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## Foreword

This Scottish GEM report provides deep insight into where we in Scotland are as we strive toward becoming a more enterprising and entrepreneurial society.

For me this study should act as a benchmark on Scottish entrepreneurship and as an information tool for policy makers and those in economic development, both public and private, to utilise in enabling Scotland to reach the premier league of enterprising nations.

These findings are not a stick with which to beat ourselves, but an apolitical analysis to assist in informing further developments whilst always recognising economic rejuvenation for Scotland's economy is a long-haul process. Beware commentators, trade bodies and politicians bearing quick fix solutions... Equally there can be no excuses for ignoring the facts and not acting upon them.

Dr. Jonathan Levie and his team are to be congratulated for their tireless work in delivering this important report to Scotland and the diaspora beyond.

2003 was a banner year for entrepreneurship policy in Scotland, with the commitment by the

Scottish Executive to a radical policy of enterprise education across the Scottish school system – we must now be able to lay claim to global leadership in this arena.

Business start-up activity increased, but there is much more still to do, particularly in the social enterprise area, and in attracting more potential entrepreneurs to Scotland.

As Scotland's Registrar General released 25 year predictions for the Scottish population we now see that a demographic time bomb is ticking for Scottish society and we must act now, offering a continuum of policy intervention to tackle this issue.

For the first time we now have an important picture of social enterprise in Scottish society. 45% more Scots said they were currently trying to start a social enterprise than said they were trying to start a business. This represents an important social phenomenon and a potentially powerful force for good in Scottish society.

The social economy is extremely fragmented, but growing fast – this is both an opportunity and a challenge as you will read, consolidation seems an inevitability in this important arena

and we must all step up to the mark to debate this serious issue.

On funding businesses the gap now is at the small end of the funding market: around £10,000 with an upper limit of £20,000. Rather than administering a small loan scheme directly, the Executive or its agencies might consider supporting a social enterprise such as PSYBT to extend its successful loan programme beyond the current remit of young adults aged 30 or less.

With the nascent entrepreneurship population rising in mid 2003 to 93,000, the 2003/04 target for Scottish Enterprise "startup assists" of 8,500 seems almost zealously modest, as does their target of 115 social enterprise assists. Perhaps the new Chief executive and incoming chairman might wish to revisit the agency's key performance indicators?

We all have a part to play in ensuring Scotland is a place where opportunity prevails for all. This GEM report offers meaningful insight as to how we might do so and I commend it to you.

Good Luck

**Tom Hunter**



# Introduction

## What's New in GEM2003?

1. GEM2003 provides current comparative entrepreneurship data on 31 participating nations and accumulated historical data on 41 GEM nations.
2. A new national measure of firm entrepreneurship, the Firm Entrepreneurial Activity (FEA) Index has been created. This reflects innovation and growth by firms within nations, providing a more complete characterisation of entrepreneurship at the national level.
3. For the first time, the prevalence of Social Entrepreneurship in the UK and Scotland is investigated.
4. A national entrepreneurial culture support index has been created using population survey data. This index varies significantly with national TEA rates.
5. The size of the UK sample has been increased again to 22,000, about 10 times larger than most other nations allowing for more robust statistical testing of results. It also contains additional questions on immigration, social enterprise and external financing. The UK sample includes 2,000 respondents in Scotland, paid for by the Hunter Centre for Entrepreneurship @ Strathclyde. The full Scottish sample, as harmonised by the GEM global team and properly weighted for age, region and gender, was used for GEM Scotland analysis.

The Global Entrepreneurship Monitor (GEM) is a unique international research programme that seeks to measure and explain differences in entrepreneurial activity in a wide range of nations.

GEM was conceived and developed in 1998 as a joint research initiative by London Business School and Babson College, with the intention of gathering together pre-eminent entrepreneurship academics to study entrepreneurial processes and the relationship between entrepreneurship and economic well being. GEM2003 is the fifth annual GEM global assessment of entrepreneurship and this Scottish GEM report is the fourth of an annual series. The programme has expanded from 10 countries in 1999 to 31 nations in 2003 with a total of 41 countries being involved in GEM for at least one year.

The GEM project aims to explore three elementary questions:

- *Does the level of entrepreneurial activity vary between countries and, if so, to what extent?*
- *Does the level of entrepreneurial activity have consequences for the rates of economic growth within a nation and, if so, to what extent?*
- *What factors contribute towards high or low levels of entrepreneurial activity within a nation?*

An additional aim of the GEM is to:

- *Provide public policy recommendations that could effect the level of entrepreneurship in each country.*

GEM measures the proportion of individuals in the working age population who are actively trying to start their own business, including self-employment, or running their own business that is less than 3 1/2 years old. This measure is known as Total Entrepreneurial Activity, or TEA.

The harmonized cross-national measures of entrepreneurial activity that GEM has provided over the last 5 years offer a unique, unprecedented resource for academics, students and policymakers with which to benchmark the nature, extent, and economic impact of entrepreneurship in their nation. 63% of the world population is represented in the 40 countries in the GEM database for 2003 and/or 2002. Among these 4 billion represented individuals, over half (2.4 billion) are of 'working age' (18-64 years). Given the year-on-year stability in TEA rates, it is estimated that 12% of these (297 million) are attempting to get 192 million businesses past their initial launch and through their first three years of operation.

The fifth GEM assessment of national entrepreneurship has benefited from an expansion of the range of countries included in this research. In addition, the observed year-to-year stability in TEA rates allows consolidation of data and increased precision of all measures. It is now possible to have high confidence in the trends highlighted by GEM, and more detailed assessments of issues are now possible for a wider range of topics.



Further details of the methodology and model employed in the GEM project are given in Appendix 1.

GEM2003 Global Report key findings:

- **Of the 31 nations included in GEM2003, 12% of the working age population were found to be actively trying to start a business or running one that was less than 3 years old.**

The TEA country average rate is 9%. There has been practically no change in the global TEA rate since 2002. Projections that incorporate the remaining 37% of the world's population who live in countries not covered by GEM suggest a total of about 472 million nascent entrepreneurs are trying to start 305 million firms. Another 89 million owner-managers of 58 million existing businesses are emphasizing an entrepreneurial focus to their business.

- **Entrepreneurship rates continue to vary by country.** TEA Rates varied from as low as 1.6 for France and 2.6 for Croatia to as high as 29.2 for Uganda and 27.3 for Venezuela. FEA rates varied from a low 0.46 in Poland and 1.05 in Russia to a high of 5.95 in Chile and 3.96 in Korea. The UK lies in the middle group of nations with a TEA rate of 6.4 and a FEA rate of 2.1.
- **Entrepreneurship rates vary by age and gender.** The impact of age and gender on entrepreneurial action is very predictable; the basic patterns are found in all countries and have changed little over time. Consistently, men are about 60 % more likely

to be entrepreneurially active than women and those individuals aged 25-44 years are more likely to engage in business start-ups than any other age group. Equal rates of participation are more frequent in developing countries, and are due to relatively high rates of necessity entrepreneurship among women.

- **High growth firms are concentrated in countries with sophisticated national Research and Development infrastructure.**

- **The number of companies receiving classic (seed and early stage) venture capital in the GEM nations continued to fall in 2002.** Most of the decline was in the G7 where the USA, Japan, Germany, France, Canada, and Italy suffered decreases; indeed, the only G7 nation to enjoy an increase was the UK.

- **Venture capital funded only 0.04% as many new firms as informal investors in 2002.** Informal funding of business start-ups (i.e. funding by individuals other than the founders) was responsible for US \$360 billion in resources to new firms in the 33 GEM nations for which reliable data is available. This is eleven times more than the US \$32 billion provided by venture capital firms to help establish businesses in their own countries. (Venture capital data is reported one year in arrears). As a percentage of GDP, UK informal investment rates are close to the median rate for GEM nations but the UK's relatively high venture capital investment rate puts it in the top quartile of GEM nations.



• **Most of the 1,300 key informants interviewed thought that governments are not very effective in promoting or assisting entrepreneurship.** In 25 countries key informants considered that both government policies and government support programmes that were specifically targeted at new and growing firms were ineffective.

As a global phenomenon, entrepreneurial activity absorbs a substantial amount of human and financial resources. About one-third of business start-ups seem to result in a real business, i.e. one that produces goods and services and creates jobs. Necessity entrepreneurship is more prevalent in poor nations whilst opportunity entrepreneurship propels more businesses in rich nations. The authors strongly suggest that it is in the interests of government and policy makers globally to attempt to harness and utilize this pervasive socio economic phenomenon.

Based on univariate correlation analysis that examined factors affecting entrepreneurship, the GEM2003 Global Report authors suggested that wealthier countries with older populations (of which Scotland is one) might be able to improve the level of new business activity and entrepreneurship among existing firms by taking the following steps:

- Reduce social security benefits
- Provide a more positive personal context by increasing training in business start-ups, including capacity for opportunity recognition, and increase contact with existing entrepreneurs.
- Increase net in-migration.
- Encourage an increase in the annual numbers of hours worked.
- Reduce the complexity and cost of registering a new business.
- Increase national cultural support for entrepreneurial career options.
- Reduce the scope of economic activities managed by the government.

These recommendations are revisited in Chapter 8 of this report.



# Summary Highlights for GEM Scotland 2003

- Scotland's Total Entrepreneurial Activity (TEA) rate in 2003 was 5.5%, lower than the country average for all sovereign nations in the GEM sample, which is 8.8%, but the same as the average for all 17 European nations in the sample (5.6%). Scotland is now placed at the base of a group of nations forming the middle of three TEA rate bands (from 5 to 10). In 2002 it was in the middle of the lowest band. Scotland's TEA rate remains at around 85% of the UK figure.
- The rise in Scotland's TEA rate is due to a recovery in opportunity entrepreneurship among young males, as predicted in last year's GEM Scotland report.
- Attitudes to entrepreneurship have continued to improve in Scotland. They are now in line with the UK average, and similar to attitudes in small modern nations, except that fewer adults in Scotland and the UK know personally someone who has started a business in the last two years.
- The informal investment rate in Scotland appears to have risen to close to UK levels (1.4% compared with 1.6%). This rate is still low by international standards.
- People who have spent a third or less of their life in the region in which they now reside (recent in-migrants) are around 60% more likely to be starting or running a new business than those who spent more than a third of their life in the region. This is a UK-wide figure, but the data for Scotland display a similar pattern.
- While 3.1% of Scottish adults (aged 18 to 80) and 4.1% of UK adults reported they were currently trying to start their own business, a higher proportion (4.5% and 5.2%) reported they were currently trying to start a social enterprise. However, more people said they were business owner/managers (9.1% and 10.9%) than social enterprise managers (7.2% and 7.5%).
- In Scotland, males are twice as likely as females to be trying to start a business or to be business owner/managers. However, males try to start social enterprises and manage social enterprises at the same rate as females.
- Social enterprise startup attempts are much more evenly distributed across all work classifications than business startup attempts. Particularly noticeable are the relatively high rates of social enterprise startup attempts by students, homemakers and retired people, compared to business startup attempts.
- Scotland performs in line with the UK, Canada and the US in the number of spinouts produced per university per annum. Scottish and UK universities produce on average 4 times as many spinouts per million dollars of research income as the AUTM sample of relatively research-intensive US universities, and twice as many as Canadian universities and research institutions. Government policy towards spinouts is, however, confused.
- Only 33% of all Scots interviewed thought that there were adequate sources of funding for business startups in the region, compared with 39% across the UK. And 53% of Scots nascent entrepreneurs expected to pay all the startup costs personally, compared with only 43% of UK nascent entrepreneurs. However, 34% of the Scottish startup entrepreneurs surveyed required only £500 or less to start their business, 50% required £10,000 or less, and 85% required £20,000 or less. Scots seem more reluctant to seek external private sector funding for businesses than their UK counterparts. There may be scope for more quasi-public sector small loan schemes in Scotland, perhaps administered by a social enterprise such as PSYBT.
- The major entrepreneurship policy initiative of the year was the £45 million, 3 year Enterprise in Education Strategy. A review of the Scottish Executive's Policies to promote the Social Economy was published in January but a strategy document had not been published by year-end. The Scottish Enterprise programmes announced in 2002 appeared to be on target and operating successfully.
- The most serious issue facing entrepreneurship in Scotland is now population decline rather than anti-enterprise attitudes. A set of immigration programmes is awaited.

