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2000 UK Executive Report

Global Entrepreneurship Monitor

2000 UK Executive Report

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Foreword

Ernst & Young are proud to have sponsored both the Global and the UK reports of the 2000 Global Entrepreneurship Monitor (GEM).

The UK GEM report provides important insights into the relationship between entrepreneurial activity and economic growth in the UK. Increased understanding of the factors that help promote and stimulate entrepreneurial activity should help the work of policy makers and others interested in creating an entrepreneurial society in the UK.

Within this brief foreword I would like to highlight just three areas from the UK GEM report.

The first is that the level of entrepreneurial activity in the UK during 2000 was similar to that of 1999 and remained well below the levels of activity enjoyed in North America and Australia. Whilst this might appear to be disappointing I am encouraged that in 2000 there were perceived to be twice as many opportunities to start new business in the UK compared to 1999. Since there is a significant correlation between perceived good opportunities in one year and emerging entrepreneurial activity in the following year, the findings suggest that, all other things being equal, the UK is set to enjoy an increased level of entrepreneurial activity in 2001. However the dot-com fever that captured the imagination of the public during the first quarter of 2000 may have added to the perceived opportunities, and the subsequent movements in the capital markets with the resulting reduction in valuations of technology stocks will no doubt impact activity in 2001.

Second, the report supports the view that as a nation we must do more to encourage entrepreneurial activity in the UK. The Government has already taken some positive steps toward this objective. I would encourage the Government to give further tax incentives beyond those in EIS and similar schemes and to also provide equivalent incentives for non-taxpayers, such as pension funds, to encourage them to invest in venture capital and thus indirectly in entrepreneurial businesses. In the private sector, I would like to see an increase in venture capital funding, expressed as a percentage of GDP, to that enjoyed in the USA. Moreover I would encourage the venture capital community in the UK to follow the example set by their counterparts in the USA and increase their appetite to fund innovative early stage businesses rather than solely concentrating on their traditional management buy in / buy out focus.

Finally, I am encouraged that almost 80% of adult respondents in the UK agreed that entrepreneurs were respected in their communities. This represents a significant increase from the 40% of last year and brings the UK closer to levels seen in the rest of Europe. However, more must be done to create a culture supportive of enterprise in the UK and it would be pleasing to think that the Entrepreneur Of The Year awards programme which Ernst & Young launched in 1999 has, in its own way, contributed to the change over the past couple of years.

The UK has yet to reach the levels of entrepreneurial activity enjoyed in the USA and Australia, but I am sure that with the support of the Government and other influential communities, such as the venture capitalists, we are well on our way to creating an enterprise economy that will be the envy of the world.

David Wilkinson
National Head of Entrepreneurial Services
Ernst & Young

1 Executive Summary

The Global Entrepreneurship Monitor (GEM) project was created in 1997 under the joint leadership of London Business School and Babson College, the leading centre for entrepreneurship in the United States. At the project's heart lies a fundamental question:

What is the relationship between entrepreneurship and economic growth?

The first GEM report, published in July 1999, encompassed the G7 (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States) plus Denmark, Finland and Israel. This year coverage has been extended to include Argentina, Australia, Belgium, Brazil, India, Ireland, South Korea, Norway, Singapore, Spain and Sweden, bringing the total to 21 countries. Eight out of 15 EU members have been involved in GEM 2000. From the outset, GEM has been designed as a long-term large-scale enterprise which should, within the next two to three years, expand to include a total of 40 countries.

That a relationship exists and, more particularly, that there exists a causal connection between entrepreneurship and economic growth and prosperity has been widely assumed. But remarkably little is known about the nature of this relationship, its strength and manner of operation. While economic growth may be encouraged by entrepreneurship, there is a lack of understanding about how this occurs and what factors shape the process.

GEM aims to shed light on this. It does so by bringing together the world's best scholars in entrepreneurship, working in teams in each of the 21 participating countries. Together, these national teams assemble three sets of data: (a) specially designed surveys of the adult population in each GEM country; (b) in-depth interviews with experts on entrepreneurship in each country; (c) a wide selection of national data from a variety of sources, such as the World Bank and the IMF. For GEM 2000 more than 42,000 individuals were surveyed and 800 experts interviewed around the world. In the UK, 2,000 individuals were surveyed and 36 national experts were interviewed. In addition, the two regional GEM teams for Scotland and Wales have undertaken two separate studies investigating the same relationship between entrepreneurship and growth on a regional level.

Summary results of the global study were published in November 2000 in the *Global Entrepreneurship Monitor: 2000 Executive Report*. At the global level the findings for GEM 2000 may be summarised as follows:

- The level of entrepreneurial activity differs significantly between countries. In Brazil, 1 in every 8 adults is currently starting a business, compared to 1 in 10 in the US, 1 in 12 in Australia, 1 in 25 in the UK and Germany, and 1 in 100 in Ireland and Japan.
- Entrepreneurship is strongly associated with economic growth. Among nations with similar economic structures, the correlation between entrepreneurship and economic growth is 0.7 and is statistically significant. All countries with high levels of entrepreneurial activity have above average economic growth. Only a few high growth countries have low levels of entrepreneurial activity.
- Financial support is associated with the level of entrepreneurial activity. The availability of early stage finance is greater among countries with higher levels of entrepreneurial activity. The results show that venture capital investment in 1999 varied among countries from 0.52% of GDP in the US to 0.022% in Japan. More importantly, informal private investment is substantially higher than formal investment in new businesses. For example, GEM estimates that total private investment in entrepreneurial companies in the US for 1999 was $63 billion, substantially more than the $46 billion invested in start-ups and growing firms by professional venture capital firms.
- Education plays a vital role in entrepreneurship. If the level of participation in post-secondary education were the only factor used to predict entrepreneurial activity, it would account for 40% of the difference between GEM countries. Providing individuals with quality entrepreneurship education (i.e. training in the requisite skills for converting a market opportunity into a commercial enterprise) was consistently one of the top priorities identified by the experts interviewed in each of the 21 countries.
- There is a clear positive relationship among the 10 GEM 1999 countries between the perception of entrepreneurial opportunity in 1999 and the overall level of start-ups in 2000.
- Policies geared towards boosting entrepreneurial activity should not be confined to the entrepreneurial sector *per se*. Fundamental features of the wider economic system play a critical role in determining levels of entrepreneurial activity.
- The perceived social legitimacy of entrepreneurship makes a difference. GEM 2000 used a variety of measures to determine the level of respect in the community for those starting new firms. Two such indicators were (a) the extent to which fear of failure acts as a deterrent to starting a new firm, and (b) respect for those starting new firms. These and other measures indicate a fundamental difference in social and cultural values between countries with high levels of entrepreneurial activity and countries where entrepreneurship is not an integral feature of everyday life.

The present report focuses exclusively on the UK. Its aim is to present GEM 2000 UK findings; identify the principal differences between 1999 and 2000; assess the position of the UK relative to other GEM countries, particularly the US and continental European countries; and develop implications for public policy.

Bringing out the implications for policy is a fundamental aim. Enormous energy and considerable financial resources are devoted to developing policies and programmes geared to enhancing entrepreneurship in the UK. Hitherto, however, much of this work has been conducted in something of a vacuum, at least in terms of internationally comparative empirical data. The purpose of GEM is to provide such data, thereby creating a solid foundation on which public policy can be debated, developed and implemented.

Summary highlights of GEM 2000: UK

- The total level of entrepreneurial activity in the UK has remained relatively stable between 1999 and 2000, lying slightly above the European average but well below the North American and Australian averages. The Total Entrepreneurial Activity (TEA) index for the UK is 5.2, compared to over 12 in the US and over 10 in Australia. This means that about 1 in every 20 adults aged between 18 and 64 years of age are actively involved either in a start-up effort or a new firm, or both.
- Just under half as many women as men are trying to start a business in the UK, which is above the average for most European countries. However, Canada, Spain and Brazil all have higher ratios than the UK.
- Adults in the UK were twice as likely to indicate there would be good opportunities to start a business in the next six months in 2000, compared with 1999. However, the measures for Canada and the US are substantially higher, with many European countries such as Sweden, Denmark and Italy higher than the UK.
- Education in the UK is the most important factor of concern for the national experts. The UK is performing below the GEM 2000 average on the educational index.
- In 1999, 40% of the UK adult population agreed that entrepreneurs were respected in their communities. In 2000 this percentage is nearly double. After education, the development of a set of social and cultural norms conducive to entrepreneurship emerges as the second most important item identified by UK key informants. Among the adult population, 70% of the respondents in 2000 agree with the proposition that "starting a new business is a respected occupation in your community"; among European countries, only the evaluations in Israel and Ireland are lower.
- The amount of money provided to new businesses by informal investors was more than five times the amount invested in seed, start-up, early and expansion stage companies by professional venture capital funds.
- Government policies, though not identified as a critical issue by the national experts, were frequently discussed. For example, red tape, taxation and lack of labour market flexibility were all topics of concern for GEM 2000 UK.

2 Entrepreneurship in the UK: The Public Policy Context

The public policy backdrop for GEM 1999 UK was dominated by the Competitiveness White Paper: *Our Competitive Future: Building the Knowledge Driven Economy in the UK*. Writing in the Foreword, the Prime Minister, Tony Blair, affirmed the Government's commitment to enterprise, declaring that "in Government, in business, in our universities and throughout society, we must do more to foster a new entrepreneurial spirit." The White Paper set out a broad policy agenda. The way in which this agenda is being translated into action provides the setting for GEM 2000.

Taken together, the Budget presented in April 2000 and the Pre-Budget Statement published in November 2000 provide the best insight into how the Government is addressing the challenge of creating an entrepreneurial society. Rather than recap all the policy initiatives either taken or proposed, it is more useful to identify the key dimensions along which policy is developing; these dimensions provide a framework for both categorising policy initiatives and situating the key findings of GEM 2000. Six dimensions will be reviewed.

1 Finance An essential ingredient in starting a business is money. Often the amount needed is relatively small, but securing early stage finance often proves difficult, as is reflected in the long-running and continuing debate about the "equity gap" or the scarcity of financing sources of £500,000 or less.

In recognition of the critical role of finance, GEM 2000 devotes special attention to the topic (see chapter 7). For its part the Government has taken a series of initiatives:

- Creation of a Small Business Investment Task Force to advise on SME finance issues, in particular on how best to intervene in venture capital markets and on identifying and tracking the "investment gap".
- Establishment of Regional Venture Capital Funds in each region.
- Launch of the UK High Technology Venture Capital fund with a target of £125m.
- Improvements in the Enterprise Investment Scheme (total investment to date of £750m), and the Venture Capital Trust scheme (investment so far of £1billion).
- Introduction of a corporate venturing tax relief scheme from April 2000.

2 Taxation GEM 2000 builds on the first report of 1999 by examining the relationship between the broader aspects of an economic system and entrepreneurship; a key component of this is taxation, both corporate and personal. Here the Government has reduced the level of corporate tax for smaller firms; introduced capital gains tax tapering for individuals holding shares for more than four years; created an R&D tax credit; and tackled the problems that newer firms have in recruiting top flight employees through the Enterprise Management Initiative which extends the scope for issuing tax-favoured share options.

3 Research and development Much entrepreneurial activity revolves around the innovative exploitation of new ideas and technologies. Universities have a central role to play in this, as reflected in the Government's twin aims of strengthening the links between higher education and business and unlocking the latent commercial potential represented by much university research. The following measures are the result:

- £140m over three years made available through the Higher Education Funding Council for England to support the development of tighter links between the SME sector and higher education.
- £45m provided through the University Challenge Fund scheme to enable universities to set up early stage venture capital funds; a second round of funding worth an additional £15m is to follow.
- £29m through the Science Enterprise Challenge fund for the creation of six Institutes of Enterprise in the UK, with a further two being added in spring 2000 and an additional £15m being made available.
- Major investments in science through the Joint Infrastructure Fund and the Science Research Investment Fund, in both of which the Wellcome Trust is playing a significant role.

4 Education Education is a central feature of the GEM model and analysis. The importance of education in creating both the human capital needed to build a business and the intellectual capital on which many businesses are founded is addressed in chapter 8. Creating the human capital in terms of skilled and capable employees is a fundamental prerequisite of an entrepreneurial society.

Here the focus of policy is on:

- Improving basic skills in respect of literacy and numeracy, where the UK compares poorly with its principal industrial competitors.
- Combining this with efforts to enhance fundamental managerial skills, most immediately through the Council for Excellence in Management and Leadership.
- Creating the infrastructure for lifelong learning, spearheaded by learndirect (the brand-name for the University for Industry), which aims particularly to provide training to those who have fallen outside the educational mainstream.
- Boosting the Young Enterprise Programme, which exposes secondary school pupils to enterprise, and complementing this with the New Entrepreneur Scholarships which aim to provide aspiring young entrepreneurs in disadvantaged areas with the skills needed to translate their business ideas into reality.

5 Enterprise culture Culture is best understood as a pattern of beliefs, norms and values that are widely shared throughout society. An entrepreneurial culture is one characterised by positive attitudes towards entrepreneurs, celebration of their success and acceptance that failure is inherent in the risk taken by anyone engaged in trying to start a business. The Enterprise Insight Campaign, backed by the British Chambers of Commerce, the Institute of Directors and the Confederation of British Industry, aims to promote just such a culture by highlighting the role played by enterprise in creating jobs and economic prosperity; by encouraging innovation and risk-taking; and by recognising successful entrepreneurs and the companies they create. A key aim of this national campaign is to encourage more young people to consider taking the entrepreneurial route.

6 Programme coordination April 2000 marked the launch of the Small Business Service (SBS), with the broad aim of making the UK "the best place in the world to start and grow business by 2005". In pursuit of this, SBS has defined a set of specific objectives, including better coordination and rationalisation of support programmes; an increase in the number and quality of start-ups; the stimulation of innovation; a reduction in the risk of failure; and the promotion of enterprise across society so as to increase participation in entrepreneurship by women and by disadvantaged groups. Among the concrete measures taken are the restructuring of the Business Links service and investment in "Gateway", an online information and advice service.

As this brief overview makes clear, Government is pursuing a wide-ranging agenda, tackling the related issues of productivity and enterprise from a variety of different angles. But action has not been confined to Government. There has been a flurry of private sector initiatives. For example:

- In 1999 Ernst & Young launched the Entrepreneur Of The Year programme in the UK. This is a regional, national and international awards scheme which identifies and recognises the achievements of outstanding entrepreneurs in growing dynamic businesses. The programme celebrates entrepreneurial success and recognises the benefits of entrepreneurship for the economy in terms of job creation and the nation's competitiveness; in 2000, the second year in which the competition was run in the UK, 400 companies took part.
- The e-gameshow, *Who Wants to be an e-Millionaire*, launched by Channel 4, provided aspiring entrepreneurs with the chance to win early stage finance for their internet start-ups with co-investment by high profile companies such as Oxygen Holdings and Bright Station; of the thousands who applied, 15 finalists were selected to pitch their plans to an expert panel. The aim of the show is to widen the public appeal of entrepreneurship.
- The Fast Track 100 is a league table modelled in part on Inc.500 in the US, which sets out to identify the UK's top emerging, fast growth companies. This league table has spawned others, such as Profit Track 100, which selects the most profitable new businesses, and the proposed e-Track 100 which will identify the best e-businesses in the UK.

