

Global Entrepreneurship **Monitor**

Scotland 2006





11011

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Foreword

It's my belief that Scotland can and will lead an era of new enlightenment, why not? Only we are standing in the way.

To lead that enlightenment we need selfbelief and a certain belligerence in the face of challenge. This seventh GEM Scotland tells us yet more about our quest to become a more entrepreneurial nation; the good news is we are getting there but to those of us impatient for progress, its taking too long.

Through GEM historically we have pushed hard on enterprise education and its worth in our schools. Here I'd like to record my personal thanks to former First Minister, Jack McConnell for picking up that challenge and running with it. Importantly, and I congratulate them on it, First Minister Alex Salmond and Fiona Hyslop recognise the opportunity to build upon this work and indeed I think they'll do a lot more.

The fruits of the enterprise education delivered via Determined to Succeed are now yielding positive results – some 50% of our young entrepreneurs had enterprise education in school. But as ever we can and must do more, not least in our tertiary education sector in order that Scotland can be the only country to have a true continuum of enterprise education and all of our people have that 'can do' attitude.

One of the most important findings this year is that we are being held back by myth – business "failure" rates are significantly lower than we think, but because we think that some nascent entrepreneurs don't start-up for fear of failure. The truth is this – only 20% of businesses that close do so because of failure. Policymakers, the media and our educators must get that message across consistently because if they do for every four people starting up now we'd have five if that myth was shattered; a very, very big win.

Importantly, and it is aligned to this fear of failure, many of our young entrepreneurs question just how committed we are to becoming an enterprising society. In turn there remains a residual resentment of wealth creators and yet they are the backbone of any successful modern economy. Scotland is becoming more of a 'can do' society, we need to now emphasise the other part of the equation; "will do". To do this we need leadership from the business, political and academic worlds.

Our entrepreneurship rates remain low but I am confident we are on the right track. With substantive changes to the delivery of business advice and economic development support recently announced we need to make sure we don't unnecessarily disrupt provision where it counts, with the entrepreneurs on the right track.

With a new Scottish Government we have new opportunities, let's make the most of them for Scotland's future - after all we only have one chance to leave a legacy.

Yours aye Tom Sir Tom Hunter



Introduction

What's new in GEM Scotland 2006?

- GEM Scotland 2006 has seven years of data to draw on, and the total sample size has increased by 20% in 2006 from around 2,000 in previous years to 2,421. The total size of the 2006 GEM UK sample was 43,033, the highest ever national GEM sample.
- This year, we are able to distinguish between individuals who attended compulsory and optional enterprise or business training in school, college, or government programmes. We also report on prior experience in running a business, corporate entrepreneurship, and reasons for business closure.
- GEM measures of new business activity in Scotland are compared with other measures developed by the Committee of Scottish Clearing Bankers and the UK Government.

The Global Entrepreneurship Monitor (GEM) cross-national assessment of entrepreneurial activity is now in its eighth cycle. GEM is a major research project aimed at describing and analysing entrepreneurial processes within a wide range of countries. In particular, GEM focuses on three main objectives:

- To measure differences in the level of entrepreneurial activity between countries.
- To uncover factors determining the levels of entrepreneurial activity.
- To identify policies that may enhance the level of entrepreneurial activity.

To this end, the project has from the start been designed as a multinational research programme providing annual assessments of the entrepreneurial sector for a range of countries.

GEM's contribution to the knowledge and understanding of the entrepreneurial process is unique since, to date, no other data set exists that can provide consistent crosscountry information and measurements of entrepreneurial activity in a global context. Information about GEM and all GEM documents can be found at www.gemconsortium.org ¹.

GEM started in 1999 with ten participating countries and the project has expanded to include 42 countries in 2006. Given the association between entrepreneurial activity and per capita GDP levels demonstrated in the 2005 GEM Executive Report, countries that participated in the GEM study in 2006 can be divided into two groups, based on their per capita GDP:

Middle Income Countries²

Argentina, Brazil, Chile, China, Colombia, Croatia, Czech Republic, Hungary, India, Indonesia, Jamaica, Latvia, Malaysia, Mexico, Peru, Philippines, Thailand, Turkey, Russia, South Africa, Uruguay.

High Income Countries³

Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Netherlands, Norway, Singapore, Slovenia, Spain, Sweden, United Arab Emirates, United Kingdom, United States.

Early-Stage Entrepreneurial Activity and Established Business Ownership

GEM estimates the level of involvement in earlystage entrepreneurial activity by combining the prevalence rate of nascent entrepreneurs (people in the process of starting a new business) and new business owners.

Nascent entrepreneurs are those individuals, between the ages of 18 and 64 years, who have taken some action towards creating a new business in the past year. In order to qualify in this category, these individuals must also expect to own a share of the business they are starting and the business must not have paid any wages or salaries for more than three months.

New business owners are individuals who are active as owner-managers of a new business that has paid wages or salaries for more than three months, but not more than 42 months.



In addition to those individuals who are currently involved in the early stages of a business, there are also many individuals who have owned and managed a business for a longer time. These individuals are included in GEM's estimates of the number of established business owners. business ownership at 19.7% and third highest early-stage entrepreneurial activity at 20.4%. Belgium, on the other hand, has the lowest rate of early-stage entrepreneurial activity and the fifth lowest rate of established business ownership.

These two measurements are both very important, as they convey different information about the entrepreneurial landscape of a country. Early-stage entrepreneurship indicates the dynamic entrepreneurial propensity of a country. In other words, it shows the percentage of the population willing and able to undertake an entrepreneurial venture. Established business ownership, instead, indicates the percentage of the population actively involved in running businesses that proved to be sustainable.

Key Findings of GEM2006 Global report

Early-Stage Entrepreneurial Activity and Established Business Ownership

- Middle income countries have higher rates of both early-stage entrepreneurial activity and established business ownership. The differences in prevalence rates between the two country groups are statistically significant at above 99% confidence level.
- Countries with higher early-stage entrepreneurial activity also tend to have higher prevalence rates of established business ownership. For example, the Philippines have the highest established

 There are some exceptions to this general pattern. For instance, the United States have an established business rate which is comparable to those of many European countries and Japan, whereas early-stage entrepreneurial activity is relatively high in the United States.

Opportunity versus Necessity Entrepreneurship

- The vast majority of early-stage entrepreneurs across the world claim that they are attempting to take advantage of a business opportunity. Yet there is also variation across countries in the balance of start-up motives. Overall, the results show that necessity entrepreneurship is relatively more common in middle income countries than in high income countries.
- In the group of middle income countries, the lowest percentages of opportunity-driven early-stage entrepreneurial activity are found in Croatia, Brazil and the Philippines at around 50%. At the other end, about 90% of Malaysia's and Indonesia's early-stage entrepreneurs report they are driven by opportunity.
- There is also wide variation in the group of high income countries. The highest percentages of opportunity-driven early-stage



entrepreneurial activity are found in Denmark, Norway and the Netherlands (all higher than 90%). Germany, France and Greece have much lower shares of opportunity-driven early-stage entrepreneurs at about 60%.

Sectoral Distribution of Early-Stage and Established Business Activity

- Early-stage entrepreneurs in high income countries are much more likely to be found in the business services sector than those in middle income countries (25% versus 9%), and much less likely to be in consumer services businesses (40% versus 52%). The pattern for established business ownership is very similar.
- In both income groups, established business owners are more likely to be located in extractive sectors such as mining, fishing and farming (13% for both groups) than early-stage entrepreneurs (6% versus 7%).
- Similar proportions (around 30%) of both early-stage entrepreneurs and established business owners in both income groups were in transforming sectors such as manufacturing, construction, transportation and wholesale distribution.