# New business activity in Scotland: 2003 update

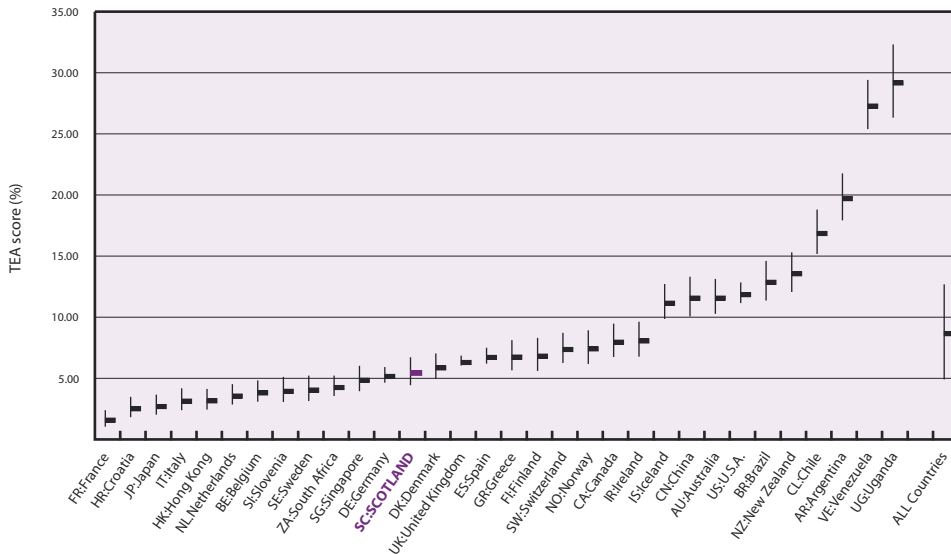


Figure 1. National TEA scores for 31 sovereign nations and Scotland

Source: GEM2003 Population Survey

Figure 1 shows the Total Entrepreneurial Activity (TEA) rates of the 31 sovereign nations that participated in GEM2003 plus Scotland, ranked in order of TEA rate. Scotland is now placed at the base of a group of nations forming the middle of three TEA bands (from 5 to 10). In 2002 it was in the middle of the lowest band. Scotland's TEA rate in 2003 was 5.5%, lower than the country average for all sovereign nations in the GEM sample, which is 8.8%, but the same as the average for all 17 European nations in the sample (5.6%). 6 nations (Netherlands, Hong Kong, Italy, Japan, Croatia and France) had TEA rates significantly below that of Scotland statistically<sup>i</sup>.

Table 1 benchmarks the Total Entrepreneurial Activity (TEA) rate for Scotland for both 2002 and 2003 against the UK, against a group of 28 global nations and a sub-group of 16 European nations for which data is available for 2002 and 2003, and finally against a group of 5 small modern nations the same size as Scotland (Denmark, Finland, Ireland, New Zealand, and Norway)<sup>ii</sup>. Entrepreneurial activity in Scotland was around 85% of the UK figure in both years. The UK and Scottish TEA rates were not significantly different in 2002 or 2003. The Scottish TEA rate is significantly below that of Ireland and New Zealand but not significantly different from Finland, Denmark and Norway.

TEA rates in Scotland and the UK rose by around 20% in 2003. However, the Global average, European average and small modern nation average TEA scores were static. This is why Scotland's TEA rate has improved relative to these benchmarks. The UK appears to be coming out of recession faster than many Continental European nations, and TEA rates are mirroring national economic cycles.

Table 1. National Total Entrepreneurial Activity (TEA) scores

Source: GEM2002 and GEM2003 Population Survey

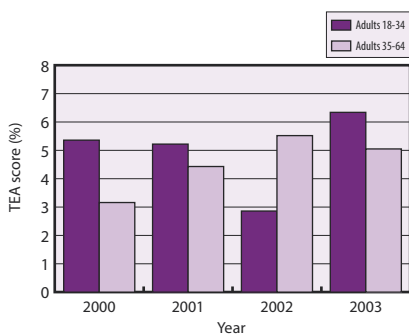
	TEA score		% change	Scottish TEA as a % of other TEA scores	
	2002	2003		2002	2003
Scotland	4.6	5.5	20		
UK	5.4	6.4	19	85	86
28 nation average	7.4	7.5	0	62	73
16 nation European average	5.7	5.6	0	81	100
5 small modern nation average	8.6	8.4	0	54	65





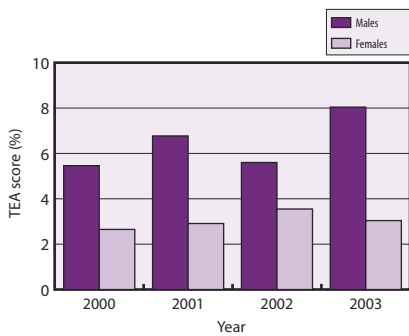
**Figure 2. TEA scores by age group for Scottish GEM 2000 to 2003 population samples**

Source: GEM2000 to GEM 2003 Population Surveys



**Figure 3. Distribution of entrepreneurial activity by gender for 2000 to 2003**

Source: GEM 2000 to GEM2003 Population Surveys



**Figure 4. Attitudes to entrepreneurship in Scotland in 2003 by gender**

Source: GEM2003 Population Survey



## Distribution of entrepreneurial activity by age and gender

Figures 2 and 3 show the trend in TEA rates among younger and older adults and males and females from 2000 to 2003. The main feature is the dip in 2002 of young adult males, followed by recovery in 2003. Male TEA rates in 2003, at 8%, were significantly higher than female TEA rates (3%), while young adult rates at 6% were not significantly higher than older adult rates (5%). The Scottish male TEA rate was 90% of the UK rate, and the Scottish female TEA rate was 82% of the UK rate. The Scottish young adult rate was 91% of the adult rate, and the Scottish older adult rate was 83% of the UK rate.

GEM distinguishes between opportunity entrepreneurship (individuals starting businesses to exploit unique market opportunities) and necessity entrepreneurship (individuals starting businesses because they have no other alternative). In Scotland in 2003, males had significantly higher rates of both forms of entrepreneurship than females, but there was no significant difference between younger and older adults for either form. The opportunity entrepreneurship rate in Scotland was 6.6% for males (88% of the UK level) and 2.7% for females (86% of the UK level). Necessity entrepreneurship among Scottish males was 1.9% (127% of the UK level), and 0.3% for Scottish females (60% of the UK level).

In last year's report, we suggested that the collapse in opportunity entrepreneurship among

young males from 8.4% in 2001 to 2.4% in 2002 might be a reflection of a possibly temporary reduction in the perceived attractiveness of entrepreneurial activity among young adults in Scotland because of the 2001/02 recession. We speculated that rates might recover in 2003, since opportunity perception among young males had risen in 2002 after a decline in 2001. This has happened, with young male TEA rates rising to 9.1% in 2003. TEA rates for older males and young and older females appear to be less volatile.

## Attitudes towards entrepreneurship

Figure 4 compares the self-perception of opportunities for starting businesses over the next 6 months, self-capacity (skills, knowledge and experience) to start a business, recent personal contact with a start-up entrepreneur, and fear of failing in business amongst males and females. There is good news in this Figure. There has been improvement in all of these attitudes since 2002. Opportunity perception has risen by 30% for males and 65% for females. Perception of entrepreneurial capacity has risen by 5% for males and 15% for females. The proportion of males and females who say they know someone personally who started a business in the last 2 years has risen by 14% and 49% respectively. Fear of failure has continued to decline for a third year, by 14% for males and 9% for females.

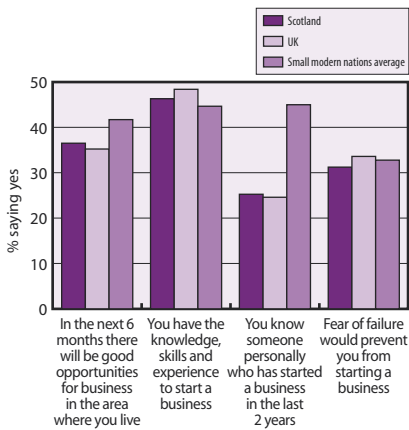
It is most likely that these improvements in attitudes are linked mainly to the economic



**Figure 5. Attitudes to entrepreneurship in Scotland, the UK and small modern nations in 2003**

Source: GEM2003 Population Survey

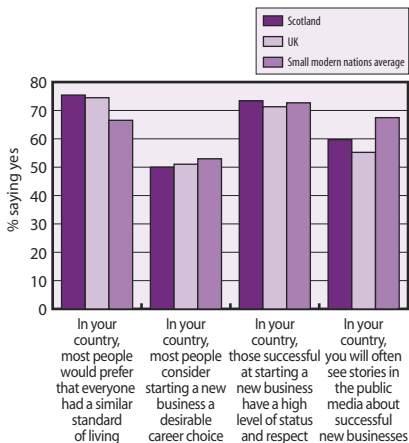
Note: The data in this figure are based on those who expressed an opinion and agreed with the statement<sup>iii</sup>.



**Figure 6. Attitudes to entrepreneurship in Scotland, the UK and small modern nations in 2003**

Source: GEM2003 Population Survey

Note: The data in this figure are based on those who expressed an opinion and agreed with the statement.



cycle. As the nation comes out of recession, people begin to feel more positive generally. In last year's report, we noted that opportunity perception had risen significantly in males but not among females in 2002, and speculated that female opportunity perception would take more time to recover from the dampening effect of recession. This is supported by the 2003 data. As these attitudes are indicators of intended action, they bode well for TEA rates in 2004.

While there is now no significant difference between Scottish males and females for opportunity perception, knowing an entrepreneur and for fear of failure, perception of capacity is significantly different by gender. Males are more likely to believe that they have the knowledge, skills and experience to start a business. This does appear to translate into a higher level of entrepreneurial activity for males.

As Figure 5 shows, attitudes towards entrepreneurship in Scotland are now the same as those in the UK as a whole. They are also the same as the small modern nation average, with the exception of knowing an entrepreneur. Only 25% of Scots said they knew someone who had started their own business in the last 2 years, compared to 45% in small modern nations. There are fewer entrepreneurs in Scotland than the average for small modern nations, and this may explain part of the difference.

## Entrepreneurial Culture

In 2003, a new set of attitudinal measures towards

entrepreneurship was introduced to the population survey. These are designed to measure national cultural perceptions related to entrepreneurship, as opposed to personal opportunity or capacity perception. The results for Scotland, the UK and an average score for small modern nations are shown in Figure 6. They show little difference between Scotland and either the UK or other small modern nations. This suggests that Scotland in 2003 did not have a relatively anti-enterprise culture.