Taken together, these public policy measures, private sector initiatives and shifts in perception would suggest that the UK is becoming more entrepreneurial, that entrepreneurial role models are becoming more numerous and that an entrepreneurial culture is beginning to take root. Indeed a visitor to the UK would be struck by just how much is going on, at least on the surface. The aim of GEM is to get beneath the surface to determine (a) just how much entrepreneurial activity is happening – and who is involved, and (b) what really makes the difference in determining the entrepreneurial dynamism of a country. The policy initiatives summarised above share one aim: to boost enterprise in the UK. The GEM initiative is entirely complementary to this. The best way of ensuring the effectiveness of policy in this area is to develop a proper understanding of how the entrepreneurial process works and which factors are the most important.

3 Understanding Entrepreneurship: The GEM Model

As noted, the aim of GEM is to understand the relationship between entrepreneurship and economic growth and, by doing so, to create a framework within which effective policies can be developed and assessed. Otherwise, initiatives may simply proliferate and an inappropriate balance be struck between support for existing entrepreneurial activity and a system of incentives for more individuals to take the entrepreneurial route. In addition, a coherent model is required as a framework for data collection, analysis and interpretation.

The general model that provides the basis for GEM is illustrated in figure 1. It provides the framework within which key empirical relationships are assessed. Central to the model is the assumption that national economic growth is a function of two sets of interrelated activities: (a) those associated with major established firms – the upper causal path in the model; and (b) those related directly to the entrepreneurial process – the lower causal path in the model.

Major firms, often competing on a global scale, clearly make a major contribution to economic growth and prosperity. Their success is determined in part by the national context in which they operate, represented in the model by "General national framework conditions". A number of international research projects focus on the role of large established firms in economic development, notably *The Global Competitiveness Report*; the specific national framework conditions listed in figure 1 are adopted from this report.

The activities of large firms explain only part of the story behind variations in economic growth. Variations in the entrepreneurial process may also explain a significant proportion of the differences in economic prosperity between countries; this process is represented in the lower causal path in figure 1.

When considering the nature of the relationship between entrepreneurship and economic growth, it is helpful to distinguish between entrepreneurial opportunity and entrepreneurial capacity. What drives entrepreneurial activity is the perception of entrepreneurial opportunity combined with the skills and motivation – the capacity – to exploit it. When opportunity is combined with capacity, the outcome is the creation of new firms and some destruction of old ones; destruction since new firms will displace inefficient or ineffective existing firms.

This process, famously labelled "creative destruction" by Schumpeter, is captured in the model by "Business churning". Despite the negative connotation, "creative destruction" has a positive impact on economic growth as declining businesses are replaced by new start-ups competitively manoeuvring their way into the market.

These dynamic changes occur within a particular context, referred to in the GEM model as "Entrepreneurial framework conditions". These include key variables such as (a) the availability of finance, (b) government policies and programmes designed to support entrepreneurship, and (c) education and training for entrepreneurship. Economic growth therefore reflects both sets of processes, although the mix or relative contributions of each will vary between countries.

To assess the model, a wide variety of data was collected by the consortium of research teams working in each GEM country. First, a representative sample of 2,000 adults was interviewed in each country, using a standardised questionnaire translated into the native language(s) of each country. Respondents were asked precise questions about their involvement in, and attitudes towards, entrepreneurship. Second, a wide selection of standardised national data was assembled from a variety of sources such as the World Bank, United Nations, OECD and IMF. Third, each national team completed one-hour, face-to-face interviews with three dozen experts in their country; these experts were selected to represent the national entrepreneurial framework conditions referred to above. Fourth, each of the experts was asked to spend 15 minutes completing a brief questionnaire that provided a standardised assessment of important features of their country's entrepreneurial sector. Fifth, all national teams provided their own assessment of the current level of entrepreneurial activity in their country.

The result of this coordinated effort of data collection is an unprecedented portrayal of entrepreneurial activity in 21 countries. It provides standardised comparisons between countries and an opportunity to determine the unique features of the UK. In addition, data were also collected for Scotland and Wales; these comprised both adult population surveys and key informant interviews.

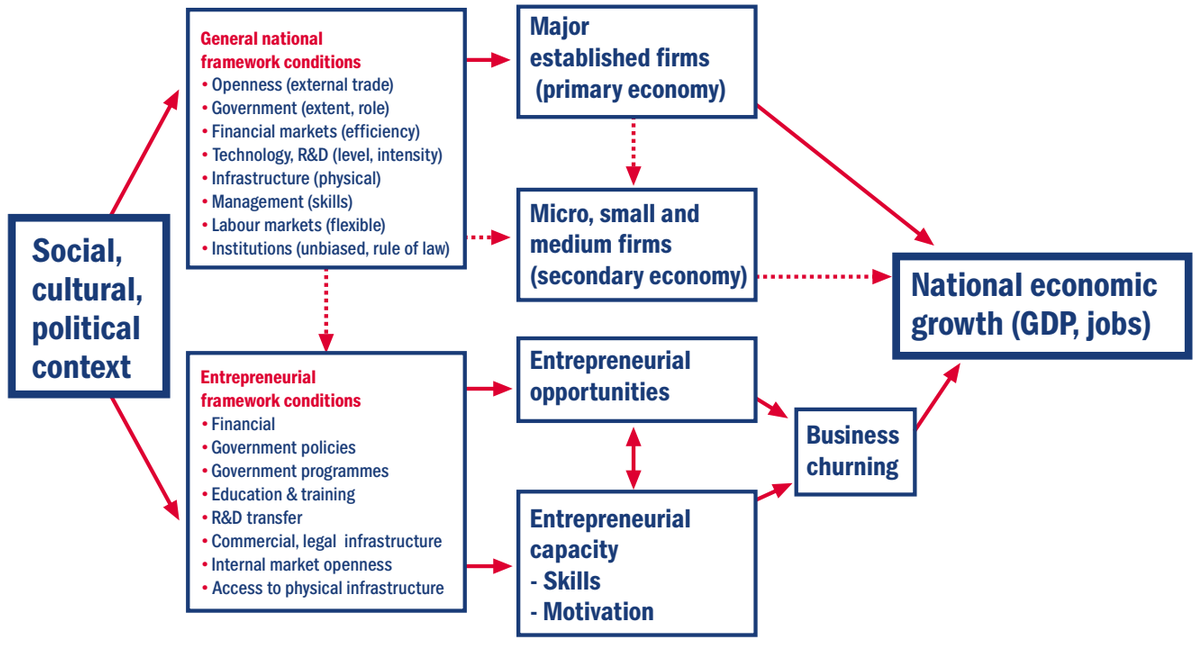


Figure 1 GEM conceptual model

4 Entrepreneurship and Economic Growth

Governments throughout the world have embarked on major programmes designed to boost entrepreneurship. Underpinning these programmes is a common assumption, namely that entrepreneurship is associated with economic growth. A central aim of GEM is to assemble evidence about this relationship: its strength, mode of operation and the scope that exists for influencing it. This is not an easy issue to address, however, for it is only recently that there has been a measurement procedure suitable for cross-national comparisons of entrepreneurial activity. The comparisons provide strong evidence for an association between the level of entrepreneurship and national economic growth. They also indicate that the UK has a level of entrepreneurship comparable to most European countries.

One of the key questions addressed by the GEM project is this: does the level of entrepreneurial activity vary between countries and, if so, by how much? Answering this question involves harmonised measures of both entrepreneurial activity and national economic growth. Standardised measures of national economic growth are readily available. The development of standardised measures of entrepreneurial activity was a major challenge for the GEM research programme. Careful attention had to be given to both an appropriate conceptual definition and a procedure for measuring the presence of entrepreneurial activity.

In surveys of the adult population, entrepreneurship was defined as "Any attempt at new business or new venture creation". Those involved in "nascent firms" were distinguished from owners of "new firms". The former were measured by asking a representative sample of the adult population aged 18–64 (the age range of the active workforce) if they were "starting a firm, alone or with others" or "starting a firm as part of their regular job". Those who said 'yes' to either or both questions then responded to additional items about this effort. If it was clear that they were currently active in the start-up effort, expected to own all or part of the new business, and had not paid salaries for more than three months, they were considered to be nascent entrepreneurs developing a nascent firm. The prevalence rate of such individuals among those aged 18–64 is presented in figure 2. The vertical bars indicate the 95% confidence interval, which reflects the accuracy of the estimates. Where the vertical bars overlap, the differences between the countries are not statistically significant. There is no statistically significant difference, therefore, between the UK and Finland, Sweden, Israel, Denmark, Spain, Italy, India and Germany.

Several things are apparent from figure 2. First, there is considerable range in the prevalence rate, from 1.2% – or 1 in 80 – for Japan and Ireland to over 10% – or 1 in 10 or less – for Brazil and the United States. An eightfold difference. Second, the UK, at 3% – or 1 in 33 – is typical for most European countries.

A similar procedure was used to identify those involved in new firms. These individuals had to be active managers of the firms, own at least part of the new firm and report that they had paid salaries and wages for up to 42 months. The prevalence rates of new firm owners is provided in figure 3. The pattern is similar to that among the nascent firm principals. There is a substantial range from the low end to the high end and the position of the UK, at about 2% or 1 in 50 adults, is typical for European countries.

A combined measure was created by identifying individuals who were involved either with a nascent or a new firm. Those individuals who qualified for both, about 6% of the total, were counted only once. This slightly understates the overall level of activity. The resulting prevalence rates for the Total Entrepreneurial Activity (TEA) index are provided in figure 4. Again there is substantial variation, from 1.6% to 16%, with the UK in the middle group with about 1 in 20 of those aged 18–64 being entrepreneurially active. The level of the TEA index for the UK does not show a statistically significant difference from that of eight other countries: Sweden, Finland, Israel, Spain, Denmark, Germany, Italy and India.

Determining the relationship between the level of entrepreneurial activity and national economic growth is simplified by the existence of substantial efforts to measure economic growth. The projected percentage increase in GDP for the year 2000 used in this analysis is taken from the projections developed by the International Monetary Fund.

Assessing the relationship between growth and indigenous entrepreneurship is complicated by the presence of countries where national economic growth may be dramatically affected by external factors. Three of the 21 GEM

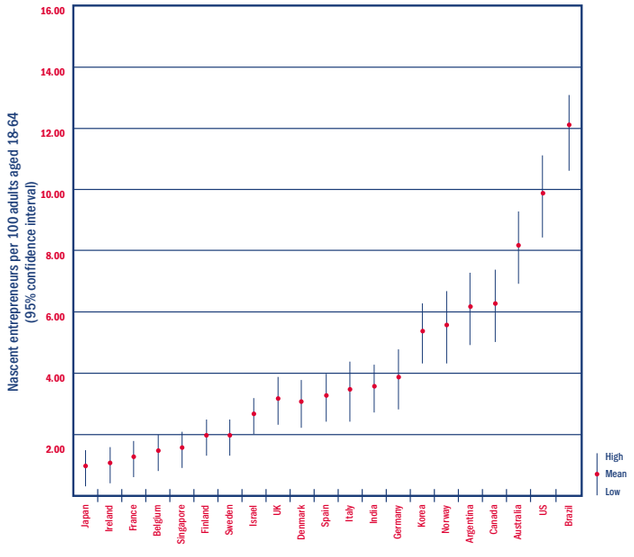


Figure 2 Prevalence rates of nascent entrepreneurs by country (per 100 adults aged 18–64, 95% confidence interval)

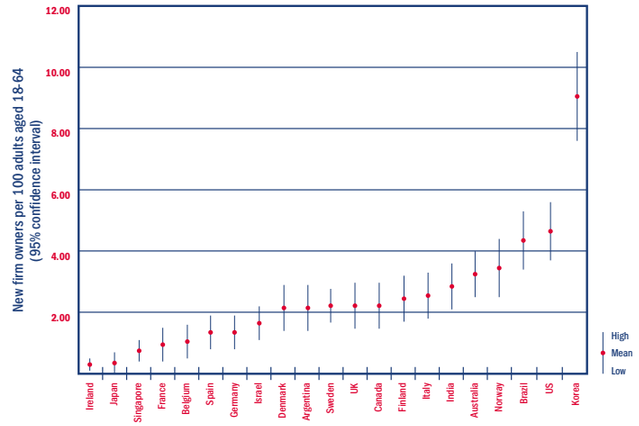


Figure 3 Prevalence rates of new firm owners by country (per 100 adults aged 18–64, 95% confidence interval)

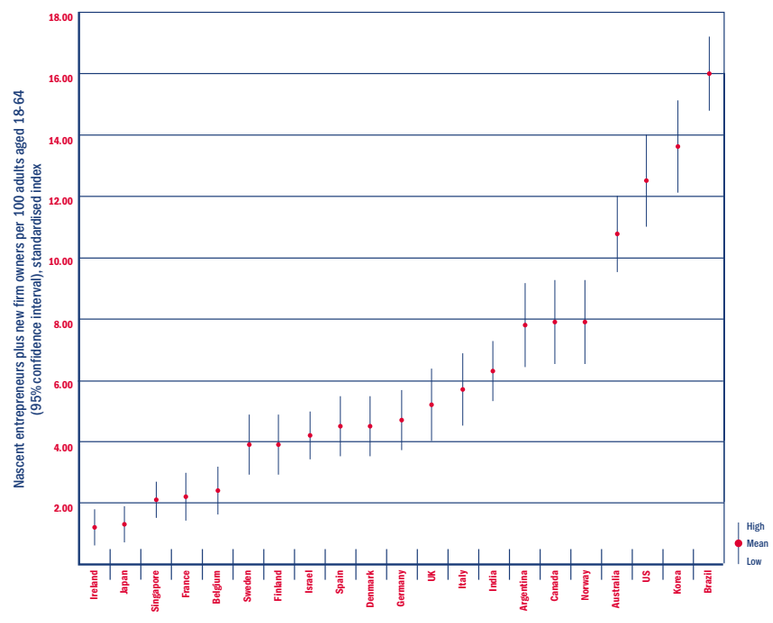


Figure 4 Total Entrepreneurial Activity prevalence rates by country (TEA index) (nascent entrepreneurs plus new firm owners per 100 adults aged 18–64, 95% confidence interval)

2000 countries have annual totals of trade flows, imports and exports, that are between 1.2 and 2.5 times greater than their annual GDP. It was assumed that national growth for these countries – Belgium, Ireland and Singapore – would be more responsive to international trade than indigenous entrepreneurial activity. In a similar fashion, two GEM 2000 countries have a relatively large agriculture sector, where the percentage of adult males involved in agriculture is greater than 25% (Brazil) or greater than 50% (India). In such countries the effect of weather and international commodity prices on growth in GDP is likely to be greater than indigenous entrepreneurial activity. Based on this analysis, the relationship between entrepreneurial activity and national economic growth was confined to the remaining 16 GEM 2000 countries, referred to as the "Alpha group".

The relationship between the level of the TEA index and the projected growth in GDP for the Alpha group of GEM 2000 countries is presented in figure 5. The correlation is moderately high, 0.69, and statistically significant. As these two measures reflect the same period – the year 2000 for projected economic growth and June–July 2000 for measures of entrepreneurial activity – no causality can be inferred from this relationship. Indeed, national economic growth may be a factor in encouraging individuals to found new firms. The level of association, however, is quite high and it is clear that there is a strong linkage – for the Alpha group of countries – between national economic growth and the level of entrepreneurial activity.

