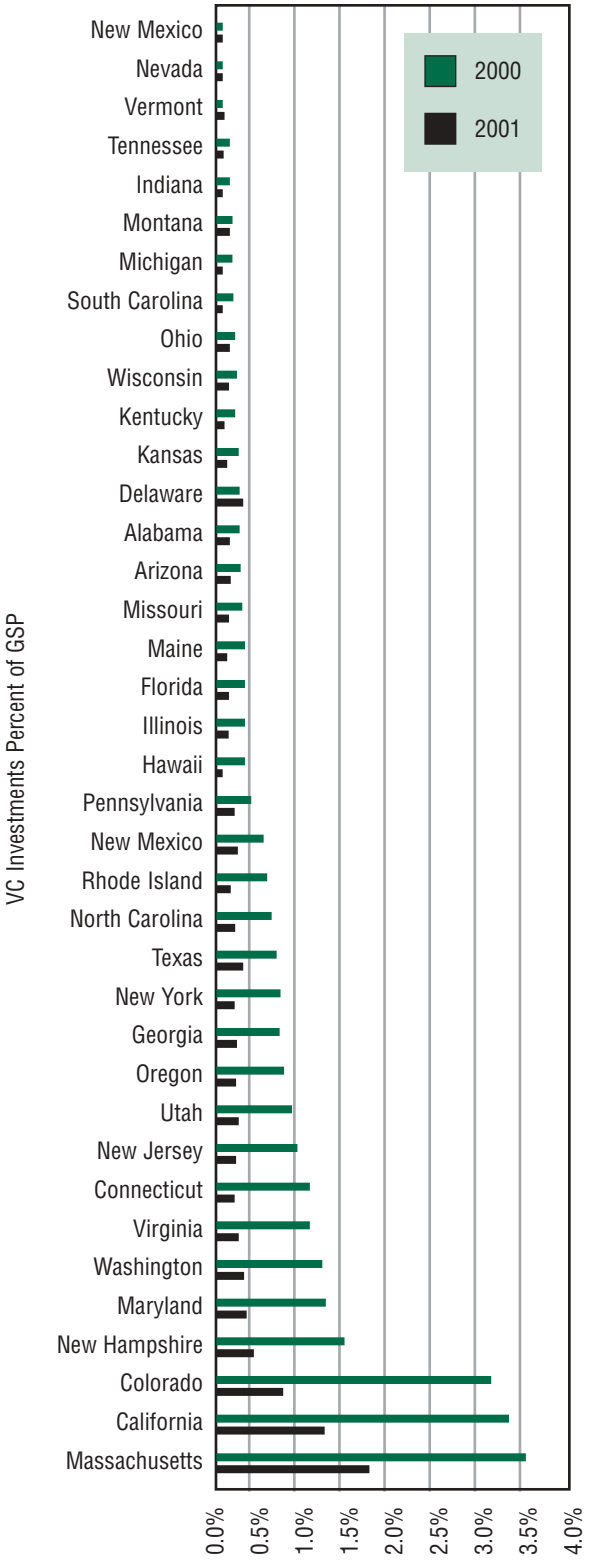


FIGURE 25
VENTURE CAPITAL INVESTMENTS AS A PERCENT OF GROSS STATE PRODUCT



Because venture capital investment is heavily concentrated geographically, its immediate economic impact is regional. The top 10 states in descending order, California, Massachusetts, New York, Texas, Colorado, New Jersey, Virginia, Washington, Georgia, and Maryland, accounted for more than 80 percent of the investment in 2001, with two-thirds going to the top five states, and a whopping 50 percent to the top two—numbers that are almost the same as in 2000.