## Informal Investment

Each year, respondents to the GEM survey are asked if they have invested in someone else's business in the last 3 years. This provides a measure of "informal" as opposed to institutional investment in each nation. Informal investment in Scotland recovered from a low of 0.8% in 2002 to 1.4% in 2003, its highest level in four years. This is close to the UK figure of 1.6% but it is still much lower than the average for small modern nations of 3.8%. The country average for 31 sovereign nations in GEM 2003 was 3.4%.

There is a more detailed discussion of finance for entrepreneurs in chapter 6.

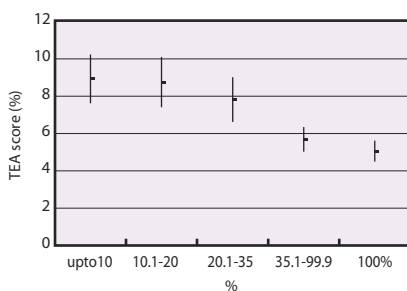
## In-migration & entrepreneurship

In last year's GEM Scotland report, in-migration, ethnicity and entrepreneurship was examined. It was found that non-white immigrants were significantly more likely to behave entrepreneurially than other groups. In-migrants to Scotland from elsewhere in the UK also appeared to have high TEA rates. One piece of the in-migration puzzle



**Figure 7. TEA scores by % of life spent in region of UK**

Source: GEM2003 Population Survey

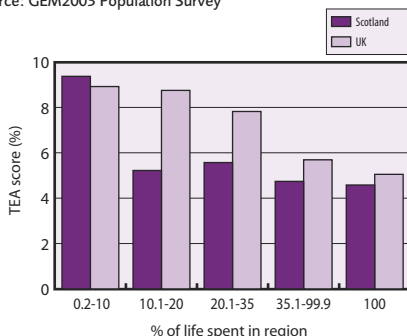


that could not be solved was: how soon after in-migrating do these people start their businesses? This could alter the effect of policies to attract in-migrant entrepreneurs – a hot topic in Scotland in 2003. If, for example, people took a long time to settle in before starting a business, an in-migrant attraction policy could take a very long time to have an effect on entrepreneurship rates.

This year, the GEM UK survey included a question that asked how long the respondent had been living in their region<sup>iv</sup>. Their answer to this question can be linked with their age to create a measure of the percentage of each respondent's life that they have spent in the region. Figure 7 displays the results. They demonstrate that people who have spent a third or less of their life in the region in which they now reside (recent in-migrants) are around 60% more likely to be starting or running a new business than those who spent more than a third of their life in the region. This difference is statistically significant. Figure 8 suggests that the recent in-migrant effect may be more marked for people who have spent 10% or less of their lives in Scotland, although the difference in TEA rates between this group and the rest of the population is not statistically significant, given the small sample size.

**Figure 8. TEA scores by % of life in region in UK and Scotland**

Source: GEM2003 Population Survey



Overall, this new data suggests that a policy of attraction of in-migrants might create more entrepreneurial activity in the short rather than the long term. It would, of course, only have a very small effect on national TEA rates, as demonstrated in last year's GEM Scotland report.

But at least it would not take half a lifetime for the results to bear fruit.

## Conclusion and outlook

2003 appears to have been a recovery year for entrepreneurship in Scotland, and it is to be hoped that the improvements in attitudes this year will be carried forward into further rises in entrepreneurial activity next year, if the general economic recovery in the UK continues. Scotland's move up the GEM rankings this year is largely a consequence of late recovery in other European nations.

- i "Statistical significance" refers to a calculation of where the range within which the average value of 95 out of 100 replications of the survey would be expected to lie. This range is shown in Figure 1 by the vertical bars on either side of each data point. If the 'confidence intervals' (denoted by the vertical bars) of two national TEA rates do not overlap, the difference between the TEA rates is not statistically significant at the 0.05 level. Reference in this report to significant differences implies statistically significant differences at the 0.05 level.
- ii The reason for comparing Scotland to these independent nations is that they are all around the same population size. There is a modest and highly significant correlation between population size and necessity entrepreneurship ( $R=0.50$ ,  $p<0.01$ , 37 nations, GEM2002 data), but not with opportunity entrepreneurship. Thus by comparing Scotland with these nations, we avoid the population effect, and can learn from policy measures implemented on a similar scale to Scotland. This year Israel did not participate in GEM data collection and so is not included in the group of small modern nations.
- iii In most questions, the proportion of "don't know" answers is very small. However, for opportunity perception, there is typically a 15% don't know group. The central GEM team strip out don't know answers before making summary national data available. This accounts for the difference in opportunity perception rates between figure 4 and figure 5.
- iv For the sake of brevity, "region" was not defined, so respondents may have defined it at the less than regional development area level.



## Social Entrepreneurship in Scotland - Foreword

4

As we all now know, entrepreneurship takes many forms. By its very definition, its success is dependent on change, on challenging the status quo, and on building sustained success. Significantly, the success that an entrepreneurial venture achieves is defined in terms set by the entrepreneurs behind the venture. Contrary to one of the great myths about entrepreneurship, this is not always in terms of great personal wealth and profit. As most of the research on the subject shows, entrepreneurs have many motivations in building their ventures: building something for their families; building a global business; proving that the technology behind the business can succeed; or, simply, making a job for yourself.

It's this very diversity of motivations that makes entrepreneurship so important as an economic phenomenon - and why government and policy-makers are so keen to take measures to stimulate it. And this is not only about business start-up as the main focus of policy. It's about other impacts as well. And, in recent years, returns to the wider community have been seen as an equally valid return from entrepreneurial activity as wealth-creation and profit.

In recent years we've seen the latest manifestation of entrepreneurship in what we now call the social economy: entrepreneurship with a social focus. While much of this is far from new - it covers many well-established forms of organisation such as community businesses, co-operatives and "not-for-profits" - in recent years we have seen this as an important part of the entrepreneurial spectrum.

Social Enterprises share the fundamental characteristics of entrepreneurship: a new idea directed at a real opportunity, an innovative business model that delivers results and a commitment that ensures the enterprise achieves success. And all deliver results in a way that changes their "markets" fundamentally, delivering markedly higher "returns" than anyone had ever thought possible (if it doesn't achieve this, it can't be said to be entrepreneurial).

It is encouraging that Social Enterprise has been included in this year's Global Entrepreneurship Monitor Survey. As with other dimensions of entrepreneurship, we need to understand more about how prevalent it is - and what we need to do to encourage it to grow.

In recent years, Scottish Enterprise has strengthened the support we provide to social enterprise. Through the Business Gateway, we offer advice and support to social entrepreneurs, using our business advisers to assist social enterprises run their organisation and develop their trading income. We do this in partnership with other key bodies, such as Communities Scotland, Social Investment Scotland and the National Council for Voluntary Organisations.

By providing valuable insights into the nature of Social Enterprise in Scotland today, the findings that follow provide an important input to the debate.

**Terry Currie**

Director, Small Business Services Division  
Scottish Enterprise



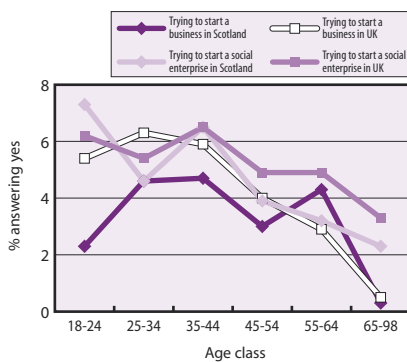


# Social Entrepreneurship in Scotland



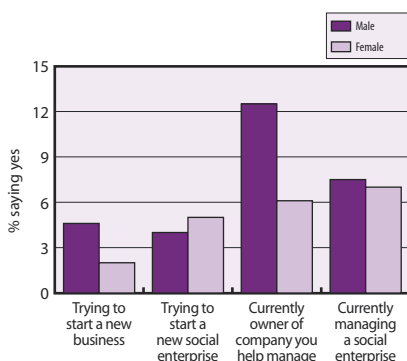
**Figure 9. Self-reported business and social enterprise startup entrepreneurs by age in Scotland and UK**

Source: 2003 Scotland GEM and UK GEM surveys



**Figure 10. Reported business and social enterprise startup and management activity of respondents aged 18+ in Scotland by gender**

Source: 2003 Scotland GEM survey



This year, for the first time, the UK GEM team attempted to measure social entrepreneurship activity in the UK. Although the methodology is not as advanced as that for business entrepreneurship, it has produced intriguing results. We also interviewed 6 leading experts in social entrepreneurship in Scotland as part of our expert interview schedule.

## Methodology

Each survey respondent was asked two questions:

1. Are you, alone or with others, currently trying to start any kind of social, community or voluntary *service, activity or initiative*? This might include providing subsidised or free training, advice or support to individuals or organisations; profit-making activity, but where profits are used for socially oriented purpose; or self-help groups for community action.
2. Are you, alone or with others, currently managing such social, voluntary or community *service, activity or initiative*?

These were designed to match as much as possible two questions on business activity:

3. Are you, alone or with others, currently trying to start a new business, including any type of self-employment or selling any goods or services?
4. Are you, alone or with others, currently the owner of the company you help manage, self-employed, or selling any goods or services?

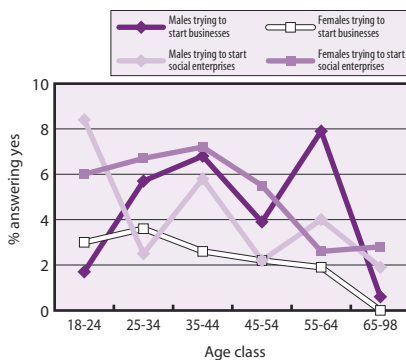
The TEA index is compiled from questions 3 and 4 plus a series of supplementary questions designed to identify people who are not business owners or who are not actively trying to start the business. These supplementary questions were not asked of social entrepreneurs in this year's survey. To separate baby businesses from established businesses, the year of founding is identified by asking when the enterprise first paid wages, profits or payments in kind to the owners. Social enterprises do not have "owners" in the same way; neither do they (typically) redistribute profits to their founders. Many of them do not pay wages, but rely on volunteers to deliver products and services to clients. Another difference is that it is very rare for people over the age of 64 to found businesses (and the TEA index only considers adults from 18-64), but many people continue to found social enterprises after the age of 64.

Given these differences in the nature of business and social entrepreneurship, the approach taken here is to compare all those aged 18 or over who answered yes to questions 1 and yes to question 3, i.e. those saying they were trying to start businesses or social enterprises; and compare those who answered yes to questions 2 and yes to question 4, i.e. those saying they were currently the owner/manager of a business or managing a social enterprise. The results are illuminating.



**Figure 11. Self-reported business and social enterprise startup entrepreneurs by age and gender in Scotland**

Source: 2003 Scotland GEM survey



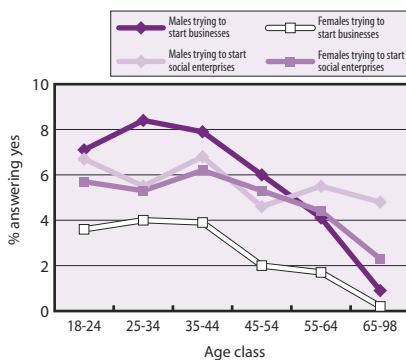
### Social and business entrepreneurs compared

While 3.1% of Scottish adults and 4.1% of UK adults reported they were currently trying to start their own business, a higher proportion (4.5% and 5.2%) reported they were currently trying to start a social enterprise. However, more people said they were business owner/managers (9.1% and 10.9%) than social enterprise managers (7.2% and 7.5%).