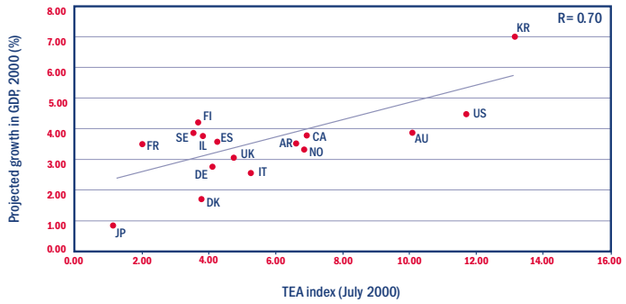


Figure 5 Total Entrepreneurial Activity and economic growth for countries in the Alpha group

The UK, which has typical values for European countries on both the projected level of economic growth and the level of entrepreneurship, is almost exactly on the regression line that represents the relationship. While a few countries have higher levels of growth than would be expected from their level of entrepreneurial activity – France, Sweden, Finland, Israel – there are no countries with high levels of entrepreneurship and low levels of growth. It seems clear that promoting entrepreneurship to enhance national economic growth is a relatively secure option for national governments. Not to promote entrepreneurship would appear to be a risky strategy.

5 Entrepreneurial Activity in the UK

Knowing how much entrepreneurial activity is taking place and how the UK compares with other countries is important. But from the policy point of view it is just as important to know who is entrepreneurially active. GEM sheds light on this issue both in terms of the age structure of the population and the relative involvement of women in entrepreneurship.

The difference between the TEA index across all 21 GEM countries and the UK on the basis of age and gender is presented in figure 6. The patterns are quite similar except for one unexpected difference: the high level of participation among women in the UK aged between 18 and 24. At 7.0 per 100 respondents the level of reported activity is almost twice the level found both among those aged 25–34 in the UK and women in the same age bracket of 25–34 in the other 20 GEM countries. As there are only 147 individuals in this category for the UK, this is probably an aberration. The samples from Scotland and Wales (2,000 respondents for each region) do not reflect this pattern.

It is reasonable to conclude therefore that the broad patterns in terms of gender and age are similar for all countries, including the UK. Most new firms are started by men aged between 25 and 44; typically men in this age group are twice as entrepreneurially active as women, with the peak period of entrepreneurial activity occurring between the ages of 25 and 34.

Both occupational categories and educational attainment have a major impact on participation in entrepreneurship, particularly among men. A comparison of the TEA index across six occupational categories, by gender, is presented in the top half of figure 7; the lower half presents the relationship between entrepreneurial activity and educational attainment. In this case, only those aged 18 to 64 are included in the analysis and the sample has been weighted to reflect this constraint.

There are no gender differences among those in the junior management, supervisory and clerical job category in figure 7. In all other occupational categories men are between one and a half to three times more likely to be involved in entrepreneurial activity than women. The gender differences related to educational attainment show less variation, with rates for men about 50% higher than those for women.

This relationship with educational attainment appears to be unique to the UK, since it is not found in any other GEM country. In most countries, those who have not completed basic schooling are unlikely to be involved in entrepreneurship, but once basic education has been completed, further

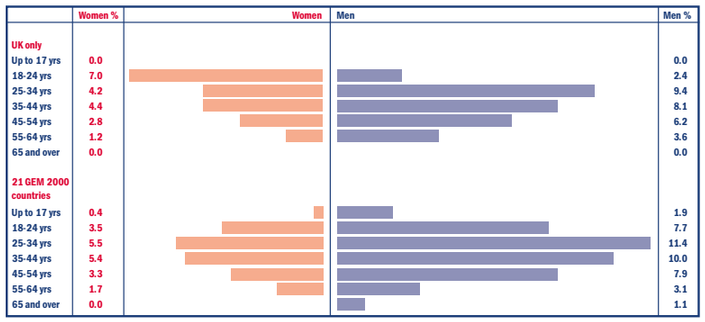


Figure 6 TEA prevalence by age and gender: UK and 21 GEM countries

Figure 7 TEA prevalence in the UK by gender, occupational categories and educational attainment (ages 18–64)

levels of education are not progressively associated with increased participation in entrepreneurial activity. The completion of basic education is a threshold and it is this barrier that makes the difference. The UK pattern, with rather low levels of activity among those who have gone beyond secondary education but have not earned a university degree, suggests that paying greater attention to this group in terms of public policy is likely to pay dividends.

Regional variations across the UK for the TEA index and by gender for those aged18–64 are presented in figure 8. Because of the small number of cases there has been some consolidation,with combinations of Scotland and northern England; the Midlands, Yorkshire and Humberside; the South East and East Anglia; and Wales and the South West. Greater London is in a separate category, thereby creating five groupings in total. The resulting patterns are quite clear. Men in Greater London are roughly twice as active as those in other areas. Women are less active in Scotland/the North as well as in the central regions, but may be just as active as the men in the South East/East Anglia region. Larger samples will be required to determine the relative participation in each region by those from different age groups.

The prevalence rates of entrepreneurial activity for the samples in the UK, Scotland and Wales are provided in figure 9, with nascent entrepreneurs on the left, new firms in the centre and the TEA index on the right. As with the national comparisons presented above, the 95% confidence levels are presented in the figure. Although the measures for all three indicators (nascent entrepreneurs, new firms and the TEA index) decline as one moves from the UK as a whole to Scotland and then Wales, only two differences are statistically significant. These are the differences between Scotland and Wales on the nascent entrepreneur measure and the TEA index. Several detailed comparisons would help determine how similar the patterns of participation might be.

Patterns of TEA prevalence by age and gender, shown in figure 10, are quite similar as between the UK as a whole, Scotland and Wales. Men are approximately twice as entrepreneurially active as women and the patterns across ages are similar. The relative participation of young women aged 18–24 in Scotland and Wales is comparable to the results from all 21 GEM countries presented above in figure 6.

A rather high level of total participation was observed among men in Scotland aged under 24. This contributes to the comparatively high level of participation among men in Scotland who are less than 34 years old; men in this age bracket in Scotland appear to be very much more entrepreneurially active than those who are older than 34. Indeed men in Scotland aged 34 and over are substantially less active than the same age group in the UK as a whole. The extensive efforts over the past decade to increase interest in entrepreneurship in Scotland may be having an impact on younger people. The general patterns in Wales seem similar, except that women in Wales under 35 years old seem to be as involved as men in the same age group. For those older than 35 the typical 2:1 male:female ratio is clear.

Comparisons between the UK as a whole, Scotland and Wales in terms of gender and occupational categories are shown in figure 11. Here the most entrepreneurially active are men in the UK, middle and higher level managers, executives, and administrators (occupational groups A and B).

Region	Women %	Men %
Scotland, Northern regions	2.4	5.7
Central regions	3.5	5.1
South East, East Anglia	6.4	6.0
Greater London	4.6	10.8
South West, Wales	3.9	5.2

Figure 8 TEA prevalence by gender and UK regional groupings (ages 18–64)

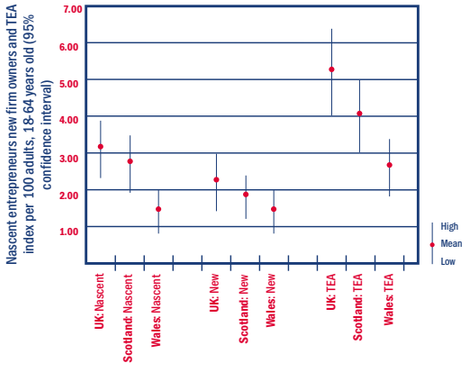


Figure 9 Nascent entrepreneurs, new firm owners and TEA index prevalence rates: UK, Scotland and Wales samples (per 100 adults aged 18–64, 95% confidence interval)

However, women in the UK from the lower managers, clerical and supervisors group (C1) have a relatively high score, almost equalling that of men in the equivalent group. Women in Wales in the higher management groups (A and B) appear to outdo their male counterparts.

The patterns across the three UK samples in relation to level of educational attainment are provided in figure 12; data for the UK are replicated from figure 7. The patterns are somewhat different for the Scottish sample, with clear gender equality for all those who have earned a university degree. In the case of men, among those with post-secondary vocational or technical training participation is quite high, with rates running at three times those for women with comparable educational backgrounds. As is clear from the figure, there is a dramatic drop for Scottish men with secondary schooling alone, and virtually no activity among the 67 in the sample who had not completed their secondary education. There is some entrepreneurial activity among the 98 Scottish women in the sample who did not complete their schooling. The sample for Wales has lower overall rates and the pattern is similar to the UK sample, with lower levels of activity among those who have less schooling.

Overview

The age and gender patterns among the three samples, for the UK, Scotland and Wales, reflect the patterns found in most other countries. The higher level of entrepreneurial activity in the UK sample compared to the Scottish and Welsh samples clearly reflects the high level of activity in the Greater London area. The differences in the overall levels of entrepreneurial activity are reflected in all age and gender categories. As a general rule, those who have completed more education and have more complex and challenging occupations are more involved in entrepreneurial activity. This may reflect a greater range of skills and knowledge, better access to the resources required to initiate a business and – perhaps most important – a social context where opportunities for entrepreneurial exploitation are more frequent and easier to recognise.

	Women %	Men %
All UK		
Up to 24 yrs	5.9	1.8
25-34 yrs	4.2	9.4
35-44 yrs	4.4	8.1
45-54 yrs	2.8	6.2
55-64 yrs	1.2	3.6
65 and over	0.0	0.0
Scotland		
Up to 24 yrs	0.7	4.4
25-34 yrs	5.1	9.4
35-44 yrs	3.6	4.9
45-54 yrs	1.6	4.8
55-64 yrs	0.6	2.7
65 and over	0.0	0.0
Wales		
Up to 24 yrs	1.8	1.2
25-34 yrs	3.4	3.1
35-44 yrs	1.7	3.8
45-54 yrs	1.3	4.3
55-64 yrs	2.1	1.5
65 and over	0.0	0.5

Figure 10 TEA prevalence by age and gender: UK, Scotland and Wales

	Women %	Men %
UK		
A, B: Admin, prof, managers	5.7	10.5
C1: Mgrs, clerical, supervisors	7.0	7.7
C2: Skilled workers	2.3	5.3
D, E: Unskilled, state dependent	2.1	3.4
Scotland		
A, B: Admin, prof, managers	4.8	6.6
C1: Mgrs, clerical, supervisors	3.1	8.0
C2: Skilled workers	4.2	2.8
D, E: Unskilled, state dependent	0.7	4.1
Wales		
A, B: Admin, prof, managers	5.2	5.0
C1: Mgrs, clerical, supervisors	2.0	4.3
C2: Skilled workers	1.6	3.2
D, E: Unskilled, state dependent	1.3	0.5

Figure 11 TEA prevalence by gender and occupational categories: UK, Scotland and Wales (ages 18–64)

	Women %	Men %
UK		
University degree & higher	6.3	9.2
Post-secondary vocational, tech	5.5	7.0
Secondary schooling certificate	3.7	5.3
No secondary school certificate	0.5	3.6
Scotland		
University degree & higher	8.0	7.0
Post-secondary vocational, tech	2.4	8.7
Secondary Schooling certificate	1.4	3.1
No secondary school certificate	1.9	0.0
Wales		
University degree & higher	3.3	4.0
Post-secondary vocational, tech	2.1	4.6
Secondary Schooling certificate	2.1	2.2
No secondary school certificate	1.9	0.7

Figure 12 TEA prevalence by gender and educational attainment: UK, Scotland and Wales (ages 18–64)

6 Entrepreneurial Opportunity and Capacity in the UK

Opportunity is the well-spring of entrepreneurship. Entrepreneurial initiative starts from the perception that a market opportunity exists – and is worth exploiting. Without this sense of perception of opportunity, no entrepreneurial initiative would ever be taken. But opportunity alone is not enough: it is a necessary condition for entrepreneurship but it is not sufficient. For the sense of opportunity to be translated into action an individual has to feel that he or she has the capacity – that is both the motivation and the skill – to do something about the opportunity.

Entrepreneurship occurs at the point where entrepreneurial opportunity and entrepreneurial capacity meet. It is quite possible to imagine a situation rich in opportunity but impoverished in terms of entrepreneurial activity simply because too few people have the motivation and skill to take entrepreneurial action. These two dimensions of entrepreneurship are critical components of the GEM model and an attempt is made to measure both. On these measures, how is the UK doing?

Entrepreneurial opportunity

The 2,000 UK adults surveyed in May 2000 were asked if they believed that "in the next six months good opportunities will have developed for starting a business in the area where you live". Results for all GEM 1999 and GEM 2000 countries are presented in figure 13.

In this figure the results appear for both 1999 and 2000 for those ten countries for which two years' data are available. Looking at this figure a number of features stand out:

- The UK falls roughly in the middle in comparison both to all 21 GEM countries and as against European GEM nations.
- The perception of opportunity has increased greatly: 35% of those surveyed in 2000 believe that in the next six months good opportunities will develop for starting a business as compared with only 16% in 1999.
- For those countries where two years' data exists, this improvement in the perception of opportunity is fairly typical. Among European countries, the relatively weak perception of opportunity in France, less than 20%, and the imperceptible change since last year are unique.

Among the adult population as a whole, therefore, there is now a much greater sense of entrepreneurial opportunity in the UK. Encouragingly, the same picture emerges from 36 interviews with key informants. Experts were asked questions such as "in my country people see lots of good opportunities for the creation of new firms" and "in my country good opportunities for new firms have increased in the last five years". By combining the responses to five such items an overall index is calculated, as shown in figure 14 for GEM 1999 and GEM 2000 countries.

By comparison with the first two measures on the figure – the rest of the G7 and the GEM European countries – the UK measure is higher than either in 2000. Overall the UK ranks sixth out of the 21 GEM countries, scoring higher than most European countries other than Germany and Ireland. The UK score is statistically significantly lower than the US and above France. More importantly the UK's 2000 score is statistically significantly higher than its 1999 score.

The conclusion from both sets of data is clear. The perception of entrepreneurial opportunity is becoming more widespread and taking firmer hold in the UK. But the importance of this change becomes fully apparent when one looks at the relationship between the perception of opportunity and the level of entrepreneurial activity itself. This relationship can only be examined for the 10 countries in GEM 1999 for which a one-year lag can be allowed between opportunity perception and entrepreneurial activity: it is presented in figure 15.

Across the 10 countries there is a 0.90 correlation between the perception of opportunity in 1999 and the actual level of entrepreneurial activity in 2000. This suggests that in countries where there is a widespread perception of opportunity

Figure 13 Perception of opportunity, by country (adult survey)

Figure 14 Entrepreneurial Opportunity Perception index (key informant survey)

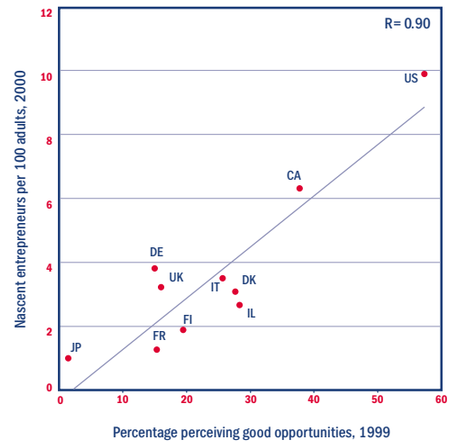


Figure 15 Opportunity perception in 1999 and subsequent nascent entrepreneurs in 2000

there will be, all other factors held constant, a significantly higher level of entrepreneurial activity in the subsequent 16 – 18 months. It is reasonable to suggest, therefore, that if all other factors are stable, in GEM 2001 the measured level of entrepreneurial activity in the UK will be higher than that for 2000. Entrepreneurial opportunity is only one side of the coin, however; entrepreneurial capacity is the other.