To look at the impact of venture capital on a state's economy, the amount of venture capital invested as a percentage of a state's gross state product (GSP) is shown in Figure 25. What a difference a year makes. Almost every state had a sharp decline in classic venture capital invested within the state. None more so than California, where the classic venture capital fell from 3.4 percent of GSP to 1.3 percent. In Colorado, classic venture capital fell from 3.2 percent to 0.9 percent, and in Massachusetts, from 3.6 percent to 1.8 percent. Falls of this magnitude had a very noticeable impact on the economy in these states. Because venture-capital-backed companies are clustered regionally in locations such as Silicon Valley and eastern Massachusetts, the economic effect of the precipitous decline in venture capital was dramatic.

INFORMAL INVESTORS

Informal investment is a crucial component of the entrepreneurial process. For instance, according to an analysis of *Inc.* magazine's 2002 list of the fastest-growing private companies in the United States, 14 percent of the companies started with less than $1,000, 41 percent with $10,000 or less, and 51 percent with $20,000 or less. Fewer than 2 percent started with venture capital.[9] Small investments primarily by the so-called 4Fs—founders, family, friends, and foolhardy strangers—are crucial in funding not only micro-companies but also future superstars. In comparison, formal venture capital is very rare at the seed stage of a new venture. For example, several million Americans are nascent entrepreneurs attempting to start new ventures. However, in a typical year, only a few hundred of them have for-