Demographic profile of Early-stage Entrepreneurs and Established Business Owners

• Early-stage entrepreneurial activity is most prevalent among individuals aged 25-34 years, while respondents aged 45-54 years old reported the highest rate of established business ownership. The age distribution of early-stage entrepreneurs and established business owners is similar in middle and high income country groups.

- In general, men are significantly more likely to start a business than women. The gender gap is more pronounced in high income countries than in middle income countries. For both country groups, the gender gap is greater among established business owners than among early-stage entrepreneurs.
- In both country groups, the participation rates of people currently starting a business are by far the highest among working people, either full-time or part-time.
- In both country groups, people with postsecondary or graduate education are more involved in early-stage entrepreneurial activity.
 Established business ownership does not show a similarly strong correlation with educational attainment.
- 1 GEM's research methodology and procedures are described in Reynolds, P.D., N. Bosma, E. Autio, S. Hunt, N. DeBono, I. Servais, P. Lopez-Garcia and N. Chin (2005), "Global Entrepreneurship Monitor: Data Collection Design and Implementation 1998–2003", Small Business Economics 24: 205–231. Most of the information in this chapter is taken from the 2006 GEM Executive Summary Report.
- 2 These countries have per capita (PPP) GDP lower than USD \$20,000. In 2006, their average per capita (PPP) GDP is USD \$10,367 and their average real GDP growth (2005) equals 5.4%.
- 3 These countries have per capita (PPP) GDP higher than USD \$20,000. In 2006, their average per capita (PPP) GDP is USD \$34,139 and their average real GDP growth (2005) equals 3.5%.



Summary Highlights for GEM Scotland 2006

- Scotland's Early-Stage Entrepreneurial Activity (TEA) rate in 2006 was 4.2%, a decline of 28% on 2005. TEA in other high income nations has also declined, but not as much. Because of this, Scotland has slipped down the rankings into the bottom quartile of 42 nations in GEM. Despite the apparent size of the drop in activity, the Scottish 2006 TEA rate is not statistically different from the 2005 estimate, although it is significantly lower than the UK estimate of TEA for the first time in four years.
- Opportunity perception and skills perception in 2006 were not significantly different from the UK, having been lower in 2005. This suggests that sentiment recovered somewhat in 2006, possibly heralding a recovery in the TEA rate in 2007.
- The Scottish established business owner/ manager rate, a measure of the stock of business management experience, at 4.2% is one percentage point lower than the UK rate of 5.3%. This places Scotland in the bottom quartile of GEM nations in 2006.
- Entrepreneurship education and training increases expectation of start-up in the future. Some types of entrepreneurship education and training increase early stage entrepreneurial activity rates among females but not ambition, while among males they increase ambition but not activity rates. There are also age cohort effects. Young entrepreneurs in Scotland are significantly more likely to have

had enterprise training in school than their older Scottish peers and peers the same age in the UK generally. However their attitudes about the receptivity of the local environment towards entrepreneurship appear to be more negative. Cause and effect in enterprise education is complex, and worthy of more detailed research.

- Fear of failure is a barrier to start-up to 42% of Scots who are thinking of starting a business. Yet for over half of these, the fear is misplaced because they over-estimate new business failure rates. If these individuals were educated about the true new business failure rate, the nascent entrepreneurship rate could increase by around 25%.
- Another widespread but erroneous view, one that feeds the business failure myth, is the view that business closure is the same as business failure. The 2006 GEM results suggest that only around 20% of businesses that closed in Scotland did so because the business no longer made commercial sense, and only a quarter of these resulted in corporate insolvencies or personal bankruptcy of the owner.
- Corporate entrepreneurship, or the starting and running of a business for one's employer, but in which one will have an ownership stake, is around the same level in Scotland as in the UK. The five year average rate for nascent corporate entrepreneurship in Scotland from 2002 to 2006 was 0.48%

(0.49% for the UK). Much of the difference in nascent entrepreneurial activity between the UK and the US is due to different nascent corporate entrepreneurship rates. Corporate entrepreneurs appear to have higher job creation expectation than independent entrepreneurs.

- 2006 was marked by a debate on Business Growth in the Scottish Parliament, with the publication of the Enterprise and Culture Committee's Business Growth Report, which urged much higher rates of investment in growth, and the passing of new legislation on bankruptcy. It was a difficult year for some public sector programmes that supported start-up entrepreneurship in Scotland, as Scottish Enterprise dealt with a spending overshoot in early 2006. Scottish Enterprise funding within its Growing Business stream continued to shift from enterprise culture to innovation and business growth, in line with its stated strategy.
- This year's GEM report raises several issues for public policy. There are signs that a new, better educated generation of Scots entrepreneurs is emerging. But they are not impressed with Scotland's entrepreneurial environment. An apparent gentle rise in earlystage entrepreneurial activity over the past six years was halted in 2006. However much can still be done to help Scotland become a more enterprising nation. An example would be dispelling the myth that most new businesses fail in their first few years of existence.



Entrepreneurial Business Activity in Scotland: 2006 Update

Figure 3.1: National 2006 TEA rates for

42 sovereign nations and Scotland

Source: 2006 GEM Scotland and Global Survey



Figure 3.2: TEA rates for Scotland and the UK, 2002 to 2006, showing 95% confidence intervals and sample size Source: GEM Scotland and UK Surveys



Table 3.1: Scottish and benchmark TEA rates, 2006

Source: 2005 GEM Scotland and Global Survey

	ТЕА		% change	Scottish TEA as a % of other TEA rates	
	2005	2006		2005	2006
Scotland	5.8	4.2	-28%	n/a	n/a
UK	6.0	5.8	-4%	97%	72%
High income nations	6.6	6.2	-6%	87%	67%
Small high income nations	7.2	6.7	-7%	80%	62%

GEM Scotland 2006 has seven consecutive years of survey data to draw on, from over 14,000 residents of Scotland. In this year's report, we highlight patterns of entrepreneurial entry and exit over time, and compare GEM measures with measures developed by the Committee of Scottish Clearing Bankers and the UK Government. In addition, this chapter updates measures presented in last year's report.

Early-Stage Entrepreneurial Activity

In 2006, representative samples of the working age population were taken in 42 countries, representing 2.72 billion people, or 74% of the world's population aged 18-64. Figure 3.1 shows early-stage entrepreneurial activity (TEA) rates for each participating GEM nation. Note that TEA rates between two countries are statistically different if the vertical bars on either side of the point estimates do not overlap¹. Scotland's relative position appears to have slipped in 2006; however this is something of an illusion as many nations have TEA rates around 5%, and a 1.5% drop, while not being significant statistically, can change rank position dramatically. Only two nations (Belgium and Japan) had TEA rates significantly below that of Scotland statistically, the same as in 2005.

Table 3.1 benchmarks the TEA rate for Scotland for 2006 against those of UK, small high income nations (Denmark, Finland, Ireland, and Norway)², and all 20 high income nations participating in both GEM 2005 and 2006³. The Scottish TEA rate dropped from 5.8% to 4.2% between 2005 and 2006. Although this



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is a decline of 28%, this drop is not statistically significant because of the small sample size in Scotland. However, as Figure 3.2 shows, there was a statistically significant difference between the UK and the Scottish TEA rates for the first time in four years. While slight drops have been recorded in all three benchmarks shown in Table 3.1, these are not as large as the apparent decline in Scotland.