Entrepreneurial capacity

As noted, entrepreneurial capacity comprises two elements:

- Entrepreneurial skills: do people have the requisite skills to take advantage of opportunity?
- Entrepreneurial motivation: do people have the motivation to do something about the opportunities they see around them?

Multi-item indices related to both skills and motivation were derived from the key informant interviews.

Skills The skills index is compiled from key informant responses to five statements such as: "in my country many people have the ability to organise the resources required for a new business" and "in my country many people know how to manage a small firm". The UK value was below average, as it was in 1999, and it ranks exactly in the middle of the 21 GEM countries (see figure 16) in 2000.

Both the rest of the G7 and the GEM European averages are similar to that for the UK. The US is at the top of the table, showing an improvement on its

1999 position. Many European countries such as Ireland, Spain and Italy score higher than the UK. Canada and Israel saw a substantial change in their index in 2000. The UK is also statistically significantly lower than the US and higher than France in 2000.

Motivation On this issue key informants were asked to respond to statements such as "in my country most people consider becoming an entrepreneur as a desirable career choice" and "in my country most think that people start new firms only if they cannot find a good job". The results of a composite index are presented in figure 17. Israel and the US are the top two countries, with Ireland, Spain, Italy and Belgium all performing better than the UK. The US has also improved its position compared to last year, unlike Germany and Finland where GEM 2000 scores are lower than those in 1999.

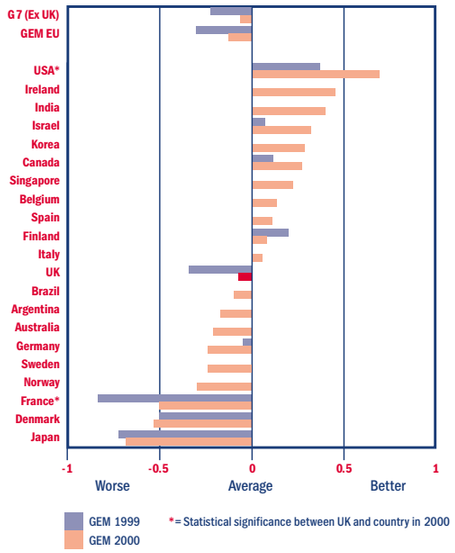


Figure 16 Entrepreneurial Capacity/Skills index (key informant survey)

As can be seen from the figure the UK position is similar to that for other GEM European countries, although there is a marked difference between the G7 and the UK. Moreover there has been a statistically significant improvement in the UK score over the past year. The UK is statistically significantly lower than the US for the year 2000 on this index.

Figure 17 Entrepreneurial Capacity/ Motivation index (key informant survey)

7 Creating an Entrepreneurial Economy

Government policy in respect of entrepreneurship was reviewed at the beginning of this report in terms of six dimensions: finance; taxation; research and development; education; enterprise culture; and programme coordination. Each of these is critical in building an entrepreneurial economy and society. The significance of each in the light of GEM 2000 will be analysed in turn.

"The Government has introduced a wide range of measures designed to boost the supply of risk capital to finance SMEs with growth potential, which might otherwise be undersupplied by the market. In particular, to improve the supply of equity to smaller, higher risk companies, the Government has improved the Enterprise Investment Scheme (EIS) and the Venture Capital Trust (VCT) scheme. Total investment to date is around £750 million for EIS and £1 billion for VCT. Encouraging a different source of equity capital for smaller companies, the Government has introduced a corporate venturing tax relief scheme from April 2000. This is designed to promote mutually beneficial investment by corporates in smaller higher risk trading companies." HM Treasury, Pre-Budget Report 2000, chapter 3.[i]

Finance

There is widespread recognition that equity financing of United Kingdom SMEs, including seed, start-up and early stage technology-based small firms (TBSFs), has improved noticeably over the past few years. That view was shared by the GEM expert informants, whose concerns about financing ranked third behind concerns about education and social and cultural norms. The results are summarised in figure 18. It shows that on the four aspects of equity financing it includes, the experts rated the United Kingdom about the same or slightly better than the average for the G7 and GEM European nations, and somewhat worse than the United States.

In assessing the availability of equity across all GEM countries, four measures were used:

- The proportion of adults who reported that they had provided financial assistance to others in starting new firms.
- The assessment of experts on the availability of risk capital from all sources.
- The total amount of venture capital invested in seed, start-up, early, and expansion stage firms in proportion to national GDP in 1999.
- The total amount of venture capital invested in seed, start-up, early, and expansion stage firms per capita of national population.

The relationship of the four measures to Total Entrepreneurial Activity shows that countries with a high level of entrepreneurial activity have higher levels of equity financing from a variety of sources, including angels, venture capital, and public stock markets.
In figure 19, for ease of analysis and interpretation, the 16 Alpha group countries have been grouped into low, medium and high levels of entrepreneurial activity. The UK is in the medium group. The average TEA prevalence rate for the high group is more than twice the average for the medium group and more than five times the average for the low group.

The relationship is unmistakable: total financing, both informal funding and

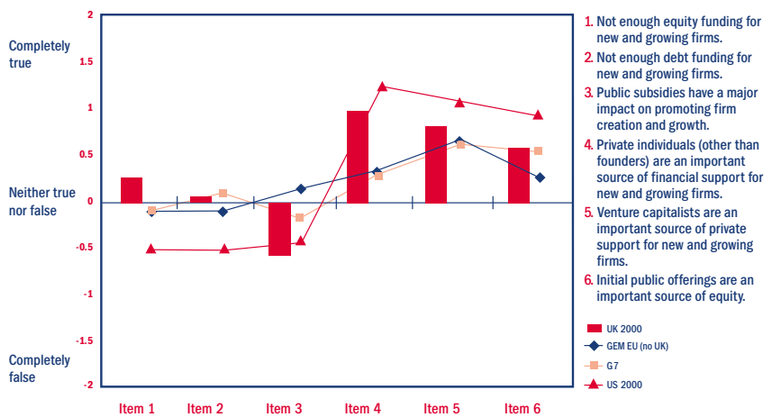


Figure 18 Key informant responses on six financial support items: UK and comparison countries

formal risk equity, is important for a strong national entrepreneurial sector. GEM 2000 involved analysis of two crucial elements of equity finance in detail: (1) informal investments by individuals, and (2) formal investments by professional venture capital firms.

Informal investments

A remarkable finding of GEM 2000 is the extent to which private individuals are investing in entrepreneurship. In 2000, 3.1% of adults in the United Kingdom were informal investors who had invested an average of £5,000 per year over the last three years. They invested predominantly – but not exclusively – in ventures started by family, work colleagues, neighbours and friends. When the sample is extrapolated to the entire United Kingdom population, these individuals appear to have invested £8.2 billion per year – a sum more than five times the amount of formal venture capital that was invested in seed, start-up, early and expansion stage firms in 1999.

The informal investor prevalence rate of 3.1% places the United Kingdom eighth among the GEM nations, behind the United States (7.0%), Korea (5.5%), Norway (5.1%), Denmark (4.1%), Germany (3.9%), Israel (3.7%) and Finland (3.6%). While informal investors are an important source of funds for entrepreneurs, they invest almost entirely in tiny enterprises, which collectively make a substantial contribution to the economy but individually have little effect. Professional venture capital firms, on the other hand, invest in an elite group of high-potential ventures with the promise of making a noticeable impact on the economy.

Formal venture capital

Venture capital is broadly defined to include all stages of finance from seed stage to buyout; it accounted for just 1.3% of the external finance of United Kingdom SMEs in the period 1997–9 according to a forthcoming Bank of England report.[ii] But while venture capital is only a small proportion of the total external financing of SMEs, it is a vital source of funding for small, young companies, especially technology-based companies, with the potential to grow rapidly into enterprises that contribute significantly to local, regional and national economies. In some instances, venture-capital-backed companies such as Intel, Microsoft, Cisco, Netscape and Yahoo even change the face of the global economy. Hence, venture capital merits the attention that it is receiving from the Government.

The venture capital industry in the United States is the benchmark for gauging the industry in other nations. However, before making comparisons between the United States and other nations, it is essential to distinguish "classic" venture capital, which is money invested in seed, start-up, early and expansion stage companies, from money used to finance management buyouts and acquisitions. This distinction makes a relatively big difference in some nations and very little difference in others. For instance, the British Venture Capital Association (BVCA) reported that £6.169 billion of venture capital was invested domestically in the UK in 1999, of which £1.327 billion (21.5%) was classic venture capital and £4.666 billion (75.6%) was management buyout financing. In contrast, the National Venture Capital Association reported that US$48.05 billion of venture capital was invested domestically in the United States in 1999, of which US$45.93 billion (95.6%) was classic venture capital.[iii]

In comparison with the US$45.9 billion of classic venture capital invested in the US, US$11.8 billion was invested in the other 18 GEM nations combined. Put another way, the US accounted for 80% of all the classic venture capital invested domestically in the GEM nations. With $1.9 billion of classic venture capital invested domestically, the United Kingdom ranks third among the GEM nations, behind the United States ($45.9 billion), and Germany ($2.0 billion), but ahead of Canada ($1.5 billion), France ($1.2 billion), Japan ($0.98 billion), Korea ($0.89 billion), India ($0.61 billion), Italy ($0.48 billion) and Israel ($0.43 billion).

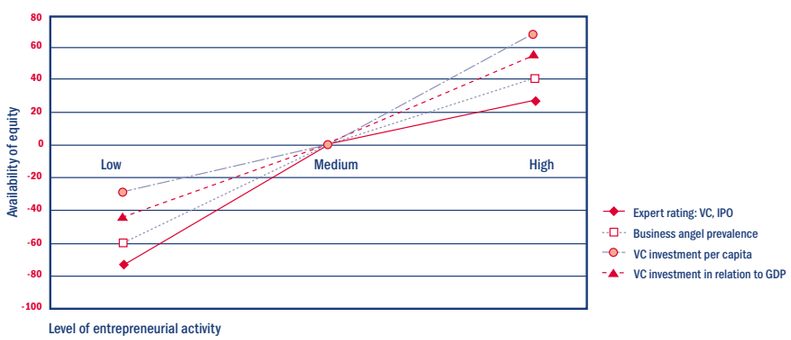


Figure 19 Equity availability and TEA index groups (high, medium and low)

Some nations invest much more venture capital in proportion to their gross domestic product (GDP) than others (figure 20). The US ranks first, with Israel a close second; these are followed by Canada, South Korea, Singapore, Belgium, the UK, India, Sweden and Germany. Japan ranks last with a classic venture capital to GDP ratio of just 0.022% versus 0.53% in the US. Put differently, in proportion to GDP, the US invested approximately 25 times as much classic venture capital as Japan and 3.7 times as much as the United Kingdom.

In 1999 a total of 13,948 companies received classic venture capital in all the GEM nations combined. In the United Kingdom, 688 companies received classic venture capital in 1999, placing it eighth among the GEM nations, behind the United States (3,478), Korea (1,945), France (1,389), Germany (1,286), Japan (1,192), India (954) and Canada (757).

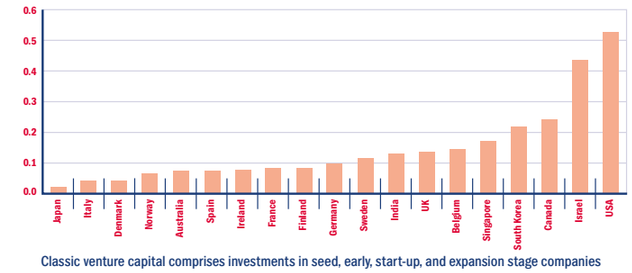
Only 25% of the companies that received classic venture capital were located in the US, but those 25% received 80% of the total amount invested in companies in the GEM nations. The explanation for this apparent paradox is that US companies received on average $13.2 million per company compared with an average of $1.31 million per company in the other nations. The nearest nations to the US in the amount invested per company were Israel, with $3.06 million, and the UK, with $2.76 million (figure 21). In France, Japan, Denmark, India, Sweden, Ireland, Finland and South Korea, the amount invested was less than $1 million per company on average. Thus at one end of the spectrum comparatively large amounts of venture capital were invested in relatively few companies in the United States, compared at the other end with comparatively small amounts of venture capital invested in relatively many companies in Korea.

These figures seem to indicate that from the perspective of global competitiveness most venture capital backed companies outside the United States are at a severe disadvantage in comparison with their American counterparts, which not only have comparatively huge amounts of venture capital but also have a huge home market. It probably explains why United States companies such as Yahoo!, Amazon.com and eBay established a global presence ahead of their European and Asian rivals.

Venture capital and the new economy

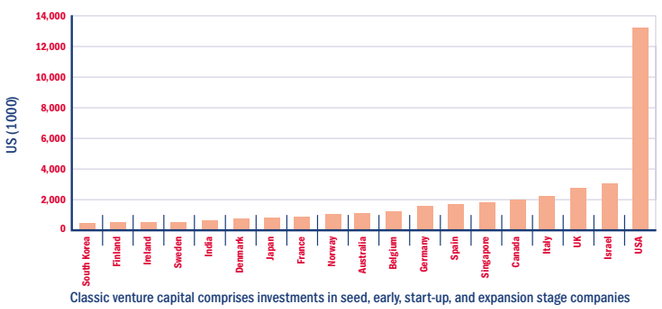
> *"The most important single conclusion (which contrasts to some extent with the Bank's 1996 findings)[iv] is that, while some TBSFs in the United Kingdom do experience difficulties in accessing risk capital at seed, start-up, and early stages, there is limited evidence now (2000) that these difficulties are significantly greater than for small firms in general."*
> The Financing of Technology-Based Small Firms: A Second Report, Bank of England, January 2001.

Much of the debate about the importance of venture capital centres on the new economy – the information and communications technology (ICT)[v]



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

Figure 20 Amount of domestic classic venture capital invested as a percentage of GDP in 1999



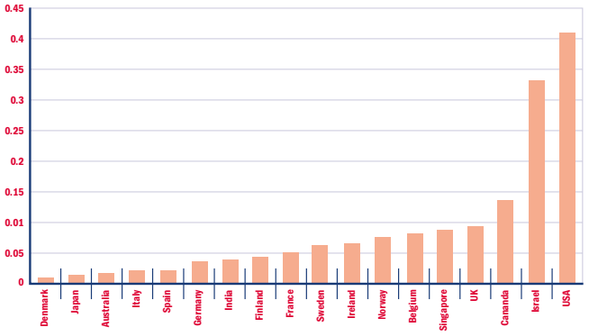
Classic venture capital comprises investments in seed, early, start-up, and expansion stage companies

Figure 21 Amount of domestic classic venture capital invested per company in 1999 (in US$1,000)

sectors. According to the Pre-Budget Statement published in November 2000[vi] the United Kingdom has invested extensively in ICT over the past decade. The report expects that over the next few years ICT will produce substantial productivity improvements in UK companies and generate competitive pressures for its adoption.