Figure 9 (*previous page*) shows self-reported business and social enterprise startup entrepreneurs by age group in Scotland and the UK. Social entrepreneurship attempts appear to be more widespread across all age groups than business entrepreneurship attempts, which tend to peak in the 25-44 age group. Three times as many adults aged 18-24 in Scotland say they are trying to start social enterprises (7.3%) as businesses (2.3%), in contrast to the UK as a whole where there is little difference (5.4% and 6.2%). In both Scotland and the UK as a whole, people continue to try starting social enterprises during retirement age, while almost nobody tries to start a business beyond the age of 64.

**Figure 12. Self-reported business and social enterprise startup entrepreneurs by age and gender in the UK**

Source: 2003 UKGEM survey



as females. The UK follows a similar pattern, except that male UK rates for all 4 activities are around 10 to 47% higher than the equivalent Scottish rates.

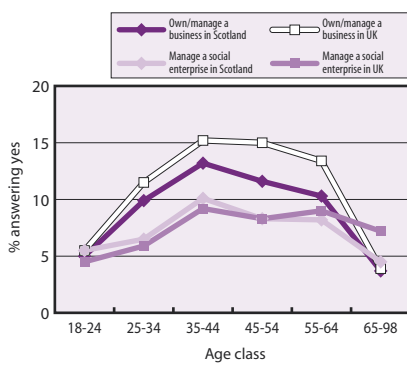
Figure 11 shows that Scottish males tend to have higher rates of business startup attempts than females in the middle age groups, while for social enterprise attempts female rates tend to be higher than male rates. This pattern is reversed for the youngest age group, although this may be an artifact of small numbers in this group. This reversal is not evident in the UK, where male business startup attempt rates are two times female rates in all age groups, while they are the same as female social enterprise rates in all groups except the oldest (see Figure 12).

There are some important gender-based differences between business and social entrepreneurship attempts, as illustrated in Figure 10 (*previous page*). In Scotland, males are twice as likely as females to be trying to start a business or to be business owner/managers. However, males try to start social enterprises and manage social enterprises at the same rate



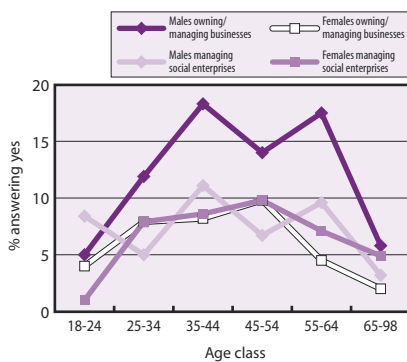
**Figure 13. Self-reported business owner-managers and social enterprise managers in Scotland and UK by age group**

Source: 2003 Scotland GEM and UK GEM surveys



**Figure 14. Self-reported business owner-managers and social enterprise managers in Scotland by gender and age group**

Source: 2003 Scotland GEM survey



**Figure 15. Reported business and social enterprise startup activity of respondents aged 18+ in Scotland by educational attainment**

Source: 2003 Scotland GEM survey

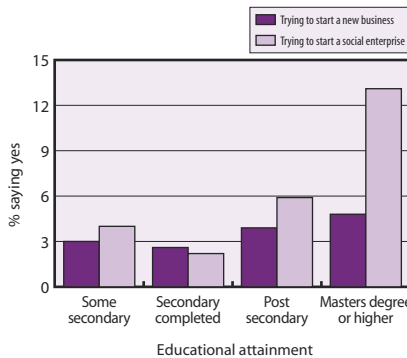


Figure 13 compares business owner/manager rates and social enterprise manager rates by age group in Scotland. Business owner/manager rates are higher in the UK than in Scotland, but social enterprise manager rates are similar in the UK and in Scotland, except for the oldest age group, which appears to have lower rates in Scotland than in the UK. Business owner/manager rates tend to be higher than social enterprise manager rates except for the youngest and oldest age groups. Figure 14 compares these rates by gender for Scotland. Males have higher business owner/manager rates than females in these middle age groups, but they do not generally have higher social enterprise manager rates. Female business owner/manager rates track male and female social enterprise manager rates quite closely. The pattern is similar in the UK, except that male business ownership rates are higher in the middle age groups.

Figure 15 shows that in Scotland, people who are highly educated are much more likely to try to start social enterprises than those who are less well educated. The education effect is strong (and statistically significant) for reported social enterprise startup activity but rather weak for reported business startup activity. The UK has very similar education effects.



**Figure 16. Reported business and social enterprise startup activity of respondents aged 18+ in Scotland by work status**

Source: 2003 Scotland GEM survey

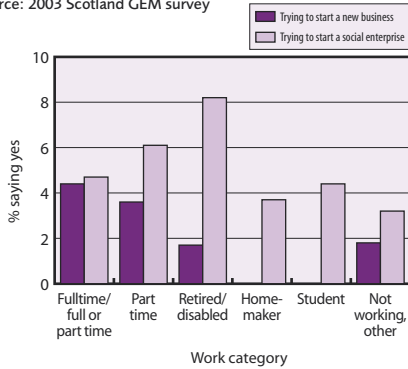
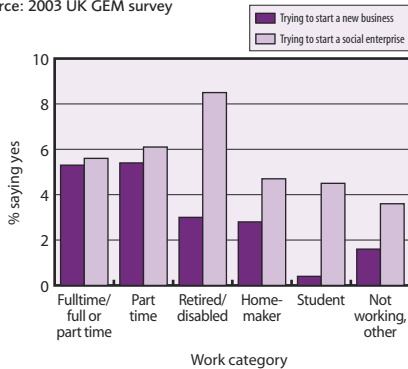


Figure 16 (for Scotland) and Figure 17 (for the UK) show that social enterprise startup attempts are much more evenly distributed across all work classifications than business startup attempts. Particularly noticeable are the relatively high rates of social enterprise startup attempts by students<sup>i</sup>, homemakers and retired people, compared to business startup attempts. Clearly, entrepreneurial behaviour among those not in paid employment is more likely to be expressed as social enterprise than business enterprise.

**Figure 17. Reported business and social enterprise startup activity of respondents aged 18+ in UK by work status**

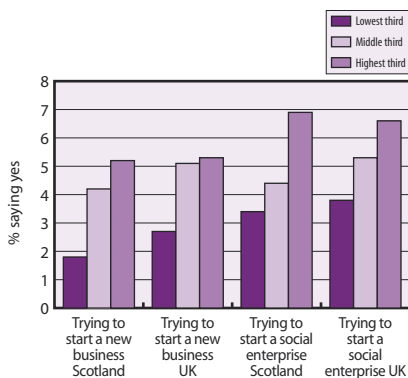
Source: 2003 UK GEM survey



Although social enterprise startup activity attracts people from all work classifications, there is an income effect. Those with more income are more likely to try to start social enterprises. Figure 18 shows the income effect for business and social enterprise startup attempts. The income effect seems slightly more marked in Scotland than in the UK as a whole.

**Figure 18. Reported business and social enterprise startup activity of respondents aged 18+ in UK and Scotland by UK-wide income, split into thirds**

Source: 2003 Scotland GEM and UK GEM surveys

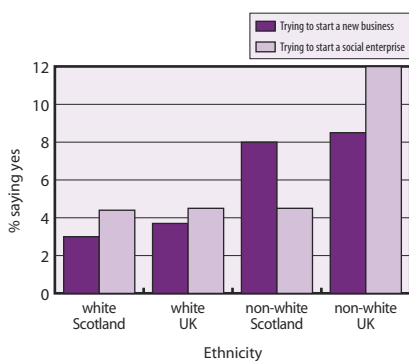






**Figure 19. Reported business and social enterprise startup activity of respondents aged 18+ in UK and Scotland by ethnicity**

Source: 2003 Scotland GEM and UK GEM surveys



**Figure 20. Business and social enterprise attempts by proportion of life spent in region in Scotland and UK**

Source: 2003 Scotland GEM and UK GEM surveys

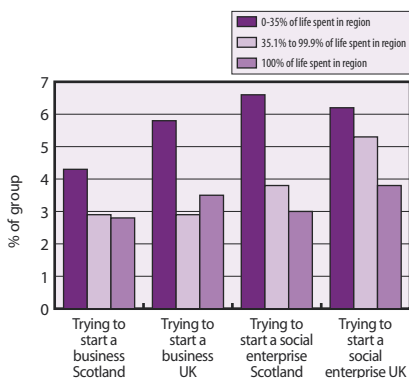


Figure 19 shows the difference in reported startup attempts by ethnicity. Non-whites had at least twice the activity rates of whites for both business and social enterprise startups, except for social enterprise startup attempts in Scotland, where they were identical. Only Scotland, Wales and the North-East of England had no significant differences in social enterprise startup attempts between whites and non-whites.

The relationship between in-migration to Scotland (or to another region of the UK) and attempts to start businesses and social enterprises is shown in Figure 20. They show that recent in-migrants tend to have the highest rates of activity.

### Characteristics of social enterprises

The Scottish "up and running" social enterprises identified in the survey ranged from educational enterprises (26% of the sample) to social work enterprises (12.5%) to food production and catering (12.5%) to entertainment (12.5%) to a wide variety of service and consultancy organisations.

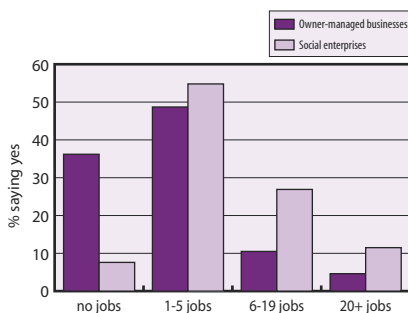
The proportion of people trying to start versus running a business or social enterprise suggests it may be more difficult to get a social enterprise off the ground and that starting social enterprises is a relatively recent phenomenon. As the state withdraws from certain activities it has traditionally engaged in, this creates niches for social enterprises to fill. However, this is a difficult, highly political market, and social

enterprises tend to have many stakeholders, making it difficult to take rapid decisions. The owners of new businesses, however, can change strategy rapidly to survive. In both Scotland and the UK, one up-and-running social enterprise appeared to exist for every 5 owner-managed businesses in existence. The median year of founding of social enterprises reported by social enterprise managers was 2000<sup>ii</sup>. The equivalent median year of founding of businesses reported by their owner managers was 1995.



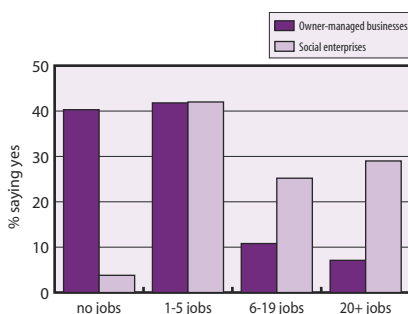
**Figure 21. Reported employment by existing owner-managed businesses and social enterprises in Scotland**

Source: 2003 Scotland GEM survey



**Figure 22. Reported employment by existing owner-managed businesses and social enterprises in UK**

Source: 2003 UK GEM survey



There is also some evidence that once social enterprises do get started, they are more likely to grow significantly in terms of employment than owner/managed businesses. This seems to hold for both Scotland and the UK, as shown in Figures 21 and 22. This would fit with their social role. However, while 29% of social enterprises in the UK sample employed 20 or more people, only 12% of Scottish social enterprises did so.