FIGURE 26
DOMESTIC INFORMAL AND CLASSIC VENTURE CAPITAL INVESTMENTS AS A PERCENT OF GDP

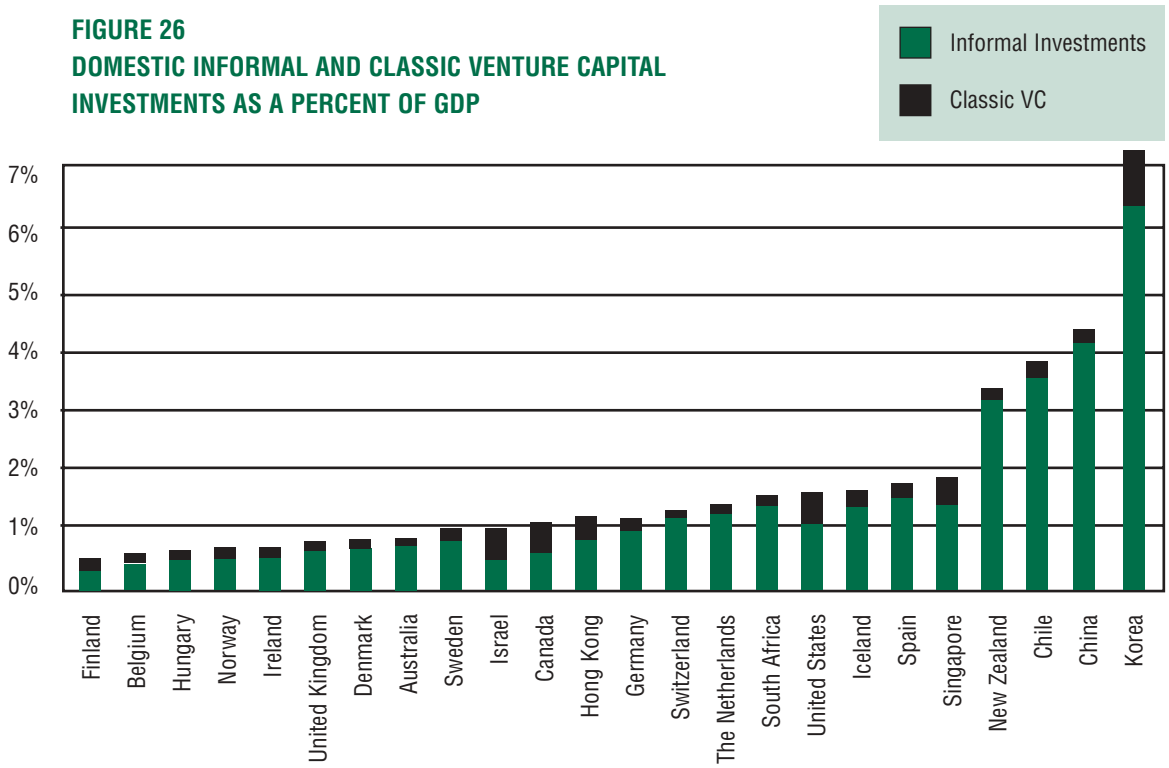


TABLE 6
INFORMAL INVESTMENT U.S. 2002—AVERAGE INVESTED PER YEAR

25th Percentile	$300
50th Percentile	$1,667
75th Percentile	$5,000
90th Percentile	$20,000
95th Percentile	$40,500
99th Percentile	$255,000

TABLE 7
INFORMAL INVESTMENT BY AGE GROUP—PERCENT OF INVESTORS BY AMOUNT INVESTED

Annual Amount Invested	Age of Investors		
	18-34	35-54	55 & Older
$333	36.4%	30.3%	21.6%
$334 - $1,667	31.2%	22.4%	8.1%
$1,668 - $16,667	26.0%	36.8%	51.4%
$16,668	6.5%	10.5%	18.9%
	100.0%	100.0%	100.0%