Because of the apparent drop in the Scottish TEA rate, it is prudent to compare trends in alternative measures of new enterprise activity in Scotland. Figure 3.3 shows trends in new business bank account openings in Scotland as estimated by the Committee of Scottish Clearing Bankers. This shows a flat trend in openings of new sole trader accounts with a decline in the fourth quarter, and a year on year rise in partnership and company accounts. Thus this source of new enterprise statistics shows no evidence of a decline in new enterprise activity in Scotland, as measured by new business bank account openings, although the decline in new sole trader accounts in the fourth quarter was unusual. Figure 3.4 shows registrations for Value-Added Tax in Scotland and the UK over the same period⁴. This also shows an increase in registrations between 2005 and 2006, with the increase more marked in Scotland than in the UK as a whole.

TEA is a composite of the proportion of nascent and new entrepreneurs (without double counting) in the working age population. From 2005 to 2006, the nascent entrepreneurship rate in the Scottish GEM samples declined by 32% from 2.98 to 2.14, and the new business

Figure 3.3: Business Bank Account openings by Legal Status of Enterprise, 2002 to 2006 by quarter and 4 quarter moving average Source: Committee of Scottish Clearing Bankers



Figure 3.4: Value-Added Tax Registrations in Scotland and the UK, 2002 to 2006

Source: Department of Business, Enterprise and Regulatory Reform



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Table 3.2: Entrepreneurial attitudes in the Scottish and UK adult population samples, 2000 to 2006 (% agree with statement) Source: GEM Scotland and UK Surveys

ltem	Know som who star business in years	neone ted a past 2 s	Good opportunities for starting a business in the next 6 months		Fear of failure would prevent me starting a business		Have knowledge, skills to start a business	
Sample	Scotland	UK	Scotland	UK	Scotland	UK	Scotland	UK
2000	29.4	32.2	28.8	34.0	40.7	29.5	n.a.	n.a.
2001	24.7	30.1	24.1	23.3	39.9	34.8	41.5	46.5
2002	21.5	24.0	25.4	29.0	36.3	34.2	42.0	45.9
2003	25.4	24.7	36.5	35.3	31.3	33.7	46.3	48.4
2004	28.5	26.7	36.5	35.3	36.8	34.0	49.2	50.4
2005	26.3	27.7	31.5	38.5	33.8	34.2	45.9	50.7
2006	26.1	27.2	35.0	36.8	38.1	35.8	48.5	49.6

Note: Numbers in bold denote significant differences between Scottish and UK samples in the same year

owner/manager rate declined by 25% from 2.91 to 2.17. However, the proportion of people thinking about starting a business rose slightly from 9% of the sample in 2005 to 11% in 2006. Furthermore, Table 3.2 shows that attitudes in Scotland appeared to recover from having been significantly lower than the UK as a whole in 2005. All in all, it does not appear that the TEA rate decline in 2006 is symptomatic of a systemwide decline, but is perhaps the working through of a temporary decline in sentiment in 2005. Based on previous experience with the leading effect of attitudes on activity, it seems reasonable to expect that entrepreneurial activity in Scotland should improve relative to UK levels in 2007.

Established business owner/ managers

Last year, GEM began reporting estimates of the proportion of established business owner/managers in the population, that is, the percentage of working age adults who fully or partly own and also manage a business that is at least 43 months old. (Owner/managers of businesses that are less than 43 months old are defined as new business owner/managers, and included in the TEA rate.) Figure 3.5 shows the established business owner/manager rate for the 2006 GEM countries and Scotland. Scotland is at the top of the bottom quartile, while the UK is in the third quartile. The Scottish rate (4.2%) is one percentage point lower than the UK rate of 5.3%.

Social Enterprise Activity

Last year's report introduced a measure of social entrepreneurial activity, or SEA. SEA is defined as the proportion of people aged 18-64 who are actively trying to start a social enterprise or running a social enterprise that has been operating a service or receiving funding for less than 43 months. Social enterprise activity is defined as any kind of social, community or voluntary venture, 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. The SEA rate for Scotland in 2006 was 2.8%, very similar to the rate of 3.1% recorded in 2005. Also like last year, the male and female SEA rates were not significantly different, although the point estimate for males (2.3%) was lower than that for females (3.3%), in contrast to 2005 when they were higher (3.9% versus 2.3%). The Scottish 2006 male SEA rate was significantly

Figure 3.5: Established business owner/manager rate in Scotland and GEM countries, 2006







Figure 3.6: UK and Scottish business owner/manager rate, nascent entrepreneurship rate and business closure rate with 95% confidence intervals, combined 2004 to 2006 GEM survey data Source: 2004-2006 GEM UK and Scotland Surveys

lower than the UK SEA rate of 3.6%, while the Scottish female SEA rate was similar to the UK SEA rate of 3.0%. A more refined measure of SEA will be introduced in the 2007 report.

Business closure

This year, a new GEM measure is introduced to this series: the business closure rate. This is based on answers to the following statement: "You have, in the past 12 months, shut down, discontinued or quit a business you owned and managed; or you have discontinued any form of self-employment, or selling goods or services to anyone. Do not count a business that was sold." Business closure rates tend to track business start-up rates, and are very low in high income countries⁵. Of the 21 high income GEM countries in 2006 (those listed in Chapter 1 plus the United Arab Emirates), the mean was 2.15%, the lowest was 0.8 (Netherlands) and the highest was 4.7 (UAE).

Figure 3.6 shows the general difference in scale between the proportion of people in the working age population in the UK and Scotland who are current business owner/managers (including new and established owner/managers), nascent entrepreneurs, that is people actively trying to start a business, and people who have closed a business in the past year. To increase the sample size and remove year-to-year fluctuations, the 2004, 2005 and 2006 GEM samples were combined to create a sample of 81,824 for the UK and 5,176 for Scotland. Figure 3.6 shows that business closure rates are around two-thirds the nascent entrepreneurship rate and about one quarter of the business owner/manager rate.



Business owner/manager rate: The proportion of adults aged 18-64 who say they are currently the owner of a business they help manage that has been paying wages for at least 3 months.

Nascent entrepreneurship rate: The proportion of adults aged 18-64 who say they are actively engaged in trying to start a business that they will at least in part won and manage and that has not been paying wages for more than 3 months, including any form of self-employment or selling goods or services to anyone. Business Closure rate: The proportion of adults aged 18-64 who say they have in the past 12 months, shut, discontinued or quit a business they owned and managed, or discontinued any form of self-employment or selling any goods and services to others, not counting a business that was sold.

Chapter 6 delves into the issue of business closure in Scotland and the UK in greater detail.

Nascent entrepreneurs vary greatly in the amount of time it takes them to start a business. While there have been no large scale longitudinal tracking studies of business start-up in the UK, studies in the US⁶ suggest that of an annual cohort of individuals that begin to try to start a business, after 5 years around one third are in business, one third have quit trying, and one third are still trying. Thus unlike the business closure rate, the "nascent entrepreneurship rate" is not event and time-based; it is more a state of variable duration.