Slightly more than half of the people managing "up-and-running" social enterprises in the population survey reported that the enterprise received half or more of its funding from public sources (55% for Scotland versus 51% for the UK). However, the Scottish social enterprise base appears to get more of its funding from sales than UK social enterprises as a whole. Two-thirds of the Scots and just over half of the UK social enterprises obtained at least some revenues from sales of products or services. Of these, over 60% of the Scots social enterprises and over 50% of the UK social enterprises obtained at least half of their revenues from sales. Similarly, over one third of the Scots social enterprises and over a quarter of UK social enterprises obtained at least 90% of their revenues from sales.

### Key Informants

The views of social enterprise key informants generally accord with the picture of social enterprise in Scotland painted by the population survey data. When asked to relate factors that contribute towards social enterprise activity in Scotland, experts were animated, pointing towards "examples of successful credit unions

*in Scotland which until recently were not found anywhere else in Britain"* and the fact that "Scotland has a tremendous record of communal activity". In addition, the establishment of a social enterprise academy to introduce action learning for entrepreneurs and their peers was considered to be beneficial by a respondent.

On the other hand, they felt that a disapproving attitude in Scotland towards 'business' and 'individual' wealth creation, fuelled by an economic and social history of community activism and socialist spirit, has led to social enterprises having a limited outlook in terms of self sufficiency and growth. One expert considered that most of the voluntary sector is "not engaging in the market" and that this is a barrier to social enterprise. As another key informant put it, "the [problem with] the voluntary sector is that it is in the poverty industry because what they spend most of the year worrying about is how to raise money to keep themselves in jobs".

Deficit funding and grant-based dependency inducing methods of financing, and the relative scarcity of mergers and acquisitions in the not-for-profit sector, were also believed to limit social enterprise in Scotland.

"Encouraging Social Enterprises to merge would possibly make part of the sector more efficient and would paradoxically make them more entrepreneurial because they would then be in a position to look at new market opportunities whereas at the moment they are in survival mode."



Several informants suggested that there was insufficient non-discriminatory support from organisations whose primary objectives are actually enterprise finance or enterprise support, and that this also limited entrepreneurial activity. One questioned whether the Scottish Executive believed in social enterprise, although this was a minority view.

### **Boosting social entrepreneurship in Scotland**

To conclude, a picture emerges of a social enterprise sector in Scotland that in many ways complements the business enterprise sector. Certain people who are underrepresented in the business enterprise sector (for example students, young adults, women, retired people) are actively engaging in social enterprise. There are similarities between business and social entrepreneurs too, such as the effect of income, immigration, and education on enterprising activity rates. Scotland seems to produce fewer significant-sized social enterprises than the UK as a whole. Scottish social enterprises appear to raise more of their income from sales than their counterparts in the UK. More detailed research, perhaps studying the finances of a sample of matched pairs of social enterprises in Scotland and England, would uncover the reasons for these differences.

This points to one of the paradoxes of social entrepreneurship: a social entrepreneur's main potential funder may be the very agency that has failed to cater for the local need that sparked the

idea of the social enterprise in the first place. This unhappy situation can and does result in difficult relationships, including a less than respectful attitude on the part of the social entrepreneur, and game-playing and obstruction by public servants. It is no wonder that social enterprises appear to be less likely to convert their dreams into viable entities than their business counterparts. They face more difficult challenges – and need to be very innovative to overcome these. While many Scottish leaders of social enterprises hesitate to call themselves entrepreneurs, it is clear that they must be able to practise entrepreneurship – and well – to survive and grow.

Our key informants felt that more could be done to positively support this sector in a way that would encourage the emergence of strong regional or national social enterprises with proven social enterprise models and more professional staff. Given the many public sector vested interests in Scotland, it may take private sector venture philanthropy, the social enterprise equivalent of venture capital, to achieve this.

- i There were only 45 students in the Scottish sample. None of them said they were trying to start a business. However, 2 said they were trying to start a social enterprise. With so few students in the sample, this result is subject to a wide margin of error. The very large UK sample confirms however that students are more likely to start social enterprises than businesses.
- ii The definition of year of founding used this year is not ideal for social enterprises, and this may have affected the result.

## University Spinouts in Scotland

### Context

Given Scotland's low background rate of entrepreneurial activity, and the relatively high proportion of Scotland's R&D conducted in Scottish universities<sup>i</sup>, the Scottish Executive has targeted university spinouts as an important source of new technology and knowledge-based companies in Scotland<sup>ii</sup>. *Spin-outs* are companies established with university intellectual property, and in which the university has some equity or royalty interest. A spinout is often a better option than *licensing* to an existing company, since a spinout has no incumbent resource base that would be threatened by the introduction of the new technology.

The Scottish Executive's recent Review of Higher Education in Scotland suggests that it is not convinced that the university sector is fully committed to knowledge transfer:

*"The commercialisation of research is central to the Executive's strategy for a smart, successful Scotland. This review found some continued questioning of the value of this activity by institutions and still some reluctance to regard it as a fundamental role for higher education - although the most recent HE-BI survey... provides strong evidence that attitudes are more positive in Scotland than elsewhere in the UK towards knowledge transfer."*<sup>iii</sup>

According to our experts, all Scottish universities are increasingly pursuing ways of exploiting the technology and intellectual know-how created through their research and other knowledge-

generation activities. Several internal and external drivers have fuelled this trend.

At a time of increasing financial pressure for universities, exploitation of university-generated intellectual property (IP) through patenting and subsequent licensing, and the sale of equity in spinouts, was seen by some universities to offer the potential to generate strong financial returns. However, the experience of universities with long histories in this area, for example Strathclyde in Scotland, and MIT in the US, is that this is an unpredictable and relatively insignificant revenue earner for the university, and cannot be expected to make up shortfalls in income from elsewhere. The total income generated by Scottish universities from "all intellectual property commercialisation activities" in 2000/01 was £4.6 million. The cost to the universities of intellectual property protection in 2000/01 (almost certainly an underestimate) was £1.3 million. The net benefit (£3.3 million) represents about one third of university income from formal consulting activities and around 1% of total research funding for the Scottish university sector<sup>iv</sup>.

A second driver comes from the role that universities wish to play - or that their stakeholders wish them to play - in generating benefits to the economy, be it on a local, regional or national scale. Licensing of IP to local established companies or a new spinout business creates direct benefits in for example employment creation and increased demand for local business services.



Thirdly, some spinouts have tremendous potential for contributing to the social good. For example, Cyclacel was founded by Professor Sir David Lane of the University of Dundee to bring the benefits of his cancer research to humanity.

Fourthly, the ability to manipulate a new technology is often tacit and difficult to license. As these skills are often possessed by a few university researchers on short term contracts, getting involved in a spinout is increasingly seen as an alternative and potentially attractive career for these individuals.

### Approaches to commercialisation

Although all Scottish universities have a formal commercialisation strategy<sup>v</sup>, the approaches taken vary, from hands-on and heavily controlled to much more open and less controlling. Once IP with commercial potential has been recognised, decisions need to be taken as to how to treat it. Patenting grants the university monopoly commercialisation rights for a fixed time period and within set jurisdictions, but is an

expensive process. Some institutions adopt a policy of being very selective in what is patented while others patent a sizeable number of developments on the basis that prospective exploiters will have the opportunity to identify potential options for the knowledge/technology.

Decision-making is complicated by the fact that each situation is unique, and there are many stakeholders (see table 2). Most universities have long-term principles that should guide their commercialisation process. However, our experts agreed that short-term departures from these principles do occur due to the influence of powerful senior administrators or academics or financial pressures, or changes in government policy.

In most cases, universities retain ownership rights over their IP and grant licences for exploitation on an exclusive or non-exclusive basis. Investors in ventures exploiting university IP normally want the business in which they invest to own the IP. Technology ownership reduces the downside risk for the investor, as patents can be sold on if the venture fails. The desire to own the IP is particularly strong in the case of venture capital investors. However, universities recognise that any technology may have multiple market applications, and that it is unlikely that any single business enterprise will have the vision or ability to exploit any technology to its full potential. By making patents on a technology over to a young firm, the university is lowering both its own upside gain and that of the society at large (assuming the

Table 2. Map of influencers on knowledge transfer decision-making in Scottish universities

Internal influencers	The decision	External influencers
University management	Spinout or License?	UK Government
Academic faculty		Scottish Executive
Heads of Department		SHEFC
Technology Transfer Office		Research Councils
University Commercialisation Committees		Research Trusts
Knowledge creators (staff or students)		Scottish Enterprise
Entrepreneurship Centres		Local companies
Scottish Institute for Enterprise		Foreign companies
		Entrepreneurs



university has the capacity to bring the technology to the notice of potential commercialisers, of course). This often causes conflicts between universities and venture capitalists in Scotland.

### Performance

Table 3 shows that Scotland performs in line with the UK, Canada and the US in the number of spinouts produced per university per annum. Scottish and UK universities produce on average 4 times as many spinouts per million dollars of research income as the AUTM sample of relatively research-intensive US universities, and twice as many as Canadian universities and research institutions. Per million research dollars, Scottish and UK universities produce at least as many licences per million dollars of research income as US universities.

The balance of spinouts created to licence income is different in North America and the UK. The Lambert Review calculated that nine new university technologies are licensed for every spinout that is formed in the US, compared to only 4 in the UK<sup>vi</sup>. This should not be interpreted as a failure on the part of UK universities to engage in licensing, however.

Estimating the benefits of licensing versus spinouts is not straightforward. The 2001 HE B-I survey, released in March 2003, estimated that US universities sampled by AUTM generated licence income of 4.3 % of their research expenditure, compared to only 0.6% from UK institutions, a seven-fold difference. The

calculation however was made using US statistics for the 2000 fiscal year, and income from sales of equity in spinouts for the US but not for the UK, where it provides a particularly high proportion of gross licence income. As Table 3 shows, a more equivalent comparison, which includes research expenditure for 2001 and income from equity sales in the US, Canada and the UK, generates estimates of 3.2%, 2.3% and 1.4% respectively, or a two-fold difference.

In the stock price bubble years of 2000 and 2001, equity sales in the AUTM US samples accounted for around 10% of gross licence income, compared with more than 65% in the HE B-I surveys<sup>vii</sup>. The typical percentage in the AUTM survey (years 1996-1999 and 2002) is less than 5%. Income from equity sales dropped significantly in 2002. Nevertheless, for research-intensive universities, equity sales can be not insignificant. In 2001, UK universities sold spinout shares worth £30 million, or 73.5% of gross licence income for that year<sup>viii</sup>. In 2003, the University of Edinburgh's spinout Wolfson Microelectronics floated on the main Stock Exchange at a value of £213 million. Admittedly, the University's share ownership has been progressively diluted through successive funding rounds, but clearly this Scottish spinout has developed into a significant industry player.

In recent years, an innovative set of programmes has been developed in Scotland to increase the quantity and quality of university spinouts in Scotland still further. These include financial aid schemes that traverse the commercialisation



process, including Proof of Concept, Synergy, SMART and the Scottish Enterprise Co-investment Fund, and intensive commercial training and mentoring programmes for researchers such as the Royal Society of Edinburgh Enterprise Fellowships and the Scottish Enterprise Network High-Growth Start-up Programme<sup>x</sup>. The finance schemes are designed to address perceived market failure in private sector funding of research with commercialisation potential.

The training schemes are designed to address a perceived lack of commercial skills among researchers. Generally, our key informants were positive about these programmes. Most of these programmes have been started or scaled up in 2002 and 2003, and despite the drop in spinout numbers across the UK in 2002<sup>x</sup> this should show up in increased numbers of spinouts in the short to medium term unless policy shifts undermine them. It is to this we now turn.