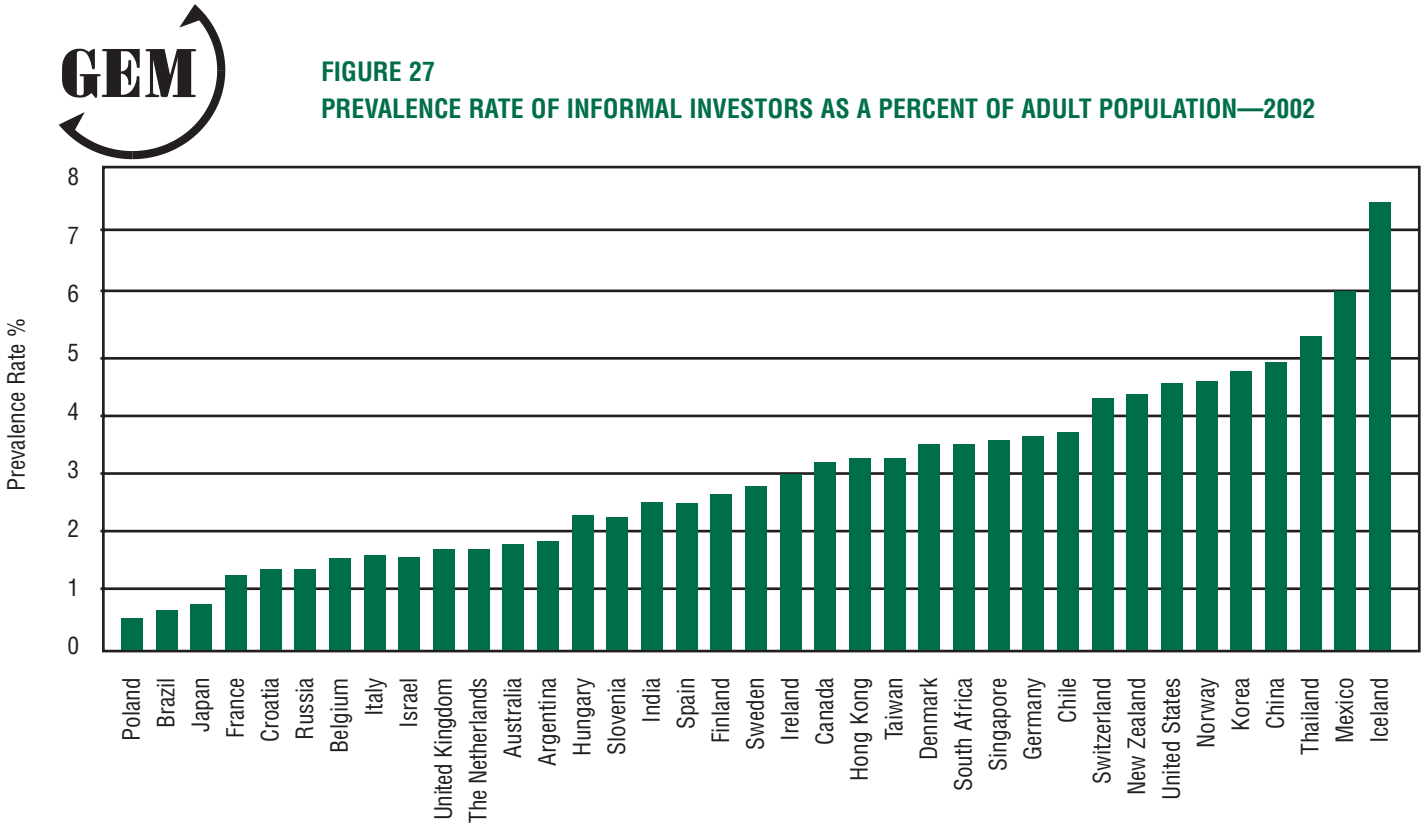
TABLE 8
INFORMAL INVESTORS U.S. 2002—RELATIONSHIP TO INVESTEE

Close Family	44.6%
Other Relative	6.5%
Work Colleague	8.6%
Friend/Neighbor	27.7%
Stranger	6.8%
Other	5.8%
	100.0%

mal venture capital in hand when they launch their businesses.

In every nation except Israel, the amount of informal investment handily exceeded the amount of classic venture capital (Figure 26). For all the GEM nations, informal investment was 89 percent of informal and classic venture capital combined; for the United States, it was 72 percent.

Not only is informal investment by far the largest source of financing for seed-stage companies, it is



also widespread throughout the population. In 2002, 4.6 percent of U.S. adults were informal investors, which was the highest rate among the G7 nations (Figure 27).

Most informal investments are small, with the 50th percentile at $1,667 annually. But some investors invest large sums, with the 99th percentile at $255,000 (Table 6).

While informal investors are abundant in all age groups, the older investors are more likely to invest larger amounts (Table 7).

Approximately 50 percent of informal investments are made in companies owned by relatives (Table 8); only 7 percent of investments go to strangers.

Conclusions

Entrepreneurship impacts the world. According to the GEM Global Executive Report 2002, the 37 countries involved in GEM represent 62 percent of the world's population and 92 percent of the world's GDP.[10] The United States continues to be an entrepreneurial power, ranking in the top third of all GEM countries while leading the G7 countries. In a tough era of a slowing national economy and world economic and political hardship, entrepreneurship remains a beacon in the United States. Though the surge of entrepreneurship from 1998 through 2000 was an exciting time for aspiring and practicing entrepreneurs, the economic reality of the past two years has weakened the confidence of nascent entrepreneurs. The majority of the decrease in the U.S. TEA rate in 2002 is due to the decline in nascent entrepreneurship. This segment of the entrepreneurially active population must be encouraged and financially supported to pursue opportunities. The United States experiences a "social loss" when many individuals desire to start a business and never follow through.

Overall, the findings of GEM 2002 highlight areas of focus for policy-makers seeking to maintain or increase the levels of entrepreneurial activity in the United States, and for researchers seeking to understand the entrepreneurial phenomenon:

- ***Entrepreneurship education can facilitate greater levels of female participation in entrepreneurship.*** GEM found that the more education an American has, the more likely the person will pursue entrepreneurship. The TEA rate peaks for women with a postsecondary degree. Statistics for current enrollment in higher education indicate that women have and will continue to have a majority representation. In 2001, 57 percent of all bachelor's degrees were awarded to women.[11] Given this trend, we suspect a greater number of women will pursue business degrees and may likely pursue entrepreneurship.