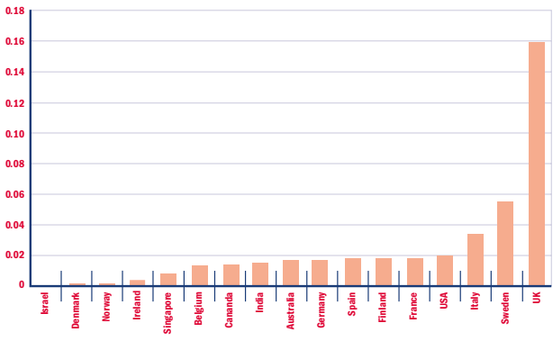
But how well is the United Kingdom doing when it comes to investing venture capital in ICT firms? Because of the way in which the European Venture Capital Association reports investments by industry sector and by stage, it is possible to compare only venture capital invested in all stages of portfolio companies, that is classic venture capital plus acquisition and buyout capital.[vii] An astonishing 86% of all the venture capital invested in ICT in companies in the GEM countries went to companies in the United States. Expressed as the ratio of venture capital invested to GDP, the US and Israel tower over the other countries (figure 22). The United Kingdom is ranked fourth. Total venture capital invested in ICT companies in proportion to GDP was a factor of 4.4 greater in the United States than in the United Kingdom; and a factor of 29 times greater in the United States than in Japan. On the same basis, the United Kingdom invested 1.7 times the amount in France; 2.6 times the amount in Germany; and 6.7 times the amount in Japan.

When the amount of venture capital invested in the new economy is contrasted with the amount invested in the old economy an entirely different story emerges. Looking at the consumer sector, the United Kingdom dominates, with 40% of the total invested in all the GEM nations; the United States is second with 32%. In proportion to GDP, venture capital invested in the consumer sector in the United Kingdom towers over the other GEM nations (figure 23) in much the same way that the United States and Israel dominate in the ICT sector. Expressed as the ratio of venture capital to GDP, investment in consumer companies in the United Kingdom was a factor of 8 times greater than in the United States, 9.4 times greater than in Germany, and 8.8 times greater than in France.



All-stage venture capital comprises seed, early, start-up, and expansion stage plus replacement, turnaround, buyout and acquisition financing

Figure 22 Amount of all-stage venture capital invested in information and communications technology (ICT) as a percentage of GDP in 1999



All-stage venture capital comprises seed, early, start-up, and expansion stage plus replacement, turnaround, buyout and acquisition financing

Figure 23 Amount of venture capital invested domestically in all stages of consumer companies as a percentage of GDP in 1999

	Early stage	% of all regions	Expansion stage	% of all regions	Early & expansion stages	% of all regions	Number of early stage per 100,000 VATs	Number of early & expansion stage per 100,000 VATs
	£ million		£ million		£ million			
South East	99	28.5%	163	14.1%	262	17.4%		
London	119	34.3%	327	28.3%	446	29.7%		
South East & London	218	62.8%	490	42.4%	708	47.1%	25.80	60.20
South West	14	4.0%	51	4.4%	65	4.3%	8.00	24.70
Eastern	23	6.6%	79	6.8%	102	6.8%	1.41	41.20
West Midlands	7	2.0%	113	9.8%	120	8.0%	5.90	41.80
East Midlands	11	3.2%	34	2.9%	45	3.0%	8.10	31.50
Yorkshire & The Humber	15	4.3%	57	4.9%	72	4.8%	9.30	41.60
North West & Merseyside	35	10.1%	164	14.2%	199	13.2%	7.50	45.00
North East	2	0.6%	40	3.5%	42	2.8%	14.30	64.30
Scotland	15	4.3%	61	5.3%	76	5.1%	27.70	78.00
Wales	2	0.6%	56	4.8%	58	3.9%	8.00	43.90
Northern Ireland	5	1.4%	11	1.0%	16	1.1%	9.20	25.60
Total without SE & London	129	37.2%	666	57.6%	795	52.9%	11.10	42.90
Grand Total	347	100.0%	1,156	100.0%	1,503	100.0%	15.70	48.40

Table 1 Venture capital: investment stage analysis by region

Regional differences in venture capital

There are substantial disparities in the distribution of venture capital among the regions of the United Kingdom (table 1). In terms of percentages of the amount of venture capital invested throughout the United Kingdom, 63% of all the early-stage, 42% of the expansion-stage and 47% of early-stage plus expansion-stage investment went to companies located in London and the South East in 1999.

Another way of looking at the distribution of venture capital among the regions is to gauge it relative to the total number of VAT-registered companies within a region. This is a measure that the BVCA uses to indicate what level of venture capital investment could be expected within a region assuming that all other things were equal.[viii]

The number of firms receiving early-stage venture capital per 100,000 VAT-registered companies varies from a high of 28 for Scotland to much lower scores, including 7 in the North West and Merseyside. London and the South East, with a score of 26, are a close second to Scotland. However, when the number of early-stage and expansion-stage firms are combined, Scotland is still at the top with a score of 78, while London and the South East fall to third place with a score of 60, just below the North East, in second place with a score of 64.

According to the BVCA, "There are many reasons for these regional differences. One theory is that where there is a 'tightly knit' financial community as in Scotland, where venture capitalists are well known by many companies and their advisers and venture capital as a type of finance is well understood, more companies are encouraged to make more use of it."[ix] More venture capital firms have offices in Scotland than in any other region except London. Moreover the financial community in Scotland is renowned for its networking. Other factors such as education and entrepreneurial culture almost certainly account for some of these regional differences.

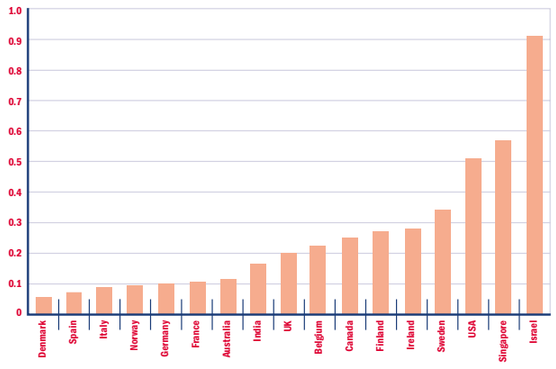
Venture capital fund-raising

The £5.819 billion raised by United Kingdom venture capital firms in 1999 was second only to the £6.496 billion raised in 1997. The amount of venture capital raised placed the United Kingdom second behind the United States, where US$46.1 billion (£31.7 billion) was raised in 1999. The United Kingdom was comfortably ahead of the third-placed country, Germany, where DM 9.056 billion (£2.79 billion) was raised. For the third year in a row, overseas investors were the most important source of funds for United Kingdom venture capital firms, accounting for 69% of the total raised. The BVCA reported that United States pension funds were the main investors in the United Kingdom venture capital industry in 1999 for the third year running, while the amount raised from United Kingdom pension funds continued to decline.

But not all the venture capital raised in the United Kingdom is destined for early-stage and expansion-stage companies. In fact, it was reported that only 28% was intended for classic venture capital investments, with 63% allocated to buyouts. When the GEM nations are ranked according to the amount of classic venture capital raised[x] in 1999 in proportion to the GDP, the position of the United Kingdom is not nearly as impressive (figure 24). It is ranked ninth behind Israel, Singapore, the US, Sweden, Ireland, Finland, Canada and Belgium, but ahead of India, Australia, France, Germany, Norway, Italy, Spain and Denmark. The position of the United Kingdom is probably too high because it is estimated that as much as 40% of the venture capital raised in 1999 will be invested in companies overseas[xi] rather than the United Kingdom.

This excerpt from a report by the Bank of England fits quite well with the findings of GEM2000:

> *"developments over the past four years tend to suggest that there is no longer a major market weakness in the provision of finance to TBSF at seed, start-up and early stages. There is no room for complacency however … A general improvement … may yet disguise significant difficulties for some TBSF in raising seed, start-up and early stage risk capital in parts of the United Kingdom isolated from major technology clusters… The improvements outlined in this report still leave the overall environment for investment in TBSF in the United Kingdom well short on that pertaining in the United States. At the same time, other European Union members have made great strides in improving the flow of risk capital into the technology sector."* The Financing of Technology-Based Small Firms: A Second Report. Bank of England, January 2001.



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

Figure 24 Total classic venture capital commitments as a percentage of GDP in 1999

Taxation

There is strong evidence from the GEM 2000 cross-national comparisons that countries with higher levels of corporate taxation, as a percentage of pretax profits, as well higher marginal personal income tax rates tend to have lower levels of entrepreneurial activity. This relationship is particularly evident in France and Japan, both of which have comparatively high levels of taxation combined with low levels of entrepreneurial activity.

In terms of both measures of taxation, average corporate tax as a percentage of pretax profits and the top marginal rate of personal income tax, the UK is at the European average and roughly comparable to some countries with higher levels of entrepreneurial activity, notably Australia, Canada and the US. On the other hand, total tax revenue as a proportion of GDP (a measure which reflects the amount of tax actually collected) is slightly higher in the UK than the average for GEM 2000 European countries as well as the G7; the UK figure is substantially higher than that in a number of countries with somewhat higher levels of entrepreneurial activity, notably Korea, Australia and the US.

There is evidence, therefore, that countries with higher levels of entrepreneurial activity have comparatively lower levels of taxation. Why might this be the case? There are two possible explanations.

First, the overall level of tax collection may reflect the range and extent of government activity. Countries in which the government plays a key role in the provision of services may present fewer opportunities for any private sector activity, including that undertaken by new firms. In other words, reducing the role of government in this respect may have the effect of opening up opportunities for new firms.

The second issue has to do with the question of where the tax burden falls and who actually pays tax. Clearly, tax policies that discourage investment in new firms, either financial investments or equity earned through share options, or policies that penalise those making significant capital gains, will reduce the financial incentives for those engaged in creating new or high growth firms. Countries with lower taxation of wealth creation are clearly endorsing the critical importance of entrepreneurial success.

Research and development transfer

The issue of the effective transfer of innovation and R&D into the new and small firm sector has been a major focus of the interviews with national experts in GEM 2000. While there is universal agreement that this is an important issue, variations in the assessments provided by national experts were not related to variations in the levels of entrepreneurial activity between countries. This does not mean that this is an unimportant issue, rather that in all 21 GEM countries the experts interviewed were generally positive about the efforts being made to enhance the commercialisation of R&D in such a way as to provide real opportunities for new and small firms. When the judgements of the experts in the GEM countries are compared, the UK scores relatively well, and certainly as well as – and in some instances better than – most G7 or European GEM countries. This is not, of course, a reason to be complacent; rather it is a sign that the UK has been relatively successful in this regard.

A continued emphasis on facilitating access by new and small firms to the nation's scientific, engineering, and technological advances is certainly justified. It is vital in the formation of technology-based new firms that attract venture capital. The high correlation (0.72) between R&D transfer and the amount of classic venture capital investments in proportion to GDP among the GEM 2000 countries provides strong support for this relationship.

8 Creating an Entrepreneurial Society

Creating the economic infrastructure that will facilitate new firm creation will have modest effects on the level of entrepreneurial activity if the adults in the labour force are neither prepared for nor interested in pursuing entrepreneurial career options. Several features related to an entrepreneurial society will be reviewed, including the educational system, creating an enterprise culture, and systematic co-ordination of government programmes to promote entrepreneurship.

Education

In discussing education a distinction is drawn between education in general and that geared specifically to entrepreneurship. The relationship between education, in both senses, and entrepreneurship is the subject of three different sets of analysis.

First, at the level of all 21 GEM countries there is an analysis of the relationship between entrepreneurship and the level of involvement in post-secondary education. Second, national experts were asked about both the provision of education relevant to entrepreneurship and the perceived capacity of the typical adult to develop or manage a new/small business. Third, information was obtained from the adult population survey on the educational background of all those who define themselves as being entrepreneurially active. All three analyses provide support for a systematic investment in and enhancement of education in the UK, both in respect of education as a whole and that geared specifically to entrepreneurship.

GEM 2000 provides strong evidence of a relationship between the level of entrepreneurial activity and the proportion of the population participating in post-secondary educational programmes, as presented in figure 25. This correlates to 0.6 across the 16 GEM alpha countries, with high proportions participating in post-secondary education in Canada (90%), Australia (80%), US (81%) and Korea (68%). It is about 48% for the UK.

It is clear that post-secondary educational participation makes a difference. Indeed, across all GEM countries, if this were the only factor used to predict entrepreneurial activity it would account for 40% of the variation between countries.

Entrepreneurship flourishes in countries with a rich educational endowment. Investment in educational infrastructure creates an asset of enormous value for society. In building their businesses entrepreneurs draw on this asset. They do so by exploiting the ideas, technologies and innovations built up over a long period and, moreover, they gain access to a rich pool of talented, capable individuals of the sort they need to build a business. In a fundamental sense, therefore, entrepreneurs leverage a society's investment in education.

GEM also examines education programmes aimed more directly at equipping individuals with the skills needed to start a business; this is what is meant by education for entrepreneurship. In assessing the range and quality of programmes in this area, key informants in all countries tended to be rather negative; this was also true in those countries with higher levels of entrepreneurial activity.

The reactions of UK experts in both the GEM 1999 and GEM 2000 interviews, along with the average values for the EU and G7 countries, are provided in figure 26. Note that on all the five items listed at the side of the chart, the general response was negative. The responses of the UK experts were typical for the EU and G7 countries on all but the last item; UK key informants were more negative about the quality of management education available compared with their peers in other countries. On item 1 ("primary and secondary education encourages creativity, self-sufficiency and initiative") and item 4 ("colleges and universities have enough courses and programmes on entrepreneurship") there is a slight improvement in the assessments made by UK experts in 2000 as compared with 1999. In short, UK experts rate the education system similar to that of other G7 and EU countries, but none provide very positive assessments.

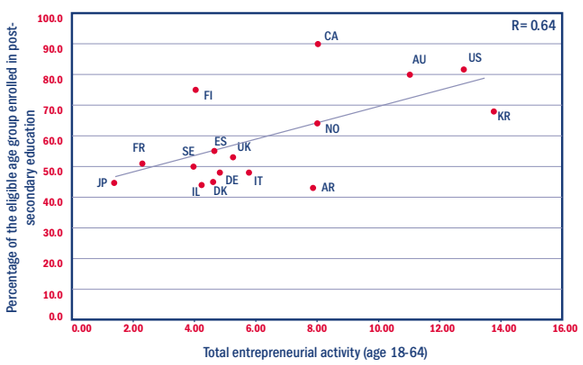


Figure 25 Participation in post-secondary education and TEA index for 16 GEM countries

The relationship between educational attainment and participation in entrepreneurship, by gender, is presented in figure 27, for the UK, US and Canada. The patterns apply to those aged 18–64, the prime age range for labour force participation. There are two striking differences between the countries. The most obvious is the higher overall level of participation in the US and Canada at almost all education levels for both men and women. The only exception are Canadian men with college or graduate degrees, who are at the same level as comparable UK men. The second difference is that participation in entrepreneurship declines among UK men and women as the level of educational attainment declines. For the US and Canadian samples this is only found among US women, and more specifically for women who have not gone beyond a high school qualification. In fact, one in four US men with post-high school training but no college degree is involved in a nascent or new firm. These are men who have several years of college but no degree or vocational technical training.

The importance of the relationship between educational attainment and entrepreneurial activity can be seen in figure 28. Those involved in entrepreneurship are presented in terms of their educational attainment. The total for each country equals 100%. In both the UK and the US, over 60% of those involved in entrepreneurship have not earned a college or university degree. Two in five in the UK and Canada, and one in four in the US, have not gone beyond secondary schooling (high school).