**Table 3. International Comparison of University Spinout Companies created in 2001 and 2002**

Indicator	US 2001 <sup>1</sup>	US 2002 <sup>1</sup>	Canada 2001 <sup>1,2</sup>	Canada 2002 <sup>1,2</sup>	UK 2001 <sup>3</sup>	UK 2002 <sup>4</sup>	Scotland 2001 <sup>5</sup>	Scotland 2001 <sup>6</sup>
No. of Universities	142	156	27	33	158	125	8	17
Sponsored research expenditure (\$M) <sup>7</sup>	27,560	31,696	1,799	2,052	4,468	n.a.	398	514
Sponsored research expenditure per university (\$M)	194	203	67	62	28	n.a.	50	30
No. of spinouts created	402	364	69	49	248	158	19	37
No. of spinouts per university	2.8	2.3	2.6	1.5	1.6	1.3	2.4	2.2
Sponsored research expenditure per spinout company created (\$M)	68.6	87.1	26.1	41.9	18.0	n.a.	20.9	13.9
No. of spinouts per \$100M research income	1.5	1.2	3.8	2.4	5.6	5.0	4.8	7.2
% contribution of spinout share sales to gross licence income	10.1	1.6	24.3	4.3	73.5	23.3	n.a.	n.a.
No. of new licences awarded	3300	3739	333	362	728	648	n.a.	107
No. of new licences per university	23.2	24.0	12.3	11.0	4.6	5	n.a.	6.3
No. of new licences per \$10M research income	1.2	1.2	1.9	1.8	1.6	2.1	n.a.	1.9
% of new licences going to spinout companies	16.5	14.6	21.0	13.9	n.a.	21	n.a.	n.a.
No. of new licences per new spinout company	8.2	10.3	4.8	7.4	2.9	3.8	n.a.	2.9
Sponsored research expenditure per licence awarded (\$M)	8.4	8.5	5.4	5.7	6.1	n.a.	n.a.	5.1
Gross licence income (\$M)	868.3	997.8	42.1	32.8	62.1	n.a.	n.a.	n.a.
Licence income as % of sponsored research expenditure	3.2	3.1	2.3	1.6	1.4	1.1	n.a.	n.a.

## Policy

The Lambert Review of business-university collaboration, published in December, stated: "There is a strong view from both business and universities that in recent years the balance of commercialisation activities has moved too far towards spinouts, driven by the availability of University Challenge Funds and an undue emphasis on the part of Government on spinouts as a source of employment creation."<sup>xii</sup>

The Scottish Higher Education Funding Council (SHEFC) also indicated to universities in December that "activities carried out for the public good will be weighted more highly than activities carried out primarily for financial gain" in the reward of knowledge transfer activities<sup>xiii</sup>. Income to universities from "venturing activities" (i.e. income from spinouts) will rank lowest in priority, i.e. rank after licensing income, in the allocation of the Knowledge Transfer Grant for 2004/05. This grant rewards knowledge transfer by universities, and is likely to affect their technology transfer policies.

<sup>1</sup>US and Canadian data from AUTM Licensing Survey Financial Year 2002. www.autm.net <sup>2</sup> Canadian data includes 5 hospital/research institutes <sup>3</sup>Higher Education Business Interaction Survey 2000-01 London: HEFCE. (98% of UK universities) <sup>4</sup>UK University Commercialisation Survey: Financial Year 2002. Nottingham: AURIL/NUBS/UNICO. (Relatively research intensive universities) <sup>5</sup>Research Intensive Universities only (data courtesy of Bob Smiles, University of Edinburgh) <sup>6</sup>Higher Education Business Interaction Survey 2000-01 Results for Scotland. London: HEFCE. <sup>7</sup>UK and Scotland 2001 data: sterling dollar exchange rate of 1.5151 (as used by HEB-I 2001 survey)



This apparent shift in policy should give cause for concern. Firstly, it goes against research in the US that demonstrates that:

*“start-up companies make substantially greater investments in new technologies than either existing small companies or large companies and so have the greatest positive economic impact.”<sup>xiii</sup>*

Indeed, the AUTM 2002 survey appeared to view the US mix of spinout to licensing as inferior to that of Canada from a public good perspective<sup>xiv</sup>.

Secondly, spinouts are themselves a significant source of licensing. 15% of US university licences and 21% of UK university licences were granted to spinouts in 2002<sup>xv, xvi</sup>. Thirdly, licence income is rising rapidly in the UK anyway. The NUBS Survey recorded a 21% rise in licence income between 2001 and 2002 in its like-for-like sample of 75 UK universities<sup>xvii</sup>.

It appears that the full benefits of spinouts are not being recognised in the current UK debate, and there is a danger of babies being thrown out with the bathwater. By curtailing spinouts, licence income will also suffer. The evidence suggests that spinouts should be accorded at least equal weighting to licensing to existing firms in the distribution of knowledge transfer funding, alongside measures to encourage quality team formation and broadcasting of information on technologies. Broadcasting facilitates market pull rather than technology push; it helps to increase both the quantity of licence opportunities and stronger market-based spinouts by attracting individuals who can see connections between the potential in a technology and potential in a

market (see below).

In summary, the issue for Scotland is more fundamental than calculating a simple trade-off between licences and spinouts. It is about how to influence university research so that it fosters entrepreneurial skills, opportunity recognition and competence development in the wider economy. Spinouts are one, potentially valuable manifestation of the process of engagement between universities and industry. We now turn to the question: how can more value be created through spinouts?

## **Maximising the Benefits of Technology**

Although academic research has established that exploitation of university IP through the creation of spinouts rather than pursuing the licensing route may be superior from a public good perspective, in practise many Scottish spinouts are low potential technology consultancies rather than substantial product-driven enterprises<sup>xviii</sup>. Several key informants noted that in contrast to the US, many spinouts in Scotland are led by research and/or teaching staff, rather than by business people. They tend to be technology – push companies rather than market – pull companies. Academics who build careers within universities have made a positive choice to advance knowledge within their discipline rather than enter the commercial world. This is a significant drawback when it comes to identifying and exploiting market applications of particular technologies.





Opportunities are best identified through contact with the market or potential market. Most (but not all<sup>xix</sup>) academics have little or no opportunity to gain knowledge that would make them well placed to spot market opportunities. This is apparent, for example, in the slow progress that many Scottish Proof of Concept projects made in writing commercialisation plans in 2003.

Secondly, researchers typically lack not just market awareness but also commercial expertise. Our interviews confirmed that some academics who stepped outside and started companies have learned the hard way about hard-ball investors and the cut-throat nature of the marketplace.

A third issue noted by key informants was that where academics do spin out, they may take with them the team of researchers who developed the technology. This can result in the hollowing out of skills and expertise in the academic department, and disclosure complications for remaining staff.

In the UK, incubators and entrepreneurship training have helped to some extent to offset a relative lack of commercial expertise among academics leading spinouts. However, several key informants agreed that more effort should be put into creating mixed executive teams of researchers and those with commercial experience, who could include ex-patriates with an entrepreneurial background. Universities' alumni are potentially a rich source of suitable team members. If communication systems could

be set up to make these human connections, this could leave senior academics in university as a source of further spinouts, bring market awareness to the new ventures, speed time to breakeven and make them much more attractive to growth funders.

Despite the efforts of technology transfer offices, too much leading edge technology, developed in Scottish universities, is being left on the shelf because the world does not even realise that it is there. There is a strong public good case for a pro-active, multi-media "Scottish Technology Review"<sup>xx</sup> to be founded, modelled on the MIT Technology Review but surpassing it (and the existing web-based Scottish Research Information System) in aggressively placing Scottish technology stories in all media, world-wide. This media-feeding role is something that could be funded by the new Intermediary Technology Institutes as a joint effort, perhaps led by a technology-savvy journalist who could be based at a university.

- i 12% of UK university R&D is conducted in Scotland, but only 3.5% of business R&D. Research & Development Expenditure and Employment by Businesses in Scotland, Scottish Executive, August 2002.
- ii A Framework for Higher Education in Scotland: Higher Education Review Phase 2 Chapter 5: Research and Knowledge Transfer, Scottish Executive, October 2003.
- iii See endnote i.
- iv Higher Education-Business Interaction Survey 2000-01 Results for Scotland. Higher Education Funding Council For England. March 2003.
- v Higher Education-Business Interaction Survey 2000-01. Higher Education Funding Council For England. March 2003. p.12.
- vi Lambert Review of Business-Industry Collaboration Final Report, December 2003. HMSO, London. p.59.
- vii AUTM Survey 2002, p. 20, UKB-I 2001 Survey, p. 26 and 34.
- viii see endnote vi.
- ix Schemes in italics are specific to spinout encouragement; other schemes are more general but spinouts feature prominently.
- x A like for like comparison of 78 UK universities by the NUBS 2002 survey showed a 33% drop in spinout formation rates between 2001 and 2002. This closely matches the 31% fall in UK TEA rates. NUBS UK University Commercialisation Survey: Financial Year 2002, p.29. Nottingham: NUBS.
- xi Lambert Review, p.50.
- xii Letter to Professor Tim O'Shea, Convenor, Research and Commercialisation Committee, Universities Scotland, from Professor David Gani, Director of Research Policy and Strategy, SHEFC.
- xiii AUTM 2002 survey, p.27.
- xiv see endnote xi.
- xv AUTM (2003) p.15.
- xvi NUBS Survey, p.18.
- xvii NUBS Survey, p.21.
- xviii We acknowledge however that some "soft start" consultancies can evolve into "hard" companies.
- xix Initiatives such as the Knowledge Transfer Programme (formerly Teaching Company Scheme) are one way of opening market possibilities to academics.
- xx This was suggested by Gavin Don.

## Finance for Startups in Scotland

This year, all respondents were asked the question: excluding money from family and friends, would a lack of external funding prevent you from starting up a business? There is no difference between the proportion of Scots saying yes to this question and those in the rest of the UK (57% versus 56%)<sup>i</sup>. However, only 33% of all Scots interviewed thought that there were adequate sources of funding for business startups in the region, compared with 39% across the UK. And 53% of Scots nascent entrepreneurs expected to pay all the startup costs personally, compared with only 43% of UK nascent entrepreneurs.

At first sight, then, lack of external finance can be a major barrier to business startup activity, and this barrier seems more substantial in Scottish minds. But is this barrier real or imaginary? 34% of the Scottish startup entrepreneurs surveyed required only £500 or less to start their business, 50% required £10,000 or less, and 85% required £20,000 or less. There are no systematic differences in these amounts by age or gender, and they are relatively small amounts of money.

Finance for entrepreneurship in general, and the low levels of informal investment in Scotland in particular, have been a recurring theme of the past three GEM Scotland reports. This year, additional questions have been asked in the GEM UK survey of all nascent entrepreneurs<sup>ii</sup> and owner/managers of baby businesses (those up to three and a half years old) and owner/managers of more established businesses. They were asked if they had secured finance from different sources, if they had failed to secure finance from these sources, and if they had failed, what were the reasons. The results are detailed below for the Scottish sample and, for comparison, for the full UK sample.

First, however, it is instructive to see where nascent entrepreneurs believe the funding for their new business will come from. They were asked to state from what sources they had received or expected to receive funding. The results for Scotland and the UK are compared in Table 4. Nascent Scottish entrepreneurs are around 20% less likely to seek funding from family or banks and 70% less likely to seek funding from individuals who are not family.