  Programs and organizations supporting women in entrepreneurship are prevalent and effective, but these have traditionally targeted older women currently in the workforce. Given that women ages 18 to 24 are three times less likely than men to pursue entrepreneurship, focus on female entrepreneurs should be expanded to include young women pursuing college degrees. New venture courses focusing on women's issues in entrepreneurship should be offered to encourage and support the pursuit of entrepreneurship.

- ***Overemphasis of venture capital in entrepreneurship education.*** 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 emphasis on family and friends. Some examples where evidence of this can be found include: new venture syllabi at leading business schools; 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.

- ***Research is needed on informal investment.*** In recent years, research on formal venture capital has increased substantially, as has 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, 5 percent on IPOs, and 3 percent on business angels, but only 1 percent dealt substantially with informal investors other than business angels. Ironically, the most researched topics on funding sources are the least useful to nascent entrepreneurs.

- ***Entrepreneurship is an urban phenomenon.*** There is continuing evidence that entrepreneurship levels are highest in urban areas of the United States. Therefore, it should be noted that entrepreneurship in rural areas may not be the best mechanism for economic growth.

- ***Unrealistic portrayal of entrepreneurship falsely encourages nascent entrepreneurs.*** The media gives more prominence to the heroes of entrepreneurship—highlighting their successes and giving little attention to the challenges and complications of starting and growing a business. The social good of entrepreneurship could be advanced if reality was emphasized over glamour. The challenge lies in reducing the social cost (e.g. individuals' time and money) of the pursuit of entrepreneurship, yet encouraging people to start businesses in a responsible fashion.

The United States is well-poised for an economic rebound. Our entrepreneurial strengths are a benchmark for most GEM nations. As a whole, Americans see more opportunities, and this is reflected in the TEA rate. Supporting nascent entrepreneurs, understanding the informal investment community, and increasing the strength of entrepreneurship education programs will increase the level of entrepreneurial activity in the future. Realignment of priorities is necessary for economic growth in the United States. There is a need now, more than ever, to focus on building sustainable businesses while not focusing on the "venture capital funded IPO quick hit" that was so prevalent over the past few years. Building sustainable businesses will lead to long-term job creation and economic growth, the hallmarks of entrepreneurship.

Appendix: The GEM Conceptual Model

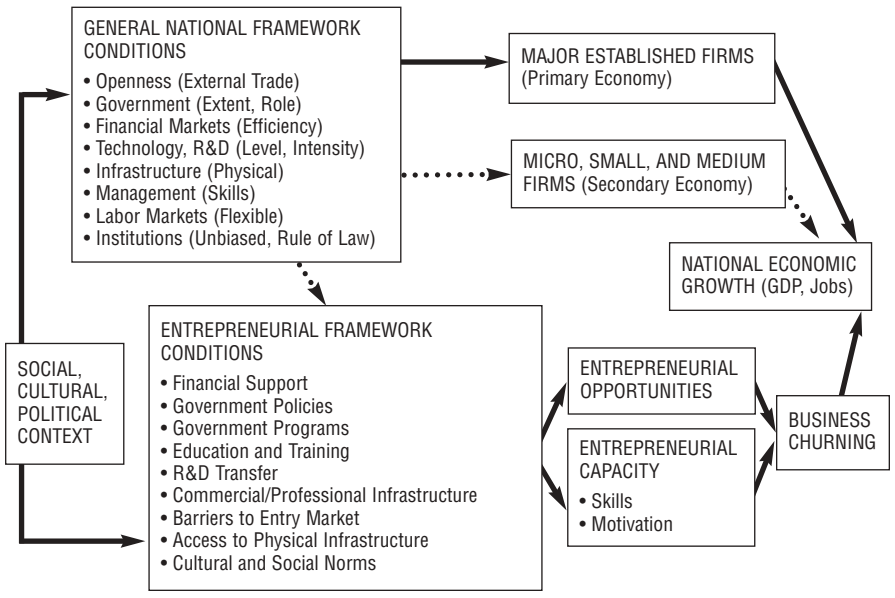
The GEM Conceptual Model (see Figure 28) identifies the causal mechanisms impacting a country's economy and the complex relationship between the variables. The GEM model has been and will continue to be adjusted as future research builds knowledge regarding entrepreneurial activity and how it relates to national economic growth.