These patterns provide a strong case for introducing the fundamentals of entrepreneurship education at both the secondary and tertiary levels, as well as vocationally oriented programmes. This appears to be particularly important in the formation of high-potential businesses because the correlation between classic venture capital per GDP and entrepreneurial education and training at all levels is almost 0.7 for the alpha group. The UK is not, however, lagging behind other countries in this regard, as no country has extensive entrepreneurial training throughout its educational system.

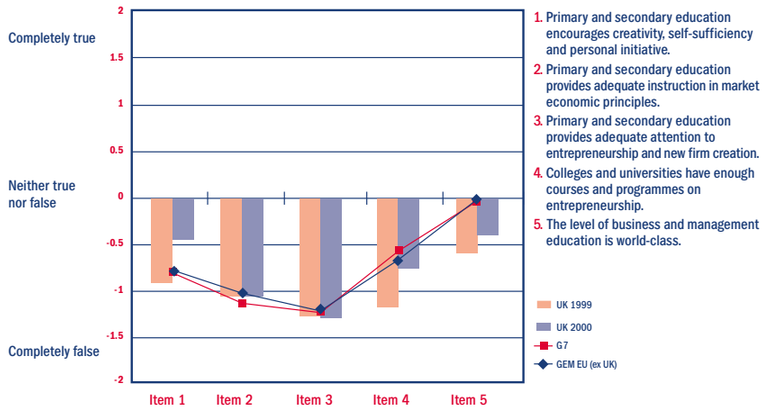


Figure 26 Key informant responses on five education and entrepreneurship items: UK and comparison countries

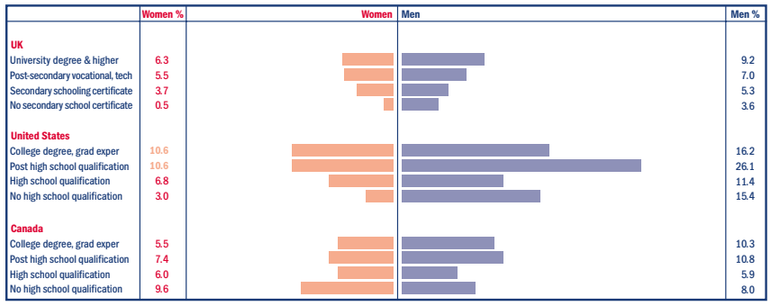


Figure 27 TEA prevalence rates by gender and educational attainment: UK, US and Canada

	Women %	Women	Men	Men %	All %
United Kingdom					
University degree & higher	14			24	38
Post-secondary vocational, tech	6			12	18
Secondary schooling certificate	18			21	39
No secondary school certificate	1			4	5
Total	39			61	100
United States					
College degree, grad exper	15			22	37
Post high school qualification	12			22	34
High school qualification	8			15	22
No high school qualification	1			5	6
Total	36			64	100
Canada					
College degree, grad exper	7			18	25
Post high school qualification	16			22	38
High school qualification	11			10	21
No high school qualification	9			7	16
Total	43			57	100

Figure 28 Sources of TEA participants by gender and educational attainment: UK, US and Canada

Creating an enterprise culture

In a speech to the British Venture Capital Association in 1999 Tony Blair called for a "revolution in attitudes to entrepreneurs" and spelled out the need for "society as a whole to applaud entrepreneurs". Underpinning observations like these is the recognition that social and cultural values, and the attitudes to which they give rise, have a profound impact on entrepreneurship.

Several GEM sources of data are directly relevant to this issue. First, there are the standardised items incorporated into the adult population surveys in all GEM countries. These can be used to determine the extent to which UK patterns may be unique. Second, the judgements of the national experts can be used for the same purpose. Third, a range of special items was incorporated into the UK adult population surveys; these provide unique information regarding the perceptions and judgements of adults in the UK. Fourth, there are the perceptions of those involved in entrepreneurial ventures, either nascent or new firms; this entrepreneurially active group provides first-hand reactions to the experience of participating in the UK entrepreneurial sector.

Standardised GEM 2000 items in adult population surveys Six items were included in all adult surveys in all countries to provide a basis for comparing national perceptions of entrepreneurship. The response of UK adults is provided in table 2, along with a comparison with all 21 countries, the 11 European countries in GEM 2000, members of the G7, and three benchmark countries: US, Germany and France. Except for the first item, related to the percentage of the population that "knows someone who started a business in the past two years", none has a statistically significant relationship to the level of entrepreneurial activity.

Nonetheless, they cover topics often discussed as part of the cultural context generally considered to affect the willingness of individuals to pursue entrepreneurial opportunities.

On most of the items the UK is slightly below average for the 11 EU countries in GEM 2000, or the G7 members. Considering the percentage agreeing with the statement that "people respect those starting a new business" and the percentage implicitly disagreeing with the proposition that "people resent those who make a lot of money from starting a new business", the UK measures are below those for France, Germany and the US. While 30% of the UK respondents agree with the proposition that "fear of failure" would prevent them from starting a business, this is lower than the figure for the GEM countries in the EU, G7, France or Germany, but one and a half times the level of US respondents (21%).

	All GEM	EUI	G7	UK	US	GER	FR
You know someone personally who started a business in the past two years? (% yes)	40%	43%	36%	32%	49%	44%	31%
People you know respect those starting a new business? (% yes)	79%	85%	74%	69%	76%	85%	77%
People you know resent those who make a lot of money from starting a new business? (% yes)	17%	14%	16%	19%	17%	17%	11%
In the next six months there will be good opportunities for starting a business in the area where you live? (% yes)	37%	41%	34%	37%	52%	31%	17%
Fear of failure would prevent you from starting a business? (% yes)	38%	36%	39%	30%	21%	48%	46%
In your country most people would prefer that everyone had a similar standard of living? (% yes)	63%	61%	59%	66%	46%	54%	77%

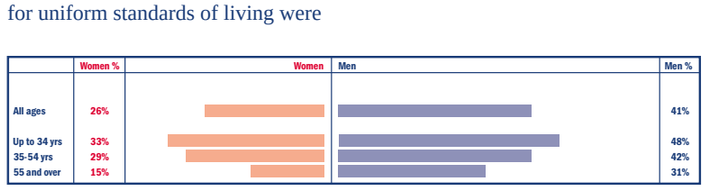
Table 2 Adult survey respondents and cultural items, all respondents: selective comparisons

The extent to which individuals agree with the proposition that "in the next six months there will be good opportunities for starting a business in the area where you live" is higher in the UK than in France and Germany, and higher also than the G7 average. But the UK measure is slightly below the EU average and well below the level obtained from respondents in the US. Judgements about the desirability of a uniform standard of living are higher in the UK than in the groups of countries, Germany and the US – but lower than in France. Overall, this is a mixed pattern, suggesting that entrepreneurship enjoys a somewhat mixed reputation in the UK.

There are also systematic, statistically significant variations by gender and age within the UK for all six items. Generally, younger respondents and men are more positive about the UK as a context for entrepreneurship. This is illustrated by the patterns related to the perception of good business opportunities developing in the next six months, as shown in figure 29. Two in five men expect them to be present, compared to one in four women. Only one in six older women think there will be good business opportunities, compared to one in three older men. The generally less favourable orientation of women about future business opportunities and other aspects of the UK as a context for starting a business is certainly one reason why women may be less involved in entrepreneurial activities.

Standardised GEM national expert responses The national experts in all GEM 2000 countries responded to six items related to the cultural and social values of a country. In figure 30 the responses of the UK experts in GEM 1999 and GEM 2000 are compared to those of the national experts for the G7 and for the 11 GEM EU countries in GEM 2000. Except for one item, the responses for GEM UK 1999 are almost identical to these other countries or groups of countries. The one difference relates to a preference that "everyone had the same standard of living". UK experts see this as a less prevalent attitude in their country than experts elsewhere. This is slightly different from the results for the adult surveys, where the percentage expressing a preference for uniform standards of living were relatively high. There is clearly a difference in perception among the adults surveyed and UK key informants on this issue.

There have been some changes in the expert judgements on the UK between 1999 and 2000, as can be seen in the slight improvements in the context for entrepreneurship shown in figure 30. In 2000 the assessment of the extent to which "the social security and welfare systems provide appropriate encouragement for people to take the initiative and be self-sufficient" and the belief that "people prefer to work for well-established organisations rather than new firms" have both moved in a positive direction in terms of cultural values associated with entrepreneurship.



	Women %	Women	Men	Men %
All ages	26%			41%
Up to 34 yrs	33%			48%
35-54 yrs	29%			42%
55 and over	15%			31%

Figure 29 Perceptions of good business opportunities among UK adults, by age and gender

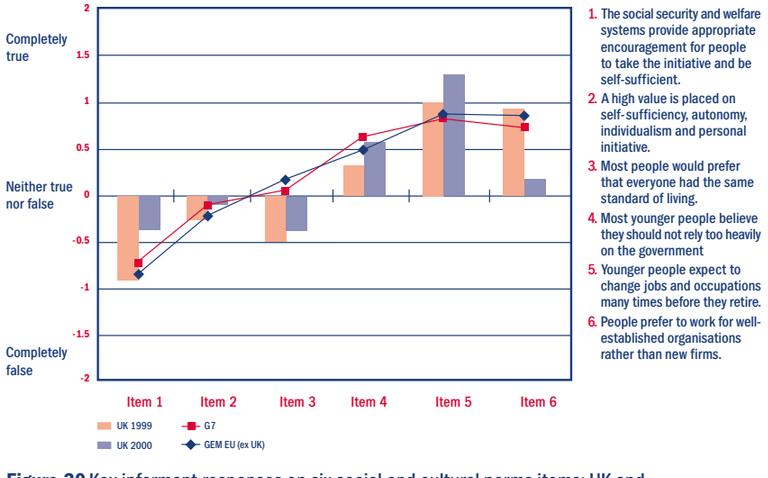


Figure 30 Key informant responses on six social and cultural norms items: UK and comparison countries

Unique UK items In an effort to provide a broad measure of the attitudes towards entrepreneurship within the UK, as well as towards the major factors seen as critical for national economic growth, 15 additional items were incorporated into the UK adult population surveys. The first set of seven was related to judgements about society's support for entrepreneurs and new firms. A set of statements was evaluated on a five-point scale ranging from "very true" to "very false", with the midpoint on the scale meaning that the statement was perceived to be neither true nor false. These are presented, rank ordered by the percentage that responded "very true" or "mostly true", in figure 31.

The percentage that considered these items as "very true" or "somewhat true" ranged from 53% to 68%, suggesting that most people believe there to be moderate support for business and entrepreneurship from a range of sources: education programmes providing start-up skills; higher education fostering business careers; the media presenting entrepreneurs positively; and leaders in government and education encouraging entrepreneurship. They also consider change to be good for the UK economy. Slightly more than half think the media present business people positively and that business firms and business people can be trusted. While these evaluations could be higher, there is no evidence of a widespread perception that business and entrepreneurship are not encouraged in the UK.

A second set of eight items relates to judgements about those sectors of the economy that may contribute to national economic growth. For each sector on the list, respondents assessed whether or not they had no role, a necessary role, an important role, or a critical role in fostering national economic growth. The ranking of the eight sectors is presented in figure 32.

Two sectors were seen as critical or important for national economic growth by over 80% of the respondents: schools, colleges and universities; and science, technology, and engineering research. Three were seen as critical or important by more than two-thirds: established big business; small and medium business; as well as entrepreneurship and new firms. Two were seen as important or critical by over 50%: government programmes and policies; and TV, newspapers and other media. The final sector, charities, religious, and not-for-profit agencies, was seen as important or critical by almost 50% of those surveyed.

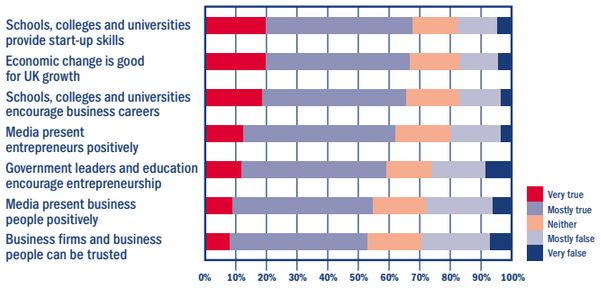


Figure 31 Evaluation of the orientation of sectors of society, and attitudes towards entrepreneurship: UK adult survey

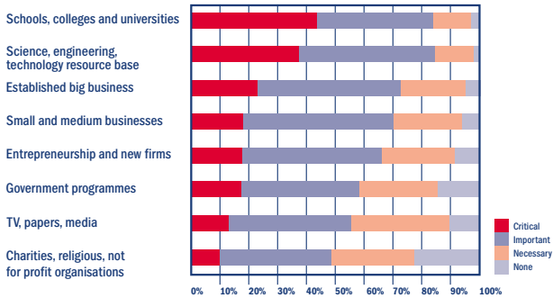


Figure 32 Assessment of UK sectors and their role in national economic growth: UK adult survey

Those eighty or so in the sample who are entrepreneurially active in the UK place the category of entrepreneurship and new firms above that of existing small and medium businesses, but the rank order of other sectors is the same. Both sets of measures reflect a nation where people see widespread support for business and entrepreneurship. Further, entrepreneurship is considered one sector – among many –that is a source of national economic growth.

Reactions of nascent and new firm participants It is possible that those who are entrepreneurially active might have a different perspective than typical UK adults. For example, in response to the six items used in the standard GEM interview schedule, there are statistically significant differences on four items; this is presented in figure 33.

Those who are entrepreneurially active are much more likely to have known someone starting a business in the past two years; think that people respect those starting a new firm; believe that there will be good opportunities for starting a business in the next six months.They regard themselves as more deterred by a fear of failure, although the latter difference is not statistically significant; and they are also more likely to believe there to be resentment of those who make a lot of money from a new business.

Three special questions were asked of those who met the criteria for involvement in a nascent firm or a new firm, as shown in table 3. Although the number of individuals is small, they are a representative sample of those involved in entrepreneurial activities. The results are, moreover, the same in the cases of both nascent entrepreneurs and new firm principals. Four in five think it will be easy to continue with their career if their business initiative is not successful; more than five out of six do not expect their success to be resented by family, friends and neighbours, and more than nine out of ten think they have the training and experience they need for their entrepreneurial activity. This is slightly different from their more negative perception of the general public's reaction to financial success from entrepreneurship. This strong, uniform level of confidence is encouraging, although it is not clear if it precedes the decision to become an entrepreneur or develops in the process of doing so.

Overall When questions relating to cultural and social values in the UK are compared with the EU or G7 countries, there is little evidence of major differences – differences that would systematically discourage people who wish to launch a new firm. There is some evidence that UK adults may not see as many opportunities for start-up businesses as those in other countries; and this alone could reduce the level of entrepreneurial activity. Cultural resistance – compared to the absence of perceived opportunity – appears to have a modest role in reducing the level of entrepreneurial activity. Those engaged in nascent and new firms see much less of a cultural barrier than the typical adult.

Programme coordination

One of the most frequent comments from experts in all countries relates to the need to simplify the number and delivery of programmes aimed at supporting new and small firms. The greater the enthusiasm among government agencies and not-for-profit organisations for entrepreneurship programmes, the more numerous the programmes themselves and the greater the confusion. In the US, a single state may have several hundred different programmes and forms of assistance but these are seldom coordinated effectively. A key aim of the Small Business Service is to address this issue by improving both programme delivery and coordination. This is clearly an important part of creating an appropriate support infrastructure, particularly when combined with the Enterprise Insight Campaign designed to create greater awareness of – and support for – enterprise.