Distribution of entrepreneurial activity by gender

Figure 3.7 shows the trend in Scottish TEA rates between male and females for 2000 to 2006. Male TEA rates were consistently double those of female rates during this period. The point estimate of TEA for females in 2006 at 2.6 is the







Table 3.3: Association between business or enterprise training and future start-up expectations by gender in 2006 (% UK respondents aged 18-44 only)

Source: GEM UK 2006 survey

Gender	Men (weighted N = 10497)			Women (weighted N = 10625)		
Total rate		13		6.5		
Type of business or enterprise training	No training	Compulsory	Voluntary	No training	Compulsory	Voluntary
Training taken at School	11.7	12.3	21.2	5.7	9.1	11.0
Training taken at college/university	13.0	17.4	17.2	5.8	16.0	15.7
Work experience in SME at school or college	10.3	12.6	18.9	4.7	7.9	8.9
Government or public sector business or enterprise skills training course	11.9	16.1	21.3	5.5	8.6	14.1

Groups of numbers in bold denote statistically significant differences in proportions at the .05 level or less

Table 3.4: Early-stage entrepreneurial activity (TEA) rates by enterprise or business training type and gender in 2006 (% UK respondents aged 18-44 only) Source: GEM UK 2006 survey

Gender	Men (weighted N = 10497)			Women (weighted N = 10625)		
Total rate	8.7			4.1		
Type of business or enterprise training	No training	Compulsory	Voluntary	No training	Compulsory	Voluntary
Training taken at School	8.9	7.2	7.9	4.0	5.2	3.8
Training taken at college/university	8.6	9.0	11.4	4.3	4.4	8.9
Work experience in SME at school or college	9.7	6.5	9.2	4.1	3.7	4.6
Government or public sector business or enterprise skills training course	8.3	3.5	13.0	3.4	4.1	9.7

Groups of numbers in bold denote statistically significant proportions at the .05 level or less

lowest since recording began in 2000, after two consecutive years of record point estimates. Care needs to be taken as to how this is interpreted, however. Because of the sample size, it cannot be concluded that either female or male earlystage entrepreneurial activity declined between 2005 and 2006. The 2006 figures do however go against a general trend of slight increase over time, and would be consistent with the proposition raised in last year's GEM Scotland report that TEA rates in Scotland may be at their "natural" level, given Scotland's current relative wealth, business stock and population growth.

The Environment for Entrepreneurship

Last year's report examined the views of experts in GEM countries on different aspects of the environment for entrepreneurship, and devoted a chapter to entrepreneurship education. A recent multi-level, multivariate panel data analysis⁷ using seven years of GEM expert and adult population survey data compared entrepreneurial activity in 48 countries and suggested that entrepreneurship education and training had a significant effect on the proportion of ambitious nascent and new entrepreneurs in the working age population and on the proportion of ambitious entrepreneurs in the pool of nascent and new entrepreneurs, controlling for relative wealth, economic growth, population growth, business stock, and year. Furthermore, regulation of new business had a stifling effect on the proportion of new and nascent entrepreneurs who were ambitious.

One issue left unresolved in last year's report was whether the higher rates of new business



Table 3.5: Early-stage entrepreneurship rates among those who had work experience in an SME while at school or college, or attended government or public sector business or enterprise skills training courses, by educational attainment and gender in 2006 (% UK respondents aged 18-44 only) Source: GEM UK 2006 survey

	Did not attend co	llege or university	Attended college or university				
	Men	Women	Men	Women			
	Work experience in SME while at school or college						
No training	8.3	2.5	9.5	5.4			
Compulsory	4.9	2.4	7.6	4.3			
Voluntary	8.0 3.0		10.8	6.1			
	Government or public sector business or enterprise skills training course						
No training	6.7	2.2	9.5	4.2			
Compulsory	1.6	5.7	3.4	5.0			
Voluntary	16.6	6.4	8.6	13.1			

Pairs of numbers in bold denote significantly different proportions by gender at the .05 level or less

Voluntary work experience in a Small or Mediumsized Enterprise (SME) appears to increase expectation among males. Work experience in an SME while at college or university appears to depress entrepreneurial activity among males if it is compulsory, but has no effect if it is voluntary. Among females, it appears to increase expectation but make no difference to activity, whether it is compulsory or voluntary.

The greatest difference in expectation can be seen among those who have and have not attended government or public sector training programmes. Males and females who were on voluntary programmes had significantly higher expectation rates than those who were on compulsory programmes. As with work experience, compulsory programmes appeared to depress activity levels among males, while making no difference to activity among females.

Overall, it appears that enterprise and business training increases expectations of starting

a business, but only increases new business activity among males if it is voluntary; while more experiential training such as work experience and government training programmes appears to depress activity among males⁸.

The above analysis ignores the fact that different people will have taken different combinations of education and training. Table 3.5 suggests that compulsory work experience in an SME reduces entrepreneurial activity among men who did not attend college or university, but does not appear to have any other effect. Compulsory government training programmes after either school or college appear to depress entrepreneurial activity among men. They appear to increase activity among females with secondary schooling only and make no difference to activity rates among women with third-level education. Voluntary attendance at government training programmes appears to increase entrepreneurial activity among both males and females with secondary schooling only, and increase entrepreneurial activity among females with third level education.

activity seen by people who had attended business or enterprise training of different types was due to self-selection rather than the programmes themselves. In the 2006 cycle, people who said they received business or enterprise education in school, college or government programmes were asked if it was compulsory or voluntary. Only those aged 18-44 were asked these questions as enterprise and business training on a wide scale is a relatively recent phenomenon. The results for the UK for expectations of starting a business in the next three years ("expectation") and for early stage entrepreneurial activity ("activity") are displayed in Tables 3.3 to 3.7. The Scottish sample was too small to conduct meaningful analysis. Given the attention paid in Scotland to entrepreneurship education, it was felt that highlighting hitherto unpublished trends in the UK GEM data might be worthwhile.

Tables 3.3 and 3.4 suggest that business or enterprise training at school level appears to increase expectation among women whether it is compulsory or intentional, but only increases expectation among men if it is voluntary. Training at school appears to have no effect on activity, irrespective of whether it was voluntary or compulsory.

Training at college or university level appears to have a positive effect on expectation among both genders, irrespective of whether it is compulsory or intentional. Training at college or university level also appears to be associated with higher levels of entrepreneurial activity, but, for men, only if the training was voluntary.



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Table 3.6: Proportion of early-stage entrepreneurs and non-entrepreneurs who took or did not take government training programmes by educational attainment in 2006 (% UK respondents aged 18-44 only) Source: GEM UK 2006 survey

Government or public	м	en	Women				
sector business or enterprise skills training course	% of entrepreneurs	% of non- entrepreneurs	% of entrepreneurs	% of non- entrepreneurs			
	Those with secondary education only						
No training	80.5	90.3	73.9	89.2			
Compulsory	5.4	2.0	4.3	2.0			
Voluntary	19.1	7.7	21.7	8.8			
	Those with post-secondary education						
No training	88.9	86.3	70.8	87.8			
Compulsory	0.9	2.7	2.6	2.7			
Voluntary	10.1	11.0	26.6	9.6			

Groups of numbers in bold denote statistically significant proportions at the .05 level or less

Table 3.7: Proportion of early-stage entrepreneurs who expect to employ at least 20 people in five years by enterprise or business training type and gender in 2006 (% UK respondents aged 18-44)

Source: GEM UK 2006 survey

Source of business		Men		Women			
or enterprise training	No training	Compulsory	Voluntary	No training	Compulsory	Voluntary	
Training taken at School	10.2	14.3	22.3	6.8	0	18.6	
Training taken at college/university	7.7	10.8	16.5	9.3	0	11.4	
Work experience in SME while at school or college	10.0	15.6	12.7	8.9	3.5	9.1	
Government or public sector training	9.7	12.5	22.5	7.5	0	8.1	

Groups of numbers in bold denote statistically significant proportions at the .05 level or less

Table 3.6 shows that a higher proportion of men and women with secondary education only, and women with third-level education, who subsequently became entrepreneurs attended government training courses voluntarily than their peers who did not become entrepreneurs. However, males with third level education who became entrepreneurs were neither more nor less likely to attend such courses voluntarily. Males and female entrepreneurs with secondary schooling only were more likely to have attended a compulsory course than their non-entrepreneurial peers. There are a number of possible explanations for these patterns. More educated males may feel less need to attend such courses, or may be less willing to seek business skills training from government agencies.