Table 4. % of nascent entrepreneurs in Scotland and the UK reporting sources of expected and secured startup funding

Source: UK GEM2003 population survey

Startup funding from:	Scotland	UK
Close family members	16	24
Other kin or relatives	9	7
Work colleague	2	10
Employer	5	6
Friends, neighbours	0	7
Banks, financial institutions	35	43
Government programmes	21	23
Any other source	18	17



Funding type	% secured this type of finance			% failed to secure this type of finance			% Success rate for this type of finance		
	Nasc.	Baby	Est.	Nasc.	Baby	Est.	Nasc.	Baby	Est.
Entrepreneur type									
Friends & family	16	12	20	4	4	2	88	100	100
Individual investor	4	4	7	6	4	4	50	40	67
Unsecured bank loan	3	19	25	4	0	6	33	100	95
Bank overdraft	8	28	55	4	2	7	60	100	96
Non-bank unsecured loan	6	0	8	2	4	0	100	0	100
Mortgage or other secured loan	3	2	21	4	4	1	33	33	95
Equity or venture capital	0	2	6	2	0	1	0	100	83

**Table 5. Success and failure in securing funding by owner/managers of nascent, baby and established businesses in Scotland**

Source: UK GEM2003 population survey

Tables 5 and 6 list secured and failed sources of finance as reported by owner/managers of nascent, baby and established businesses for Scotland and the UK. A "success rate", or the number of entrepreneurs who secured a type of funding as a percentage of all those who attempted to secure that type of funding is also shown<sup>iii</sup>. This data shows that the success rate goes up as the businesses become more established. It also shows that the success rate for friends and family is highest, next comes secured bank loans and overdrafts, then unsecured loans, and less again for equity type investments from individuals or venture capital.

**Table 6. Success and failure in securing funding by owner/managers of nascent, baby and established businesses in UK**

Source: UK GEM2003 population survey

Funding type	% secured this type of finance			% failed to secure this type of finance			% Success rate for this type of finance		
	Nasc.	Baby	Est.	Nasc.	Baby	Est.	Nasc.	Baby	Est.
Entrepreneur type									
Friends & family	12	20	24	3	3	1	79	88	98
Individual investor	5	8	6	3	5	2	75	66	77
Unsecured bank loan	8	17	21	6	8	5	46	72	75
Bank overdraft	21	28	47	8	6	7	68	89	97
Non-bank unsecured loan	5	5	7	3	3	2	84	66	85
Mortgage or other secured loan	10	13	19	4	2	4	61	92	94
Equity or venture capital	3	4	3	4	2	2	45	70	68

One feature of this data is that the proportion of baby business owner/managers who had secured friends and family funds was 20% across the UK but only 12% in Scotland. This is consistent with the relative expectations of Scottish and UK nascent entrepreneurs outlined in Table 4. However, there is little difference in the failure rates between Scotland and the UK. This suggests that fewer Scottish entrepreneurs are asking, and not that more Scottish entrepreneurs are being rejected. In fact, the failure rates are very low in Scotland and the UK. The Scottish sample is small, and this carries with it the possibility of error. However, the UK sample is large, with about 600 nascent entrepreneurs, 600 baby business owner/managers, and over 1000 established business owner/managers. It can therefore be expected to be reasonably representative of the population as a whole.

The table reveals a preference for debt over equity as a means of external funding. Debt also had higher success rates than equity, whether from individuals or institutions.

Those who had failed to secure funding were asked why they had failed by agreeing or disagreeing with a set of eight possible reasons. Table 7 show the percentage of UK nascent, baby and established business owner/managers who agreed with each reason for bank overdraft, equity or venture capital, and individual investors. (The Scottish sample was too small to assess in this way). They show systematic differences between institutional and individual investors and



between debt and equity providers, and changes in reasons for rejecting funding requests as the businesses became more established.

individual investors failed to fund primarily because of the nature of the business, but also, for more established businesses, because of debt levels (equity investors) or the cost of funding (individual investors).

Funding type	Bank Overdraft			Equity or Venture Capital			Individual Investor		
	Nasc.	Baby	Est.	Nasc.	Baby	Est.	Nasc.	Baby	Est.
Entrepreneur type									
Not investor ready	17	12	15	9	0	6	45	14	20
Nature of business	39	29	33	17	64	61	52	30	48
Inadequacies of business plan	35	12	12	4	7	28	52	33	29
Business too small	34	30	27	44	7	18	57	39	38
Fear of debt	27	30	33	13	7	56	19	33	25
Unwillingness to share ownership	29	21	37	4	0	28	10	11	29
Cost of finance too high	25	24	37	13	7	28	24	29	43
Weak management team	6	3	8	35	29	12	10	4	19

**Table 7. Reasons for failure in securing funding by owner/managers of nascent, baby and established businesses in UK (% of owner/managers agreeing)**

Source: UK GEM2003 population survey

Many different reasons for rejecting overdraft requests were given, with only "weak management team" agreed by less than 10% of respondents. By contrast, answers to equity capital and individual investors were more focused.

Table 7 suggests that relatively few entrepreneurs failed to secure funding because in their opinion the cost of finance was too high. The entrepreneurs perceived that the nature of their business was a major stumbling block for both equity investors and individual investors, and was also important for nascent entrepreneurs seeking bank overdrafts. Other major themes were existing levels of debt. It appears that the relatively few entrepreneurs who reported failing to secure certain types of funding, failed mainly for internal reasons or problems of matching with suitable investors.

Bankers set more store by the business plan and the nature of the business for nascent entrepreneurs. For more established businesses, bankers were worried about levels of debt and the state of the balance sheet, and the need for more equity. For institutional equity and individual investors, the small size of the nascent business was the primary reason for failing to get funded. Equity investors were also more concerned about the adequacy of the management team, while individual investors were concerned that the business plan was poor and the nascent business was not investor ready. As businesses became more established, equity investors and



## Lessons for entrepreneurs

Equity and individual investors typically invest in businesses they know something about. The solution for entrepreneurs who get rejected by these investors is to shop around. Indeed, some in our sample did so and were successful. The success rate for established businesses for both individual investors and equity capital was around 70%. Considering that our experts believed 2003 to be a venture capital famine in Scotland (but one where some movement was being detected by year end), these are surprisingly good success rates. We were, of course, sampling the survivors. The 2% of the UK sample (1.3% of the Scottish sample) who shut down their businesses in the past 12 months do not feature in this data.

Despite the generally high success rates, only 50% of Scottish nascent entrepreneurs, 20% of baby business owner/managers, and 20% of established business owner/managers felt there are adequate sources of external startup funding in their region. The equivalent figures for the whole UK survey were 47%, 44% and 35%. The lower rate for baby business and established owner/managers in Scotland should give some cause for concern, as the data do not justify this pessimism. In summary, the data from GEM suggests that the lack of funding issue may be at least partly perception rather than reality. The experience of the entrepreneurs interviewed is that those who actively seek it have a relatively high chance of getting it.

- i Poorer, younger people are however more likely to say yes to this question.
- ii These are entrepreneurs aged 18-64 who are actively trying to start a business that they will own in whole or in part and which has not paid wages for more than three months.
- iii This measure controls for those who both failed and succeeded with the same type of finance source.

# Scottish Entrepreneurship Policy and Programmes Review 2003

## Introduction

This chapter reviews progress and highlights major new developments in entrepreneurship-related policy and programmes in Scotland during 2003.

## Policy

In early 2003, the Scottish Executive accepted all the recommendations of the Enterprise in Education Review Group that had reported in December 2002. In March the First Minister and Deputy First Minister announced the Scottish Executive's Enterprise in Education Strategy. They also appointed Schools Enterprise Scotland, the charity set up to raise and channel £2.5 million of private and £2.5 million of public money into enterprise education for primary schools, as the Scottish Executive's principal advisor on delivering the recommendations. Scotland is now the first nation in the world to have a comprehensive system of enterprise education for pupils in all schools at both primary and secondary level. As part of this programme, a further £44m has been provided, including £2m from the Hunter Foundation, for enterprise education in schools.

In January 2003, the Scottish Executive issued a "Review of the Scottish Executive's Policies to promote the Social Economy". The conclusions of the review are that "the Scottish Executive is committed to supporting the growth of the social economy". Communities Scotland (formerly Scottish Homes) was given overall responsibility for promoting the sector, while

Scottish Enterprise "should establish its position in the social economy market as a provider of services aimed primarily at organisations either already close to commercial viability or with clear ambitions in that direction".

On the same day as the publication of the report, the Executive's deputy social justice minister Des McNulty announced a £6 million funding package to support the development of Scotland's Social Economy. The money was intended to stimulate greater involvement of social enterprises in areas such as housing, childcare, care in the community and the new deal.

Unlike England and Wales, no Scottish minister has specific responsibility for this sector. Instead, responsibility rests within the Communities Ministry. The review concluded: "it now falls to all interested bodies including the Executive, local government, Communities Scotland, the Enterprise Networks and, of course, social economy organisations themselves, to take this agenda forward and achieve the outcomes to which this review has pointed." Following the review, a steering group was set up to create an action plan with 7 strands. By year end, despite considerable discussion within the sector, the action plan had not been published.

Throughout 2003, the Scottish Executive was developing a policy for attraction and retention of immigrants as a response to increasing awareness of the effect of Scotland's declining



population on the economy and on Scottish society. Policy announcements were expected early in 2004. It also issued a consultation paper on personal bankruptcy law in Scotland, following earlier changes in English law.

### **Programmes<sup>ii</sup>**

2002 saw the launch or re-launch of many important entrepreneurship programmes. In 2003, these programmes began to have an effect on real businesses. Progress made is summarised in the following paragraphs.

### **Support for Startups**

In July 2003, the business information and advisory services of Scottish Enterprise, the Scottish Executive, Local Authorities and other business development organisations were revamped with the creation of Business Gateway, designed as a one-stop shop for business people. With over 40 outlets, Business Gateway dealt with over 140,000 enquiries in 2003, most of which came from nascent entrepreneurs. This is around 66% of the "active" nascent entrepreneur population at the time of the GEM survey<sup>iii</sup>.

An important feature of the new look Business Gateway was the emphasis on the delivery of services via the web, on [www.bgateway.com](http://www.bgateway.com). This much-improved website included a range of on-line management tools that can be used by start-ups, including a Start-up Assessment test, a Business Planner, start-up tutorials and workbooks, and tools for interacting with advisers and existing entrepreneurs.

The number of business startups formally "assisted" by Scottish Enterprise in 2002/03, at 8772, was 10% over target, with 36% being female-owned startups. This represents exactly half of the 17511 new businesses started during this period as estimated by Scotland's main clearing banks<sup>iv</sup>, and 14% of the nascent entrepreneur population of around 63,000 at the time of the 2002 GEM population survey. The target for 2003/04 was 8,500 assists. Local Enterprise Companies were also tasked with providing business advisory support to 115 not-for-profit organisations which had the potential for commercial trading in the 2003/04 fiscal year.

### **Access to Finance**

Two new programmes and one revamped programme, all launched in 2002, began operating in earnest in 2003. The Scottish Co-investment Fund, a £20m fund run by Scottish Enterprise and financed by the Scottish Executive, began investing in partnership with 15 private sector venture capitalists, business angels and investment syndicates. The Business Growth Fund provided £9m since 1999 to 120 companies as loan and equity investments of between £20,000 and £100,000 to start-ups and growing businesses. The Investment Readiness Programme began providing advice and financial support to companies requiring professional help to improve the quality of investment propositions, improving their ability to secure equity investment. In 2003, over £1m was provided to companies under this scheme.