The **social, cultural, and political context** encompasses a range of factors that have been shown to play an important role in shaping a country's national framework conditions. **General national framework conditions** include the role of government, the level of research and development, the quality and strength of the physical infrastructure, the efficiency of the labor market, and the efficiency and robustness of legal and social institutions. The role of **major established firms** is important, as they provide national representation on a global level. The national framework conditions affect the competitiveness of the major established firms. As competitiveness increases, demand increases, and this increases opportunities for **micro, small, and medium firms**.

Entrepreneurial framework conditions are composed of nine conditions that shape the overall perception of entrepreneurial opportunities available in an economy, and the capacity to exploit such opportunities. The entrepreneurial framework conditions include financial support, government programs, government policies, education and training, research and development transfer, barriers to entry or market openness, infrastructure, and cultural and social norms. **Entrepreneurial opportunities** refer to the existence and perception of market opportunities available for exploitation. **Entrepreneurial capacity** refers to the motivation of individuals to start new firms and the extent to which they possess the skills required to adequately pursue them. **Business churning** encompasses the processes whereby new firms start, grow, contract, or die.

Finally, **national economic growth** incorporates a number of standard economic measures, including growth in GDP, changes in employment, and per capital income. The continual economic churn associated with the birth, death, expansion, and contraction of business firms has been shown to relate closely to the rate of job creation.[12] It is assumed that as the rate of economic churn increases, the rate of economic growth will increase as well.

FIGURE 28
GEM CONCEPTUAL MODEL



End Notes

[1] The nascent and new business rate is greater than the overall TEA rate because some new business owners are pursuing a second new business simultaneously.

[2] National framework conditions include 1) financial support, 2) government policies, 3) education and training, 4) cultural and social norms, 5) government programs, 6) research and development transfer, 7) commercial and professional infrastructure, 8) barriers to entry/market openness, and 9) access to physical infrastructure.

[3] Reynolds, P., Bygrave, W. D., Autio, E., Cox, L. W., & Hay, M. (2003). Global Entrepreneurship Monitor: 2002 Executive Report. Babson College, London Business School, and the Ewing Marion Kauffman Foundation.

[4] "Colleges discover a new liberal art: entrepreneurship," *The Boston Globe*, Shari Rudavsky, November 10, 2002, B9.

[5] Charney, A. and Libecap, G. (2000) "Impact of Entrepreneurship Education." Ewing Marion Kauffman Foundation.

[6] Statement of Stephen G. Shank, Chancellor of Cappella University, to the Senate Committee on health, education, labor, and pensions. Capital Hill hearing testimony on September 26, 2002.

[7] Report to the United States General Accounting Office, "Federal Agency Efforts in Transferring and Reporting New Technology," John B. Stephenson, October 31, 2002.

[8] Classic venture capital comprises investments in seed, early start-up, and expansion-stage companies.

[9] Singer, Thea. "Who's Running the 500?" *Inc.* Magazine: 15 October 2002. http://www.inc.com/magazine/20021015/24767.html.

[10] Reynolds, P., Bygrave, W. D., Autio, E., Cox, L. W., & Hay, M. (2003). Global Entrepreneurship Monitor: 2002 Executive Report. Babson College, London Business School, and the Ewing Marion Kauffman Foundation.

[11] Hacker, Andrew (2003) "How the B.A. gap widens the chasm between men and women." *The Chronicle of Higher Education*, June 20, Section 2: B10-12.

[12] Reynolds, P. 1999. "Creative Destruction: Source of Symptom of Economic Growth?" In Acs, Z. et al. (eds), *Entrepreneurship, Small and Medium-Enterprises and the Macroeconomy*. Cambridge, UK: Cambridge University Press, pp 97-136.

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