Table 3.7 shows that male entrepreneurs who have received training in school, college or on government programmes appear to be more likely to be ambitious, that is to expect to employ at least 20 people in five years time, than those who have not, and those who chose to take training appear more likely to be ambitious than those for whom the training was compulsory. No significant effect is apparent for females.

This finding suggests that, on average, male entrepreneurs who receive enterprise training subsequently expect to create more jobs than male entrepreneurs who do not. It is difficult to be precise about the extent of the difference, because job expectation (and actual job



creation) is highly skewed. A relatively small proportion of entrepreneurs create most of the jobs over time in their cohort⁹, and thus even a large sample can be inaccurate at estimating average job creation expectation, especially if the sample is weighted.

In summary, entrepreneurship education and training increases expectation of start-up in the future. Some types of entrepreneurship education and training increase early stage entrepreneurial activity rates among females but not ambition, while among males they increase ambition but not activity rates. Compulsory training seems to depress activity rates among males, but not ambition. This analysis does not include age effects, which are considered in the next chapter.

- 1 "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 3.1 by 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 difference at the 0.05 level.
- 2 The reason for comparing Scotland to these independent nations is that they are all around the same population size and are classified as high income OECD countries. 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. High income nations have different entrepreneurial activity to middle or low income nations (see the 2004 GEM Global Report). Thus by comparing Scotland with these nations, we avoid the population and income effect, and we can learn from policy measures implemented on a similar scale to Scotland. Israel and New Zealand did not participate in GEM in 2006 and so are excluded.
- 3 Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan,

Prior experience of running a business

Males with prior experience of or who are currently running a business are far more likely to engage in nascent entrepreneurship than males who have no prior experience, but prior experience appears to have no effect on the likelihood of females trying to start a business. Twenty-two percent of males in the GEM Scottish sample had prior experience of running a business or were currently running a business, compared with only 14% of females. The equivalent UK rates were 28% and 15%. Males in this group were around two and a half times more likely to be actively trying to start a business than males who had no prior experience (5.2% versus 2.2%; compared with 8.0% and 3.1% across the UK). For Scots females,

Netherlands, Norway, Singapore, Slovenia, Spain, Sweden, United Kingdom, United States.

4 This series is based on data taken from the Office for National Statistics' Inter-Departmental Business Register (IDBR) in May 2007. The IDBR is a comprehensive database of UK businesses based on traders registered for Value Added Tax (VAT) purposes, employers operating a Pay As You Earn (PAYE) scheme registered with HM Revenue and Customs and incorporated businesses registered at Companies House. The IDBR contains around 2.1 million enterprises in the UK, or nearly 99% of UK economic activity, of which nearly 1.7 million are VAT-registered (see www.statistics.gov.uk/ukbusiness). However, BERR estimates (see http://stats.berr.gov.uk/ed/ sme/index.htm) that there are 4.5 million enterprises in the UK (including the very smallest businesses not registered for VAT and/or PAYE), so VAT registrations and de-registrations, whilst providing a guide to trends in start-ups and closures, are likely to under-estimate the total number of starts and closures. Some enterprises are in VAT-exempt areas, such as education, health and public administration, so coverage of businesses in these sectors will be particularly affected. VAT registration does not always happen at the time a business starts trading. Evidence from the BERR Annual Small Business Survey 2005 shows that a guarter of

the equivalent rates were 1.5% and 1.2% (5.2% versus 1.3% in the UK). Thus the gap in Scottish and UK TEA rates was not just due (in part) to a lower proportion of people in Scotland with prior experience, but a lower frequency of startup attempts by those in Scotland with prior experience, particularly women.

Conclusion

As predicted in the 2005 report, a gap opened up in 2006 between Scottish and UK TEA rates. While the Scottish TEA rate did not experience a statistically significant drop on 2005 levels, a six year trend of gentle growth was broken. On the bright side, opportunity and capacity perception improved in 2006, and based on past experience this suggests that the Scottish TEA rate may recover somewhat in 2007.

VAT-registered SMEs registered prior to start-up, over half registered within 6 months of start-up, and a small number registered 2 years or more after starting up.

- 5 Pearson correlation of closure rate with TEA among GEM countries in 2006 was .609 (p=.000, N=42), and even higher with raw answers to the statement: "You are, alone or with others, currently trying to start a new business, including any type of self-employment or selling any goods or services to others" (.728, p=.000, N=42).
- 6 Reynolds, P.D. (2007). Entrepreneurship in the United States. New York: Springer.
- 7 Levie, J. and Autio, E. (2007). Entrepreneurial Framework Conditions and National-Level Entrepreneurial Activity: Seven-Year Panel Study. Paper for the Third Global Entrepreneurship Research Conference George Mason University, Washington D.C., October 1-3.
- 8 It might be argued that those who have taken such compulsory experiential programmes are more likely to have demographics that are not conducive to entrepreneurship anyway. However, there are no significant differences in terms of working status, income or educational background among males who had taken compulsory or voluntary training programmes.
- 9 Autio, E. (2007). 2007 Global Report on High-growth Entrepreneurship. London Businesss School.



Entrepreneurship and Age

Figure 4.1: Nascent and new entrepreneurial activity rates and established business owner/manager rates by age group in the UK, combined 2004, 2005 and 2006 GEMUK databases (N = 94,991)

Source: GEM UK 2004, 2005 and 2006 Surveys



Entrepreneurial activity varies with age. As Figure 4.1 shows, rates of nascent and new entrepreneurship in the UK are almost identical in each age group. However, rates vary over the working life span and by gender. They are also higher for males in all but the oldest age group. Early-stage entrepreneurial activity is low in early adulthood, peaks around 35 to 44, and then declines gently until retirement age, when it rapidly drops to near zero.

Owner/managers of established businesses have an older profile; prevalence increases to 55-54 years, then declines, rapidly so after retirement age. Nascent and new entrepreneurship rates are higher than established owner/manager rates up to age 30 for males and mid to late 30's for females. Thereafter, established owner/ manager rates are higher than nascent or new entrepreneurship rates.

Figure 4.2 shows that the profile of entrepreneurial activity by age and gender for Scotland is similar to that of the UK, except that established business owner/manager rates are clearly lower among males from 35 years of age onwards, and among females from 55 years of age. Scottish male established business owner/manager rates also peak later, in the 55-64 age group.

Both males and females have similar shaped profiles of nascent and new entrepreneurial activity by age, but males have twice the nascent or new entrepreneurial activity of females in every age group except 18-24, where male entrepreneurial activity is three times as prevalent. The age profile of female established business owner/managers is flatter than that of males.

While males and females have identical, and extremely low, established business owner/ manager rates at age 18-24, from age 25-34 on the rate for males is three times that for females. Thus females have a smaller pool of established business owner/managers from which to draw experienced entrepreneurial capability. It is not surprising therefore that a smaller proportion of female than male nascent entrepreneurs have experience of running a business (42% versus 51%, based on 18-64 year olds from the 2006 survey).

Figure 4.3 shows how age and gender affect the relationship between starting a business and prior experience in running a business. The proportion of male nascent entrepreneurs with prior experience of running a business rises linearly with age, as one might expect. However, the relationship is V-shaped for females. Young females aged 18-24 were 11 times more likely to start a business if they had prior experience, while young males were only four times as likely. This brought nascent entrepreneurship rates of young females with prior experience in line with those young males with prior experience (11% versus 13%)¹. But young females without prior experience were much less likely to start a business than young males without prior experience (0.6% versus 2.9%)².