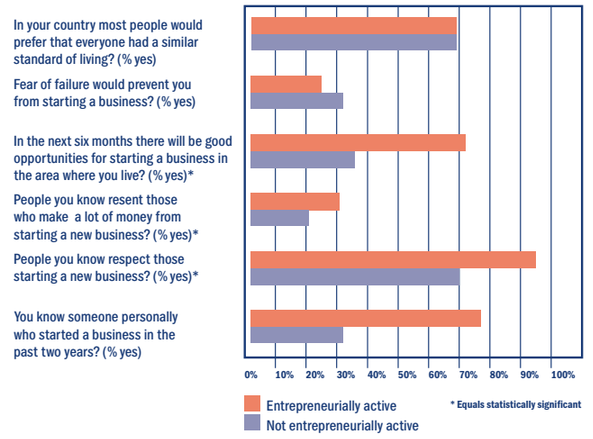


Figure 33 Comparison of reactions to GEM standard items from UK adult respondents (age 18–64) according to whether they are entrepreneurially active or not

	No of cases	Nascent entrepreneurs	New firm principals
If this start-up is not successful, will it be easy for you to find a good job or start another business? (% yes)	45	84 %	
If you made a lot of money from this start-up, would your family, friends, and neighbours resent you? (% no)	46	87 %	
Do you have the training and education necessary to be successful with this start-up? (% yes)	49	94 %	
If this new business is not successful, will it be easy for you to find a good job or start another business? (% yes)	33		80 %
If you made a lot of money from this new business, would your family, friends, and neighbours resent you? (% yes)	34		94 %
Do you have the training and education necessary to be successful with this new business? (% yes)	35		89 %

Table 3 Assessment of their situation by nascent entrepreneurs and new firm principals

9 GEM and Public Policy

As set out in the November 2000 Pre-Budget Statement, the Government's aim is to make "the UK the most attractive environment for business in Europe, removing obstacles to entrepreneurship and promoting the development and spread of new ideas". As a subset of this, the aim of the Small Business Service is to ensure that "the UK should, by 2005, be the best place in the world to start and grow a business". Both aspirations are elements of the broader challenge of raising productivity in the UK. For its part, the SBS identifies an increase in the number, quality and productivity of smaller firms as being central to creating the "conditions for greater economic growth and enterprise for the UK as a whole". The link between entrepreneurship and economic growth is therefore central to the policy agenda.

In pursuit of these aims, the government is embarked on a major programme of reform and new initiatives, as described at the beginning of this report. These measures encompass a number of dimensions, notably finance, taxation, the creation of an enterprise culture, strengthening links between higher education and business and, through the SBS, improved integration and delivery of support programmes.

If one looks beneath the surface of these wide-ranging policy initiatives, a number of consistent themes emerge. At the risk of being overly simplistic the core themes or policy biases may be summarised in the following terms: focus on removing obstacles or barriers to entrepreneurship, the implicit assumption being that obstacles such as regulation and complexities of start-up inhibit the entrepreneurial process; a narrow definition of enterprise culture in terms of innovation and risk-taking, with rather less attention being given to critical values and attributes such as personal independence, initiative, creativity, tolerance of income disparity and so forth; a mix of incentive measures (e.g. tax incentives) and support programmes (e.g. venture capital); a bias towards measures and specified timetables such as the SBS five-year goal that are relatively short-term in orientation; a definition of the education agenda, so far as enterprise is concerned, primarily in terms of improving the skill base of both managers and workers.

No judgement is implied by this identification of these core policy themes. GEM was not set up as a vehicle for the evaluation of public policy. Rather the central aim of the project is to provide a robust and rigorous framework within which policy debate can take place and appropriate policies be developed. The biggest contribution that GEM can make to policy is to help policy-makers answer the question: does our policy agenda tackle those factors that matter most in creating an enterprise society? GEM 2000 gives rise to two sets of indications: the first is a set of "tests" or criteria that may be applied to public policy. The second is a set of specific policy implications.

First, the tests. These may be defined in terms of five questions:

1 *Does enterprise "policy" take full account of factors that affect the enterprise sector?* GEM 2000 provides clear evidence that key features of a wider social and economic system, notably finance, taxation, labour market flexibility, education and appropriate social and cultural values are strongly associated with entrepreneurial activity. While it will take time to determine accurately the nature and direction of causality in some of these dimensions, it is nonetheless clear that there is a range of issues with an impact on the enterprise culture that transcend boundaries between government departments.

2 *Is the approach to policy consistent and does it provide a set of mutually reinforcing initiatives?* Building an enterprise society is in part about creating momentum. More high-quality start-ups provide a powerful demonstration effect; this in turn encourages individuals to make the entrepreneurial jump; once they have done so, the chances of success are greatly enhanced if the wider economic and social infrastructure provides the right mix of incentives and support. Taken together, specific policies and programmes need therefore to be mutually reinforcing.

3 *Does policy strike the right balance between "incentive pull" and "support push" measures?* Historically, the bias was towards support-push measures in the form of special programmes, schemes and financial grants. Whereas support push operates on the principle that the key goal of policy is to remove obstacles to entrepreneurship, incentive pull measures work on the principle that entrepreneurs and their backers are strongly motivated by social and economic incentives in the form of tax relief on investments, capital gains tax benefits and the tangible social endorsement of entrepreneurial success.

4 *Does policy contain the right mix of initiatives geared to the short, medium and long term?* Closing the entrepreneurial gap between, say, the UK and US will not happen quickly. It was not just recently that entrepreneurship became a widespread feature of US society; indeed the history of the US could be read in part as a sustained entrepreneurial journey. For countries with a quite different social and cultural background there is no quick fix. While some aspects of an entrepreneurial society can be put in place relatively quickly, such as a supportive financial infrastructure, others, such as a change in social and cultural values or fundamental improvements in the education system, take time.

5 *Does the policy focus on widening access to and engagement in entrepreneurship?* A truly entrepreneurial society is one in which entrepreneurship is pervasive and in an important sense "ordinary": that is, an accepted and taken for granted feature of everyday life. Widening participation in terms of age, so that those under 25 and older than 44 are also engaged, and increasing the role of women are two clear priorities for enhancing the overall level of entrepreneurship.

This set of questions provides a broad framework for thinking about the public policy agenda. Building on these questions and on the analysis in this report, a series of more specific policy recommendations can be developed. GEM 2000 provides evidence in support of the following priorities, starting with those that are short-term and moving through to more fundamental, long-term aims.

1 Reducing the burden of regulation In building their businesses entrepreneurs need to focus exclusively on doing just that, thereby creating wealth, employment and opportunity. Meeting the requirements of an unnecessary regulatory burden diverts time and attention away from building a business.

2 Reducing taxation At the global level GEM 2000 provides strong evidence that countries with higher levels of entrepreneurial activity have comparatively lower levels of taxation, both corporate tax and maximum personal tax. Reductions may require a reduction in the scope of activities in which Government gets involved.

3 Increasing labour market flexibility and reducing non-wage labour costs At the global level it is quite clear that high levels of entrepreneurial activity are associated with greater labour market flexibility and lower social costs of employment in the form of social security, insurance and so forth.

4 Strengthening financial support Three financing issues stand out. First, the enormous amount of funds being invested in new businesses by informal investors. Second, the relative paucity of UK pension money that is being invested in formal venture capital funds, and hence in new firms, especially technology based new firms. Third, despite the abundance of venture capital managed by UK funds, the amount of venture capital in proportion to GDP invested domestically in early-stage and expansion-stage companies places the UK only seventh among the GEM nations. The findings of the study corroborate government initiatives to support private investments in early stage businesses. As part of this, the reduction in capital gains tax is a welcome step.

The top tier of personal investors is composed of relatively high net worth individuals with the potential to make substantial investments in new and growth firms; this could fill the perceived gaps in equity financing of seed, start-up and early-stage businesses that are not candidates for formal venture capital. The provisions of the new Financial Services and Markets Act that will exempt sophisticated or high net worth private investors from normal financial promotion rules should facilitate investments in new and growth firms. It is expected that the draft Financial Order defining high net worth individuals as those with annual income over £100,000 or net financial assets above £250,000 will become effective in June 2001.

Regulatory factors might inhibit pension managers from investing in venture capital funds. For example, the Minimum Funding Requirement (MFR) is often cited as a culprit. The Treasury Pre-Budget Statement noted that the Government was considering the Myners Review recommendations for relieving the regulatory burden, in particular the MFR on pension funds. It is also considering the changes in the Financial Services and Markets Act to make it easier for pension funds to invest in limited partnerships and hence venture capital. Both measures, if implemented, should stimulate the flow of more UK pension money into venture capital funds.

5 Boosting education for entrepreneurship To start a business, individuals need to feel that they understand what is involved and have the requisite skills; it is also important that entrepreneurship is seen as a genuine career option. There is therefore a clear case for weaving entrepreneurship into the education experience at all levels and thinking in terms of a ladder of enterprise training or development through which individuals progress in the course of their educational careers. A sustained and systematic approach to this would over time significantly strengthen the entrepreneurial capacity of the UK. In endeavouring to do this, the UK is not alone; the 800 experts interviewed around the world for GEM 2000 consistently identified quality entrepreneurship education as one of the top priorities.

6 Increasing the engagement of women in entrepreneurship Overall, men are twice as likely as women to be involved in entrepreneurial activity. The relative underrepresentation of women constitutes a wasted opportunity. Increasing the role of women would have an immediate impact on the level of entrepreneurial activity in the UK.

7 Broadening the age of participation in entrepreneurship Those aged 25–44 account for the largest amount of entrepreneurial activity. As the UK population age profile changes, this age cohort will become progressively smaller. To maintain the level of entrepreneurial activity, it will become important to develop enterprise policies and encourage the involvement of individuals younger than 25 or older than 44.

8 Investing in the infrastructure of post-secondary education If the level of participation in post-secondary education were the only factor used to predict entrepreneurial activity, it would account for 40% of the differences between GEM 2000 countries. One-third of UK key informants identified education as the number one issue. Enhancing the range, depth and quality of education, combined with encouraging high levels of participation, are fundamental to building an entrepreneurial society. Investing in education strengthens entrepreneurship by equipping people with the capacity to think for themselves and to develop a stronger sense of personal independence; by broadening horizons and so putting individuals in a better position to see opportunities; by creating a societal asset in the form of the intellectual know-how, technology, information and patents upon which many entrepreneurial businesses are founded; and by providing an essential resource in the form of capable and skilled workers of the sort required to build a business.

9 Creating an enterprise culture In 12 of the 21 GEM 2000 countries the national experts identified culture as the most important single issue; in the UK it ranked second, slightly behind education. The extent to which individuals feel motivated to pursue entrepreneurship will, in large part, reflect their belief that entrepreneurship is socially respected and that success will not be resented or failure stigmatised. Many of the initiatives listed at the beginning of this report, both those taken by the Government, such as the Enterprise Insight Campaign, and private sector programmes such as Ernst & Young's Entrepreneur of the Year scheme, are specifically aimed at creating a culture that values entrepreneurial endeavour and celebrates entrepreneurial success. In support of this the media have a critical role to play, given the scope they have to create a positive imagery and language of enterprise.

10 Conclusion

From the outset GEM has been designed as a long-term, large-scale project involving a significant number of countries. The reasons for this are twofold. First, the collection of longitudinal data over time is essential if we are to understand fully the causal relationships both between entrepreneurship and economic growth and between other factors, e.g. education, that are clearly associated with entrepreneurship. Over time it should be possible to move from observations of association to statements about causality. Second, as more countries become involved (the target is for 25–30 countries in 2001), it will become possible to make increasingly sophisticated comparisons between countries, thereby gaining greater insight into why some countries are more entrepreneurial than others. On the basis of GEM 2000 a number of conclusions can be drawn for the UK:

1 The Government is right to focus on boosting entrepreneurship to promote growth; there is clear evidence of an association between entrepreneurship and economic growth. Although other factors are important in determining growth, there is no question that enterprise has a central role to play.

2 Although the measured level of entrepreneurial activity in the UK in 2000 is broadly similar to that for 1999, there is evidence of movement in the right direction, most notably in the strengthening perception that good opportunities exist for starting a business. UK key informants believe there to be a shift in attitudes in terms of people's preference for working in large organisations; there are signs both in terms of attitudes and initiatives being taken that an entrepreneurial culture is beginning to take firmer root.

3 It is essential that public policy widens its focus beyond the entrepreneurship sector *per se* and includes an entrepreneurial dimension in the agenda that encompasses broader aspects of the economy (e.g. taxation) and society (e.g. commitment to investing in education).

4 There is a clear case for accelerating the shift away from support-oriented programmes, and the associated grant mentality and dependency to which they may give rise, towards incentives – economic, financial and social – for identifying and exploiting opportunity. The latter, in the form of recognition of entrepreneurs and respect for their achievements, as well as tolerance of those who fail, are a defining feature of a genuinely entrepreneurial society.

5 Enormous scope exists for broadening participation in entrepreneurship along three dimensions: age – widening the age range of those who are entrepreneurially active; gender – developing specific initiatives designed to increase the role of women; and geography – addressing disparities between regions and within regions themselves. In respect of the latter the proposals made by the Social Investment Task Force have an important role to play.

Finally there is a need to broaden research efforts, of which GEM is a part. GEM UK is unique in that detailed studies have been undertaken for the country as a whole, and, by separate teams, in Scotland and Wales. Other countries are planning regional replication studies, but the UK is among the first to complete such analysis. Building on this, two immediate research priorities stand out. First, further analysis of the differences between regions and within regions; such work would greatly benefit the strategy of the Regional Development Agencies. Second, in-depth analysis of the new firm formation process as a complement to the more macro level approach of GEM. Really effective public policy must be based on a better understanding of who starts new firms, how the start-up process operates and what distinguishes those who successfully survive from those who do not. This should include careful attention to the substantial role of informal investors in providing financial support during the start-up phase. Furthermore, a key part of this is a much more detailed examination of high-growth companies, which play such a critical role in generating employment and wealth. The incidence, nature and distinguishing attributes of high-growth companies will form a key part of GEM 2001.

Appendix 1

The Regional Dimension: Scotland

GEM Scotland: Laura Steele and Jonathan Levie

In terms of entrepreneurial activity, Scotland sits at the lower end of a middle group of GEM nations, alongside Sweden, Finland and Israel. Entrepreneurial activity in Scotland was slightly but not significantly lower than the average for the UK in the year 2000: the TEA index for Scotland is 4.0, compared with 5.2 for the United Kingdom. For young people aged up to 34 years, the figures are effectively identical. The rate for middle-aged Scots is lower, but not significantly so, while for older adults entrepreneurial activity is significantly lower. Other indicators of involvement in entrepreneurial activity generally show lower rates of activity, although the small numbers in the sample mean that some of these differences may not be statistically significant. Half as many Scots women as men were entrepreneurially active. The proportion of Scots adults working in a business start-up (2%) is less than half the UK equivalent. Only 6% of Scots adults are owner/managers of a business, compared with 12% of UK adults. Only 1% of Scots adults had invested in someone else's business in the last three years, compared with 3% of UK adults.