## High Potential Entrepreneurship

During 2003, the Scottish Enterprise Network assisted 219 high-growth start-ups, with the range of support boosted by the launch of the Network High-Growth Start-up Unit that concentrates on supporting the creation of technology-driven start-ups likely to generate significant valuation over the medium-term. The target for this unit is to generate 30 new companies, each capable of achieving a minimum valuation of £5m, within three years. After a year in operation, the Unit has worked with 36 start-up teams, supported by a network of entrepreneurs, expert advisers and professionals drawn from the private sector.

In 2003, three Intermediary Technology Institutes (ITIs) were established in Life Sciences, Energy and Communications Technologies & Digital Media to "support the development of market-focused, pre-competitive technology to high-growth businesses using existing research capacity"<sup>v</sup>. Scottish Enterprise hired senior management staff to each ITI and committed funding of £450m to the ITIs over the next ten years. It was intended that the ITIs would leverage Scotland's existing significant research base to increase new firm spinoffs and increase university-industry interaction, complementing existing technology commercialisation programmes such as the Proof of Concept Fund.

- i [www.scotland.gov.uk/library5/social/rose-00.asp](http://www.scotland.gov.uk/library5/social/rose-00.asp).
- ii Thanks to Brian McVey of Scottish Enterprise for providing the statistical information for this section.
- iii It is not possible at this time to estimate how long on average individuals remain nascent entrepreneurs. The total number of nascent entrepreneurs in any 12 month period may be much greater, due to churning.
- iv Committee of Scottish Clearing Bankers data on number of new business relationships opened at the four main Scottish clearing banks each year (from Q2 of one year to Q 1 of the following year to align as closely as possible to Scottish Enterprise's accounting year). This is an underestimate of the total number of new businesses, but it is difficult to state the extent of this underestimate.
- v Scottish Enterprise Operating Plan 2003/04, p.4.





# GEM and Entrepreneurship Policy in Scotland



2003 was a banner year for entrepreneurship policy in Scotland, with the commitment by the Scottish Executive to a radical policy of enterprise education across the Scottish school system. Coincidentally, 2003 also witnessed an increase in business startup activity, following the recovery of opportunity perception last year, as economic activity across the UK economy picked up. But there is much more still to do, particularly in the social enterprise area, and in attracting more potential entrepreneurs to Scotland.

On December 18, Scotland's Registrar General released 25 year predictions for the Scottish population. These included a 4% decline in the population, an 8% decline in the working age population, a 20% decline in the under 16s, a 25% rise in pensioners, and a 61% increase in those aged 75 or older. This is a demographic time bomb for Scottish society.

A population decline of the magnitude and nature forecast by the Registrar General would cause huge problems of mismatch of supply and demand in basic services such as education, where demand will decline significantly, and health care, where it will increase significantly. But it will also narrow the base of potential wealth creators. As last year's GEM report showed, population growth is a major predictor of new business activity. It will be very hard to increase entrepreneurial activity against these odds.

While family-friendly policies might help to

stabilise the decline in the Scottish fertility rate, they are unlikely to increase it to the replacement level<sup>i</sup>. The only other "solution" to this time bomb is immigration. First generation immigrants not only directly add to the population, they tend to have more children, and as discussed in chapter 3, they are more likely to start businesses as well. The problem here is that huge numbers of immigrants are needed, given the forecast decline in the Scottish population of 210,000 over the next 25 years. In 2003, considerable background work was being conducted on developing a set of coherent policies on immigration, for release in 2004.

Chapter 4 revealed how important social enterprise is in Scottish society. 45% more Scots said they were currently trying to start a social enterprise than said they were trying to start a business. Put another way, 4.5% of the sample of 18-80 year olds, equivalent to around 170,000 people in Scotland, said they were currently trying to start a social enterprise. Many of these will not be *actively* trying to start a business. But this represents an important social phenomenon and a potentially powerful force for good in Scottish society.

In England and Wales, there is a designated minister for social enterprise and a social enterprise strategy<sup>ii</sup>. Unlike enterprise education policy where Scotland arguably leads the rest of the UK, social enterprise policy in Scotland has lagged behind. It still effectively falls between two

ministries (Communities and Enterprise & Life-Long Learning) and two agencies (Communities Scotland and Scottish Enterprise). This lack of political visibility is surprising, since the GEM data suggests that social enterprise seems to appeal to more Scots than private enterprise.

The social economy is extremely fragmented, but growing fast. One recent estimate put employment in this sector at 70,000 to 90,000, up from 45,000 in 1997<sup>iii</sup>. By comparison, employment in agriculture in Scotland in 2002 was 68,000<sup>iv</sup>. Progress in creating a coherent strategy for this sector has been slow. This is a difficult political issue for the Executive. But if it is really serious about using the social enterprise sector to improve social services, then it must tackle local vested interests in the public sector.

Chapter 5 demonstrated recent policy shifts in the encouragement of university spinouts. The situation is now confusing. On the one hand, Scottish Enterprise is to pour an unprecedented £450 million over 10 years into the new Intermediary Technology Institutes, which are specifically charged with increasing knowledge transfer by increasing high potential spinouts from Scottish universities and other means. The Deputy First Minister, Jim Wallace, stated on March 18 at the launch of the Enterprise in Education Strategy: "we are now focusing on spinning ideas out of university labs into new world-class companies". On the other hand, new guidance from SHEFC suggests that universities



should give lowest priority in knowledge transfer to spinouts.

Recent British comparisons of university-industry knowledge transfer, such as the most recent HE B-I survey and the Lambert Review, appear to underestimate the contribution that spinouts can and do play in the technology transfer process, and Lambert recommends a rebalancing away from spinouts and towards licensing. Universities deserve clearer guidance than this. They also need external help to broadcast the capability of technologies they develop. A cross-media Scottish Technology Review, as suggested in Chapter 5, perhaps funded by the ITIs, could be a useful step forward here.

Chapter 6 discussed the nature of financing startups in Scotland. Scots are more likely to say that there is a shortage of funding in their region, but they also appear to be more reluctant to seek funding from private individuals or institutions. The consensus of expert opinion is that Scots are more cautious about taking on debt than their counterparts in the rest of the UK. This would be one explanation for the anomalous nature of new firm funding in Scotland. The only source of startup funding that Scots seem to take up at the same rate as the UK generally is Government.

The Scottish Enterprise Co-investment Fund and the revamped Business Growth Fund have had a successful first year. But these funds are for relatively large startups and young ventures seeking finance of £20,000 or more. The gap now

is at the small end of the funding market: around £10,000 with an upper limit of £20,000. In other parts of the UK and in other nations, this would be funded by family, friends and acquaintances, and perhaps by small bank loans. It is very expensive for large institutions to administer such small amounts, and Government faces an additional constitutional duty to protect the citizens' money from fraud.

The Government could consider other investment options that would appeal to Scots. Rather than administering a small loan scheme directly, it might consider supporting a social enterprise such as PSYBT, which might be seen to be acting solely in the public interest, to extend its successful loan programme beyond the current remit of young adults aged 30 or less.

Chapter 7 suggests that Scottish Enterprise's new entrepreneurship support programmes seem to be getting off to a flying start. With the nascent entrepreneurship population as measured by GEM rising in mid 2003 to 93,000, the 2003/04 target for Scottish Enterprise "startup assists" of 8,500 seems somewhat modest, as does the target of 115 social enterprise assists. The effort now should be on increasing quality and quantity of delivery, with world class training of front line advisory staff, and considerable expansion of targets for services to nascent social and business entrepreneurs.

- i Heather Joshi and Robert Wright (2004). *Starting Life in Scotland in the New Millennium*, Allander Series No. 4. University of Strathclyde, Glasgow.
- ii [www.dti.gov.uk/socialenterprise](http://www.dti.gov.uk/socialenterprise).
- iii Alan McGregor, Andrea Glass and Simon Clark (2003). *Revaluing the Social Economy*. CEIS, Glasgow, September.
- iv June Agricultural Census, 2002.
- v McMahon, S. (2003) *Household Debt in Scotland and the UK*. Scottish Economic Report (February), Chapter 4.



# Appendix 1

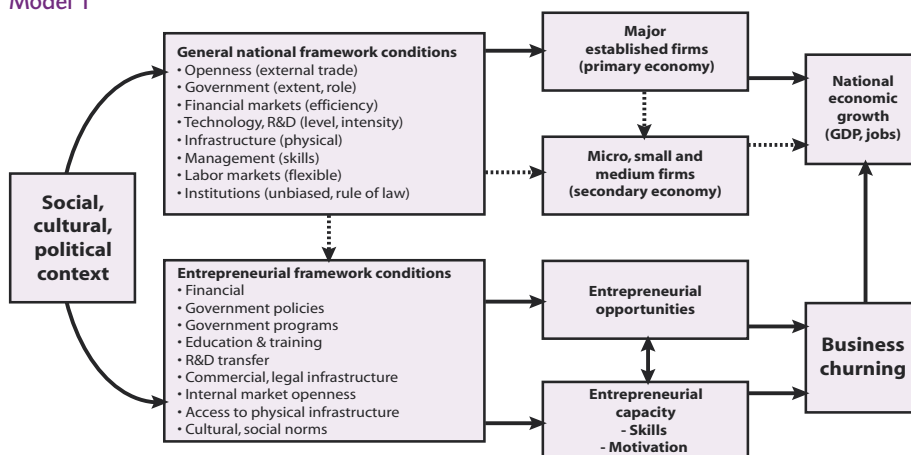
The general model that provides the basis for GEM is illustrated in Model 1. This model is described at length in the annual GEM Executive Reports, available at [www.gemconsortium.org](http://www.gemconsortium.org). The model assumes that national economic growth is a function of two distinct but complementary economic activities: (a) those associated with established firms – the top causal path in the model - and (b) those related directly to the creation and growth of new firms — the bottom causal path in the model.

Established firms clearly make a major contribution to economic growth and prosperity, but variations in new firm activity may also explain a significant proportion of the differences in economic prosperity between countries. This latter activity is the focus of the GEM research project although the new FEA Index will assist in estimating the contribution made by established firms that are behaving entrepreneurially.

The GEM model proposes that economic growth is affected by *Business Churning* – the birth, growth, decline and death of firms. The amount of churning in an economy will be a function of: 1) the emergence or presence of market *Opportunities* and; 2) the *Capacity* of people (i.e. motivation and skills) to create new firms to pursue those opportunities. These dynamic changes occur within a particular context, referred to in the GEM Model as *Entrepreneurial Framework Conditions*. These key variables can vary in the short term, but are influenced by a more stable *Social, Cultural and Political Context*.

The annual GEM assessment involves four major types of data collection. First, a representative sample of at least 2,000 adults in each country is surveyed to determine how many of them are active in trying to start a new firm or are the owners of an existing firm pursuing an entrepreneurial strategy. Over 100,000 standardised interviews were completed in 31 countries for GEM 2003. Second, national teams complete interviews with domestic entrepreneurship experts. In 2003 over 1,300 such interviews were completed globally and 17 in Scotland. Third, experts also completed a questionnaire that provides a standardized measure of their assessments of entrepreneurship in their nation. 1,300 questionnaires were completed globally and 26 in Scotland. Fourth, a wide selection of standardized national data was assembled from a variety of sources such as the World Bank, United Nations, OECD, and IMF.

Model 1





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