This could be interpreted as a demonstrator effect: experience in running a business may have a more powerful positive effect on entrepreneurial intentions for young females

Figure 4.2: Nascent and new entrepreneurial activity rates and established business owner/manager rates by age group in Scotland, combined 2004, 2005 and 2006 GEMUK databases (N = 6165)

Source: GEM Scotland 2004, 2005 and 2006 Surveys





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than for young males³. Similar gender differences in the effect of some forms of enterprise training were shown in Chapter 3. Unfortunately, significantly fewer females than males aged 18-24 said they had ever run a business before or were currently running their own business (5% versus 8%)⁴.

An explanation for the V-shape trend in previous business management experience of females of different age groups is that this fits wider trends in the labour market. Many skilled women withdraw from the full-time labour market to raise a family, and are therefore less likely to gain business management experience. As children grow up and leave, these women may return to the full-time labour market and gain this experience, but proportionally fewer of them have business management experience than men.

Attitudes to entrepreneurship

Attitudes to entrepreneurship vary by age. Irrespective of whether individuals are entrepreneurial "doers", that is, starting or running their own business, or "thinkers", that is, thinking about starting a business in the short to medium term, or "avoiders", people who have never thought about starting a business or decided against doing it, the attractiveness of entrepreneurship as a career option declines with age. Between 60 and 70% of doers, thinkers and avoiders aged 18-24 in Scotland and the UK think that most people consider starting a business is a desirable career choice - except for Scottish doers, of whom only 45% are of this opinion. The proportion of people with this view declines with age up to age 45-54, when it levels off at around 45%. Only Scottish doers aged 18-24 veer from this pattern⁵.

The GEM model suggests that entrepreneurial capacity is a necessary (but not sufficient) condition for starting a business. GEM measures capacity of individuals by asking them if they have the knowledge, skills and experience required to start a business, and if in the next six months they agree there will be good opportunities for starting a business in the area in which they live. Figures 4.4 and 4.5 show the patterns for Scottish and UK doers, thinkers and avoiders. Avoiders score low on both measures, and age seems to make little difference to their perceived capacity. Younger thinkers score lower than doers for skills, but gradually catch up in perceived skills as they get older. This is probably related to the significant increase in the greater proportion of thinkers with experience in running a business in the older cohorts - from 6% for those aged 18-24 to 59% for those aged 65 or over. Prior experience among older avoiders is much lower, around 20 to 30%.

Opportunity perception declines with age, and Scottish and UK doers, thinkers and avoiders differ little in this respect except in the youngest age group, where fewer Scots doers or thinkers appear to believe there are business start-up opportunities in their local area than UK doers or thinkers⁶. This, combined with the more negative view that Scots doers hold of public perceptions towards entrepreneurship as a career, suggests that young entrepreneurs in Scotland are more likely to feel their environment is not conducive to entrepreneurship than their counterparts in the UK.

Figure 4.3: Percentage of nascent entrepreneurs and non-nascent entrepreneurs with experience of running a business by age group in the UK in 2006 Source: GEM UK 2006 Survey

l male non-nascent entrepreneurs female non-nascent entrepreneurs female nascent entrepreneurs male nascent entrepreneurs



Figure 4.4: Proportion of thinkers, doers and avoiders in each age group who agree they have the knowledge, skills and experience to start a business, in Scotland and the UK







Figure 4.5: Proportion of thinkers, doers and avoiders in each age group who agree there are good opportunities for starting a business in their local area in the next six months, in Scotland and the UK

Source: GEM UK and Scotland 2004, 2005 and 2006 Surveys



Figure 4.6 shows the proportion of individuals in each category who agreed that fear of failure would prevent them from starting a business. Fear of failure is, not surprisingly, lowest among doers, although young Scots doers have a significantly higher fear of failure than their UK peers⁷. Thinkers and doers have similar levels of fear of failure, which decline with age.

Together, these patterns tell a story of avoiders who have low capacity and high fear of failure, thinkers who have high capacity and high fear of failure, and doers who have high capacity and low fear of failure. A possible inference is that if fear of failure could be reduced among thinkers entrepreneurial activity in Scotland might increase. Chapter 6 investigates this possibility in some detail. A more worrying inference is that young Scots "doers" seem to be more negative, not about their skills, but about their perception of the external environment, such as opportunities locally, what might happen if the business failed, and what other people think about entrepreneurship as a career.

Figure 4.6: Proportion of thinkers, doers and avoiders in each age group who agree they are afraid of starting a business in case it might fail, in Scotland and the UK Source: GEM UK and Scotland 2004, 2005 and 2006 Surveys



Figure 4.7 shows that half of these young Scots doers received enterprise or business training at school – significantly more than thinkers or avoiders of the same age group⁸ or than their UK counterparts⁹. It may be that these young entrepreneurs feel that the environment for entrepreneurship in Scotland is not as conducive as they might have expected. This figure also shows how much more prevalent enterprise training in schools has become in Scotland and the UK. It also shows what little relationship there is between enterprise education in school and



subsequent entrepreneurial activity – except among young Scots.

A very different pattern is evident among those with post-secondary education who had business or enterprise training while at college or university. Figure 4.8 shows that avoiders are half as likely to have taken enterprise training in college as thinkers or doers. The percentage of thinkers and doers (and, for Scotland, avoiders) who have taken enterprise training declines with age, reflecting its more widespread availability in both Scotland and the UK. It may also reflect greater self-selection at post-secondary level, as those who are entrepreneurially inclined seek out enterprise or business training, while those who are not interested avoid it.

In conclusion, a new, better educated, generation of entrepreneurs is emerging in Scotland, but there is some dissonance within this group. There is some evidence that young Scots entrepreneurs are more likely than their older peers or than other young UK entrepreneurs to see the environment as somewhat hostile to them. This is something that Scottish policymakers and enterprise educators need to think about, as they try to encourage a desire and a capacity for entrepreneurship among the young.

Figure 4.7: Proportion of doers, thinker and avoiders who have taken part in business or enterprise training while at school, in Scotland and the UK

Source: GEM UK and Scotland 2004, 2005 and 2006 Surveys



- 1 Chi-square test of equality of proportions, continuity corrected: .115, p=.735, N=338
- 2 Chi-square test of equality of proportions, continuity corrected: 36.088, p=.000, N=4721
- 3 Only 13% of the male and none of the female nascent businesses being started by 18-24 year olds with prior business experience were spinoffs from family firms.
- 4 Chi-square test of equality of proportions, continuity corrected: 13.066, p=.000, N=5060
- 5 Chi-square test of equality of proportions, Scottish doers, thinkers, avoiders aged 18-64: 8.788, p=.012, N=474. There were no significant differences in proportions for any other age group in Scotland.
- 6 Scots versus UK doers: Chi-square equality of proportions = 10.196, p=.006, N=1008. Scots versus UK thinkers: Chi-square equality of proportions = 9.650, p=.008, N=2201

Only in the 18-24 age group are the opportunity perceptions not significantly different between Scottish doers, thinkers and avoiders: Chi-square equality of proportions = 8.399. p=.078, N=468

- 7 Chi-square equality of proportions, continuity corrected, fear of failure among Scots doers versus non-Scots doers aged 18-24 in UK: 10.168, p=.001, p=562
- 8 Chi-square equality of proportions =16.245, p=.000, N=978
- 9 Chi-square equality of proportions = 14.298, p=.001, N=1007

Figure 4.8: Proportion of doers, thinker and avoiders with post-secondary education who have taken part in business or enterprise training while at college or university, in Scotland and the UK

Source: GEM UK and Scotland 2004, 2005 and 2006 Surveys





Corporate Entrepreneurship

Figure 5.1: Nascent corporate entrepreneurship rates in 41 GEM nations and Scotland in 2006, showing 95% confidence intervals Source: GEM 2006 Adult Population Surveys



Figure 5.2: Contribution of independent and corporate nascent entrepreneurship rates to overall nascent entrepreneurial activity in high income countries and Scotland in 2006 Source: GEM 2006 Adult Population Surveys

Nascent independent entrepreneurship rate

GEM's main measure of entrepreneurial activity includes people who start new businesses for their employer, but where they will have some ownership stake. This is one definition of corporate entrepreneurship, and it is an important means of delivering innovation for large institutions that might otherwise stifle new projects that do not fit the key performance indicators of mainstream operations. Figure 5.1 shows the percentage of people aged 18-64 in each GEM participating country in 2006 who said they were starting a business for their employer but met all the other criteria for inclusion as a nascent entrepreneur. With a nascent corporate entrepreneurship rate of 0.16% in 2006, Scotland falls right at the bottom of this league table, alongside Turkey, Sweden, Japan and Finland, and significantly below the UK rate of 0.5%¹.