There are some differences between Scots and the UK population as a whole in terms of attitudes towards entrepreneurs. This is likely to be connected to Scotland's traditional economic dependence on a few large employers throughout the nineteenth and into the twentieth century, and the associated wide disparities in wealth and resulting dependency culture. Scots are more likely to believe that people who make a lot of money from entrepreneurship would be resented, and that everyone should have the same level of income. Fear of failure in business regarded as a barrier to start-up is more widespread in Scotland than in the UK – even among young people. Perhaps one positive outcome of this is that more Scots believe that people who try to start a business are respected. This, of course, is not sufficient for a positive enterprise culture. People need to be respected for having tried and succeeded, or tried and failed, not just for trying. It is not surprising, therefore, that with this more hostile cultural background, only 29% of Scots who expressed an opinion believe there will be good start-up opportunities in the next six months in their local area, compared to 37% of the UK population. This in turn is likely to be connected with what key informants referred to as the "skills drain" affecting Scotland. The fact that younger Scots who stay in Scotland are as entrepreneurial as their UK-wide counterparts, however, is extremely encouraging. The ten-year drive by Scottish Enterprise to increase business birth rates, combined with higher levels of entrepreneurship education in Scotland than in the rest of the UK, and high profile campaigns by Scottish entrepreneurs to turn around the anti-enterprise culture, may well have contributed to this apparent generational shift in entrepreneurial activity.

For four out of five Scottish key informants, their "three most important issues facing the entrepreneurial sector" fell into just four of the nine entrepreneurial framework conditions: cultural and social norms, financial support, government programmes, and education and training. When asked to single out the most important issue, 36% named a cultural and social norms issue, 31% named an education issue, and the next most frequently mentioned area was government policy (11% of informants). Compared to the UK as a whole, cultural and social norms seem to have the edge over education as the key area of concern. This is possibly because there is wide belief that an anti-entrepreneurial culture exists in Scotland: 44% of Scottish key informants who expressed an opinion agreed that there was resentment of successful entrepreneurs among people they know. In the adult population survey, however, only around 26% of Scots claimed this, a somewhat greater proportion than the UK-wide figure of 19%, but less than among the key informants. Perhaps attitudes in the general population are changing faster than opinion-formers believe. In addition, the Scottish education system is somewhat ahead of the UK generally in addressing the need for entrepreneurship education. Almost a quarter of the Scottish key informants felt that education is already improving attitudes towards entrepreneurship and the entrepreneurial sector. They welcomed the continuation of these efforts, which include the Schools Enterprise Programme, launched in October 2000 with a planned £5 million investment to be contributed equally from the private sector and the Scottish Executive. This initiative aims to provide every school child in Scotland with at least three entrepreneurial experiences during their school career. It builds on the development of enterprise education materials and teacher training by the National Centre for Work and Enterprise at the University of Strathclyde.

Appendix 2

The Regional Dimension: Wales

GEM Wales: David Brooksbank and Dylan Jones-Evans

Introduction

The level of entrepreneurial activity in Wales is lower than the average for the UK and for Scotland. The TEA index for Wales is 2.6, compared with 5.2 for the United Kingdom and 4.0 for Scotland. This difference between Wales and the UK is statistically significant . The index is higher than for five other GEM participants – Ireland, Japan, Singapore, France and Belgium – but lower than for other north European countries such as Sweden, Denmark and Finland.

In terms of the prevalence rates of new firm owners, Wales has a figure of 1.4, compared to 2.2 for the UK, 1.8 for Scotland and 0.3 for Ireland. However, while they are perhaps illustrative of the general picture, the differences in these figures are not statistically significant. Turning to the index for nascent entrepreneurship, however, Wales, with an index of 1.4 again, does have a statistically significantly lower rate than the UK at 3.1. Scotland has a figure of 2.7 and Ireland one of 0.99. In other words fewer than 1 in 100 adults in Wales are actively involved with new business formation.

How does one start to explain these figures? During the last 20 years, Wales has undergone a major industrial transformation. From dependency on traditional industries such as steel and coal, the country has become a major magnet for overseas manufacturing companies in sectors ranging from car components to electronics. Despite this success in attracting inward investors, most statistics suggest that Wales is not as entrepreneurial as it could or should be. The region is currently at least 30% behind the average for the UK for the rate at which it creates new businesses. For Wales to catch up with the average business start-up rate for the UK within the next six years there needs to be a 50% increase in annual VAT-registered start-ups. This equates to increasing the annual number of new businesses from 6,300 to 9,300. Wales is also losing businesses at a faster rate than the UK. The net loss in Wales between 1994 and 1998 was 4,700 businesses – the UK gained 51,100 businesses in the same time period. Given these facts, the challenge remains to transform Wales into a higher value added, innovative and entrepreneurial regional economy, capable of delivering increased prosperity to people in all parts of Wales.

Analysis of the key informant interviews in Wales suggests that this problem is attributable to three main issues: the lack of an enterprise culture, lack of governmental policies towards entrepreneurship that are capital specific; and the poor access to capital.

Enterprise culture

According to the national experts interviewed in Wales, the lack of an enterprise culture is clearly the most significant problem facing the Welsh economy in terms of entrepreneurship. Of the interviewees, 17 ranked this concern in their top three. In particular, all sectors of education are seen to be failing in the provision of support for entrepreneurship and wealth creation. However, this problem extends to the rest of Welsh society, with the perception that a low value is placed on individual initiative and self-sufficiency.

Specific government policies

The development of specific government policies towards entrepreneurship is also seen as being important in reviving enterprise within the region. Here 15 of the respondents ranked the concern in their top three. In particular, it is perceived that government policies do not consistently favour new firms, although the small firm sector is becoming seen as a priority for the National Assembly for Wales. In terms of support, there are serious question marks raised over the competence of government agency employees in supporting entrepreneurs in Wales, as well as whether the right help can be found through a single business support agency (which currently exists in the form of Business Connect).

Access to capital

Lack of capital is also seen as a major issue to be tackled in helping Welsh enterprises, with 13 interviewees placing this problem in their top three. However, while equity and debt funding are perceived as important for firms, private individuals, venture capital or IPOs are not seen as being important, which may reflect the type of business to be found in Wales.

To address these problems, the National Assembly has commissioned the development of an Entrepreneurship Action Plan for Wales, the first regional enterprise strategy of its kind in Europe. This will create a greater awareness of the opportunities and rewards of entrepreneurship in order to encourage more people to start a business or to grow the business they are in, and to develop a greater entrepreneurial culture within institutions, communities and businesses. It also aims to help the establishment of a greater number of sustainable start-up businesses in Wales with potential for further growth, particularly by those underrepresented in the entrepreneurial sector, such as women, the young, Welsh language speakers, ethnic minorities and retired workers. From these new start-ups, the strategy will aim to increase the number of small businesses in Wales that grow, thereby creating wealth, employment and opportunity. Key major projects already under development for the Action Plan include the establishment of a development fund for SMEs in Wales, which will address the perceived finance gap problems of the sector. The creation of an enterprise college and a knowledge exploitation fund will also help to develop a culture of enterprise within the Welsh higher and further education sectors.

Appendix 3

A Note on Methodology

The UK 2000 GEM report, as well as the reports on Scotland and Wales, is based on standardised methodological procedures implemented across all 21 participating GEM national teams. Three major components are discussed below. The data was assembled into a master data set by the GEM coordination team and distributed to all national teams for completion of the national reports. All procedures are described in detail in Reynolds, Paul D., Andreas Rauch, Paloma Lopez-Garcia, and Erkko Autio, GEM 2000 Data Collection-Analysis Strategies Operations Manual, London Business School and Babson College, 2001.

Standardised Cross National Data on a variety of national characteristics and attributes, growth in GDP being the most important, was assembled from a wide range of harmonised international sources, such as the UN, Eurostat, ILO, U.S. Census International Data Base, World Bank, International Monetary Fund, etc. Such data is not, of course, available for national sub-regions, such as Scotland and Wales.

Expert Informants were chosen by reputation and referrals to represent the nine entrepreneurial framework dimensions, 36 or more for each team. Four experts with substantial career experience were selected to represent each of the arenas of finance, government policies, government programmes, education & training, research & development transfer, commercial & legal infrastructure, internal market openness, and access to physical infrastructure. A standardised fixed response self-completed questionnaire, translated into the national language was provided to all experts for self-completion at the end of the face-to-face interview. Almost 900 expert interviews and questionnaires were received from the 23 teams. Summaries of all interviews and the coded files from the fixed response questionnaire were provided to the coordination team where all material was assessed, cleaned, and transforms completed and indices created.

Adult Population Surveys were completed by established market research firms in each country and region, such as Taylor Nelson Sofres for the UK, Systems Three for Scotland, and Beaufort Research in Wales. With about 2,000 responses per unit, over 46,000 interviews are in the consolidated master data set.

The details of the procedures vary across firms, but the Taylor Nelson Sofres procedure is typical. Samples are developed from randomly created phone numbers, which are then processed and edited to increase the probability that each number is attached to a working household phone. Quotas for each geographic region are set by sex, age and social class to match the 1991 UK census data, the latest available. Each number is called up to three times. Any person at a randomly selected household that falls within a quota is asked to complete an interview; if their age, sex, social class quota is filled, they are asked if anyone else in the household that can fill an incomplete quota will answer the Computer Assisted Telephone Interview (CATI) schedule. Following completion of each replication of 1,000 interviews, the sample is weighted based on an interlocking 192-cell matrix consisting of age within sex within class within region to match the 1991 UK Census data.

The actual GEM interview takes an average of less than two minutes, with a range of 60 seconds to 15 minutes, depending on how much the respondent is involved in entrepreneurial behaviour. For most respondents it consists of 10 “yes/no” items. Only the UK interview included an additional 15 items related to national institutional support for entrepreneurship and sectors responsible for national economic growth. The first four GEM items are related to participation in entrepreneurial activities—starting a new firm, owning and managing a new firm, or informally investing in another’s new firm. Anyone engaged in any of these activities is asked about selected details of these activities. The last six items are related to attitudes toward and knowledge of the entrepreneurial climate. The GEM interview items are agreed to in an open meeting involving all national teams. After translation into the appropriate languages by the survey vendor, the interview schedules are reviewed and approved by the GEM national team. All 23 survey vendors provided raw data sets to the coordination team, which reviewed and cleaned all the data, prepared standardised transforms and coding and, finally, returned each national survey data sets to the respective national teams.

The flow of the interview procedure, with truncated items, is represented in Figure A3.1. Those that report they are (1) actively involved in starting a business where (2) they will share ownership that (3) has not paid wages for over three months are considered nascent entrepreneurs. Those that report they are (1) sharing ownership and (2) sharing management of a business that has (3) not paid wages for over 42 months are considered new business owners. Standard socio-demographic questions were supplemented by a question on educational attainment for all three surveys within the UK.

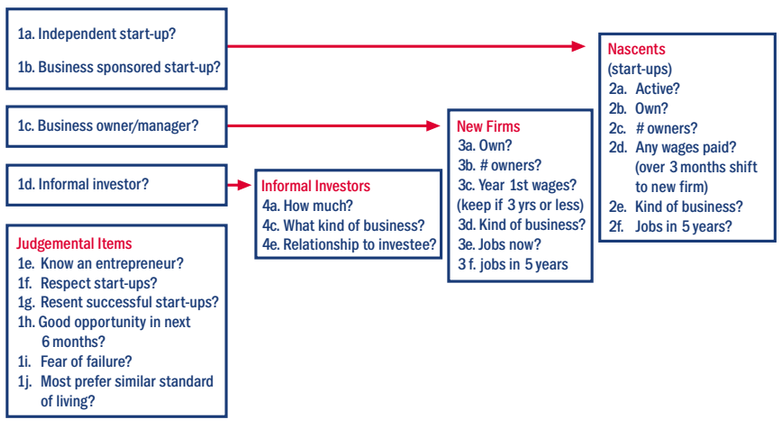


Figure 34 Structure of GEM 2000 adult population interview schedule

Notes

i www.hm-treasury.gov.uk/pbr2000/report/chapt03.htm

ii The Financing of Technology-Based Small Firms: A Second Report, Bank of England, January 2001.

iii The nations for which we have valid venture capital data are Australia, Belgium, Canada, Denmark, Finland, France, Germany, India, Ireland, Israel, Italy, Japan, Norway, Singapore, South Korea, Spain, Sweden, the United Kingdom and the United States. Sources of data for this study include the following:Australian Venture Capital Journal, British Venture Capital Association, Canadian Venture Capital Association, European Venture Capital Association, Indian Government, Israel Venture Capital Online and the National Venture Capital Association (US).

iv The 1996 report found there was a market weakness in the provision of risk capital to TBSF at the seed, start-up and early stages.

v The term ICT in this report is synonymous with the term IT used in the Global Entrepreneurship Monitor 2000 Executive Report www.entreworld.org/GEM2000

vi www.hm-treasury.gov.uk/pbr2000/report/chapt03.htm

vii By agglomerating classic venture capital with buyout and acquisition capital, the amount of money invested in the US relative to European countries is understated because in the US the bulk of acquisition and buyout private equity is not included in the venture capital numbers reported by the National Venture Capital Association. Put differently, when venture capital is defined broadly to include all stages, the ratio of venture capital invested in European countries to venture capital invested in the US is higher than it would be if the measure were just classic venture capital.

viii Report on Investment Activity 1999, British Venture Capital Association.

ix Report on Investment Activity 1999, British Venture Capital Association.

x In the United States this is called commitments. It is the amount of money committed to venture capital funds.

xi Report on Investment Activity 1999, British Venture Capital Association.

References

Department of Trade and Industry (1998). Our Competitive Future: Building the Knowledge Driven Economy. The Stationery Office, London. Command Paper 4176.

Global Entrepreneurship Monitor, Executive Report (1999). P. D. Reynolds, M. Hay, S. M. Camp, Kauffman Center for Entrepreneurial Leadership.

Global Entrepreneurship Monitor, Executive Report (2000). P. D. Reynolds, M. Hay, W. D. Bygrave, S. M. Camp, E. Autio, Kauffman Center for Entrepreneurial Leadership.

Global Entrepreneurship Monitor, UK Executive Report (1999). J. Levie, M. Hay, P. D. Reynolds, Apax Partners and London Business School.

HM Treasury, Pre-Budget Report (2000). www.hm-treasury.gov.uk/pbr2000/report/

Integrating the Business Support Infrastructure for SMEs (2000). Small Business Service, A National Framework for Small Business Support.

Knowledge 2000: Conference on the Knowledge Driven Economy (2000). Department of Trade and Industry, www2.dti.gov.uk/knowledge2000/blair.htm

Organisation for Economic Co-operation and Development (1998). Fostering Entrepreneurship. OECD, Paris.

Small Business Service, Corporate Plan 2000/1 to 2002/3.

Small Business Service, www.sbs.gsi.gov.uk

The Global Competitiveness Report (1999). K. Schwab, M. Porter, J. Sachs. World Economic Forum, Geneva.

The World Competitiveness Yearbook (2000). S. Garelli, International Institute for Management Development, Lausanne.

The UNICE Benchmarking Report (1999).Fostering Entrepreneurship in Europe.

Think Small First, A National Strategy for Supporting SMEs in the United Kingdom (2000). Small Business Service.

World Development Indicators (2000). World Bank, Washington DC.

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The 2000 UK Executive Report should ideally be read in conjunction with the Global Entrepreneurship Monitor 2000 Executive Report which covers all 21 GEM countries. This can be obtained by contacting Professor Michael Hay, London Business School, Regent's Park, London, NW1 4SA. Tel. 020 7262 5050, fax 020 7723 8534, e-mail mhay@london.edu See also www.entreworld.org

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