Ireland and the US stand out as high income countries with relatively high levels of nascent corporate entrepreneurship in 2006. The overall nascent entrepreneurship rate in the US in 2006 was 7.5% compared with 4.5% in Ireland and 3.2% for the UK. If the UK nascent corporate entrepreneurship rate was the same as that of the US, its overall nascent entrepreneurship rate would be 6.2%. If it was the same as that of Ireland, its overall nascent entrepreneurship rate would be 4.2%. As Figure 5.2 shows, corporate entrepreneurship makes a difference to overall rates of nascent entrepreneurial activity across high income nations, and explains most of the difference in nascent entrepreneurial activity between the US and UK, and between Ireland and the UK in 2006.

Nascent corporate entrepreneurship rate



Because so few Scots are corporate entrepreneurs, it was necessary to combine as many years as possible to generate a large enough sample to conduct an analysis of corporate entrepreneurs in Scotland. The 5 year combined database (2002 to 2006) returned an annual average nascent entrepreneurship rate for Scotland of 0.48%, the same as the annual average for the UK for the same period of 0.49%. There were no significant differences between any of the annual estimates in Scotland or in the UK during this period, but as noted above the Scottish rate was significantly below the UK rate in 2006. With a total of only 41 nascent corporate entrepreneurs in a Scottish sample of 8403, one must be careful not to infer too much about them from the data. The following demographic profile should be read with this warning in mind.

Corporate and Independent Nascent Entrepreneurs

Sixteen percent of UK nascent entrepreneurs and 18% of Scottish nascent entrepreneurs in the combined 2002 to 2006 samples were corporate entrepreneurs. The proportion in Scotland in 2006 was unusually low at 8%. This compared with average 2006 proportions for the four small high income countries in 2006 of 20% and all 20 high income countries (those listed in Figure 5.2) of 21%. The figure for small high income countries is skewed by a high proportion of 35% for Ireland in 2006. The other three small high income nations in GEM in 2006 (Denmark, Norway and Finland) have proportions similar to Scotland. Independent and corporate nascent entrepreneurs in Scotland do not differ significantly from each other by gender, age, ethnic or origin profile. However, across the UK, 33% of independent nascent entrepreneurs are women, compared with only 25% of corporate nascent entrepreneurs, a significant difference². Scottish nascent corporate entrepreneurs are significantly more likely to be in business services rather than in extractive, transforming or consumer oriented businesses, as Figure 5.3 shows³. This pattern is less pronounced in the UK, with only 34% of nascent corporate entrepreneurs in business services, and 44% in consumer services.

One area where nascent corporate entrepreneurs stand out is their level of ambition. A much smaller percentage of nascent corporate entrepreneurs expect to employ small numbers of people in five years time. The result is that the mean job expectation in Scotland is 18 for corporate entrepreneurs and 9 for independent entrepreneurs (medians of 5 and 3), very similar to the UK-wide figures of 17 and 10 (medians of 5 and 3)⁴. In Scotland, the nascent corporate entrepreneurs expected to provide around 28% of the jobs from 17% of nascent businesses. The UK proportions were similar (25% and 17%). In Scotland, 26% of the nascent corporate entrepreneurs and 14% of the nascent independent entrepreneurs expected to employ at least 20 employees in five years time (25% and 14% in the UK).





Business industry group



Both nascent corporate and nascent independent entrepreneurs had identical levels of opportunity and skills perception, suggesting very similar capacity for entrepreneurship. This was true both in the UK and in other high income countries. However, both UK nascent corporate and independent entrepreneurs were more likely to agree there were good opportunities for starting a business in their local area in the next six months than their counterparts in other high income countries, taken as a group⁵. Sixty percent of nascent corporate and independent entrepreneurs in the UK agreed there were good opportunities, compared with 54% of nascent corporate entrepreneurs and 53% of nascent independent entrepreneurs in other high income countries.

Nascent corporate entrepreneurs appear on average to be somewhat better linked into entrepreneurial networks. In 2006, 72% of nascent corporate entrepreneurs in the UK and 71% in other high income GEM countries knew someone who has started a business in the last two years, compared with 54% of UK nascent independent entrepreneurs⁶ and 66% of nascent independent entrepreneurs in other high income countries⁷. In summary, nascent corporate entrepreneurial activity in Scotland has over the past five years been running at similar levels to the UK, although the 2006 rate was significantly lower than the UK, the first time during this period. Nascent corporate entrepreneurial activity is an important component of overall nascent entrepreneurial activity in the top three high income countries for nascent entrepreneurial activity, and there may be lessons to be learned from this for Scotland and the UK. Relatively little cross-national research has been conducted on this topic. Further cross-national research on this topic might reveal why corporate entrepreneurial activity is relatively high in some nations and not in others.

- 1 The 95% confidence interval for the Scottish point estimate of 0.16% was -0.003 to .036, and for the UK point estimate of 0.53% was 0.43 to 0.62.
- 2 Chi-square equality of proportions continuity corrected = 15.013, p = .000, N=3481
- 3 Chi-square equality of proportions = 8.089, df=3, p=.044, N=179.
- 4 Because job distributions have a long tail, some extreme job estimates can bias the results, and it impossible to distinguish bogus but large job creation estimates from genuine estimates. For this reason, all estimates above 996 were removed from analysis and means and medians were calculated on the unweighted data, following the protocol adopted by Levie and Autio (2007). Because of small numbers of Scottish corporate entrepreneurs, only the UK means were significantly different.
- 5 Nascent corporate entrepreneurs: Chi-square equality of proportions = 8.713, p=.013, N=781
 - Nascent independent entrepreneurs: Chi-square equality of proportions = 42.460, p=.000, N=2932
- 6 Chi-square equality of proportions continuity corrected for UK = 19.309, p=.000, N=1107
- 7 Chi-square equality of proportions continuity corrected for other high income GEM nations =5.178, p=.023, N=2578



Business Closure

One of the great contributions made by the Global Entrepreneurial Monitor has been to counter some of the widely-held myths about entrepreneurship and how much it contributes to the growth of our economy. Over the years, this body of knowledge has grown, benefiting not just from the widening international coverage of the research, but from the addition of new insights on different aspect of the entrepreneurship question, such as the role played by high-potential entrepreneurs, or the contribution made by social enterprise.

This year, GEM turns its attention to one of the most contentious areas of entrepreneurship – an issue that is particularly susceptible to misperception and myth: the issue of business closure.

As the following chapter illustrates, something you see regularly quoted, in the media and by business commentators, is the assertion that "most start-ups fail" – often asserting that all of these businesses have somehow "failed" or "gone to the wall". These comments are regularly made – even though the published statistics often suggest otherwise.

We know – not least from past GEM Reports – that the issue of "Fear of Failure" is a major obstacle to entrepreneurship. We also know that this fact is that this fear tends to be greater in countries like Scotland, where the potential for more entrepreneurship is not fully realised. This makes it all the more important that we understand what "failure" actually is – and what its consequences are.

By investigating the issue of business closure, this year's GEM Scotland Report provides a refreshing insight to this issue. Clear statistical data is presented, on the number of news starts that actually close. Evidence is also presented on why entrepreneurs close their businesses and what actions we might take to improve the situation.

This evidence improves our understanding of the dynamics of this complicated process, helping to shift us away from the undue pessimism that often predominates in this area. As the evidence which follows demonstrates, many of the popular notions of business "failure" are misplaced – adding to the misperception that starting a business is unduly risky.

Using this evidence to address these misconceptions is a useful first step to further improving our attitudes to enterprise, reducing our fear of failure and helping to provide in Scotland a more supportive environment for people to start and grow their businesses.

Brian McVey Scottish Enterprise Scottish Enterprise



Business Closure

Figure 6.1: Distribution of most important reason for closing a business in the past 12 months, excluding businesses that were sold, UK and Scotland

Source: GEM 2006 UK and Scotland surveys



Figure 6.2: Distribution of most important reason for closing a business in the past 12 months, excluding businesses that were sold, by age group of former owner/manager, UK

Source: GEM 2006 UK Survey



Business "churn" and entrepreneurial recycling revitalise modern economies. Yet this process is misunderstood; most people equate businesses closure with failure, and assume that new businesses have high failure rates. These mistaken views can inhibit people from starting a business, distort markets for new business funding, provoke legislation for the wrong reasons, and distort entrepreneurship training. Research presented in this chapter suggests that few new businesses close in their early years, that only around 20% of Scottish businesses that close are business failures, and only 5% are insolvent or bankrupt their owners.

Business closure does not mean business failure

Why do business owner/managers close their businesses? One recent study¹ surveyed 387 exited or closed business owners in the UK. It found that only half of closed businesses actually stop; these discontinued businesses either failed financially (20%), or no longer met their owners' objectives (30%). The other half were sold on (35%) or re-opened under a different legal form (15%).

A second UK study² had similar findings: 30% sold, 15% still going or passed on to family member, and 50% closed voluntarily (this would include those that no longer meet the owners' objectives and those re-opening). 5% were identified as technical failures (insolvency or bankruptcy); the equivalent for the first study was 4%.

In 2006, GEM respondents who indicated that they had in the past 12 months closed, quit or discontinued but not sold a business they owned and managed were asked the most important reason for closing the business. Figure 6.1 shows that around 72% of the Scottish respondents (55% in the UK) gave personal reasons, including retirement or finding another job, while 28% (45% in UK) gave business reasons. The latter could be seen as "business failure" reasons; not insolvency, but termination of a business concept that was no longer attractive. Thus, if around 30% of all business closures are business trade sales, then only around 20% of Scottish business closures are closed primarily because they are not viable, including the 5% of closures which are insolvencies or result in personal bankruptcy.

Figure 6.2 shows that the reasons people across the UK give for closing their businesses vary by age. "Found another job" is significant for younger age groups. Business reasons become more important as people grow into middle age (45-54). As retirement beckons, personal reasons again become dominant. "Lack of customers" is a minor issue except for middle-aged business owners, for whom time is running out to create wealth in the second half of their working lives. The Scottish profile of reasons for closure seems to fit best with that of the 55-64 age group, reflecting the older average age of Scottish business owners.



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Business failure rates in Scotland and the UK: myth and reality

Here is an example of business failure mythmaking in the media: "Business Boffins, which operates a small-business mentoring programme in Oxford, ran a trial scheme with 147 firms, offering practical advice, online guidance and access to a panel of experts. The result - 86 per cent are still in business after 12 months. This flies in the face of estimates by Barclays bank that almost one in three businesses goes to the wall in the first year. It also defies the standard business failure rate, which soars to 55 per cent in the first three years..."³

In fact, as Figure 6.3 shows, this "86 per cent still in business after 12 months" rate is slightly under the 10-year average percentage of businesses still registered for VAT one year after registration (the "standard" one year business survival rate⁴) in Scotland and the UK. It is slightly over Barclays bank's own one year survival estimates, based on 15 years' data on new business bank account openings and closings⁵, not of businesses "going to the wall".

There is no "standard business failure rate" in the UK, but approximately 10% of VAT registered businesses deregister each year – the same proportion as businesses that have been registered for just one year. Deregistration rates rise to 12% on average of the original cohort in the second year of registration, and decline each year thereafter⁶. By ignoring deregistration because of change of legal status, sale of the business, and nonbusiness related reasons, the VAT deregistration rate significantly overestimates business failure rates. The combined business insolvency and business-related personal bankruptcy rate in Scotland was approximately half of one percent of the stock (number) of existing businesses in 2006 (0.6% for England and Wales)⁷. One tracking study of new Scottish companies that sought external funding found that, irrespective of funding success, business mortality (complete discontinuance) was on average around 1.5% in the first year, and cumulative mortality averaged 11 or 12% after three years⁸.

Most people highly over-estimate new business failure rates. A recent focus group study of 178 individuals in England on business myths⁹ revealed that the "biggest myth to emerge... related to perceived rates of business failure... most people believed the likelihood of failure to be relatively high – that in the region of three out of four new businesses were likely to collapse in their first year. The perception was widespread, though no one could cite a reliable source for the information when challenged" (p.16).

A second study of 1,002 adults suggested that 51% of the UK population thought that half or more of new businesses would fail within a year of start-up, and 18%, or over one third of these, thought that three-quarters or more would fail in the same time period¹⁰. As Figure 6.4 shows, those who were not already running a business and had given no recent thought to starting a business ("avoiders"), had significantly lower Figure 6.3: Proportion of VAT-registered businesses still registered one year and three years after registration, for businesses registering for the first time each year from 1995 to 2004

Source: Department for Business, Enterprise and Regulatory Reform



Year of registration for VAT









Figure 6.5: UK public's estimates of New Firm Survival Rates within Three Years (Estimate of sample N=968)

Source: Calculated from raw data in Allinson et al. (2005)



failure rate estimates than "thinkers" about starting a business and "doers", those starting or running a business¹¹. Perhaps thinkers and doers are more conscious of presumed high business failure rates.

The survey also asked respondents to choose from five different estimates of new firm survival rates within 3 years. As figure 6.5 shows, half of them thought that a third or less survived their first three years.

Fear of failure

Since most people believe the failure rate of new businesses is high, one might expect fear of failure to be a major barrier to start-up. In the 2006 GEM UK survey, 36% (38% in Scotland) agreed they would not start a business because they were afraid it might fail. The new business failure rate myth has greatest effect on thinkers. In the perception of failure study cited above, when those who had over-estimated the failure rate were told that the "true" rate of new firm failure in the first year was 10% (VAT deregistrations were used as an indicator of business failure, itself an over-estimate, as we have seen), 55% of thinkers but only 25% of avoiders became more positive about their prospects of starting a business.

In the GEM Scotland 2006 survey, 11% of 18-64 year olds were thinkers. A further 2% were nascent entrepreneurs, that is those who have moved from thinking to engaging in startup activity. Fear of failure is a barrier to startup for 42% of thinkers and only 18% of "nascents". However, the perception of failure study results (see above) suggests that education on the true failure rate could remove this barrier from 55% of thinkers for whom this is an issue.

If we employ the static ratios of thinkers to nascents as indicators of dynamic flow rates from thinkers to nascents, and then analyse how many thinkers and nascents fear failure, then it appears that only one fourteenth of thinkers who fear failure become nascents. In contrast, one quarter of thinkers who don't fear failure become nascents: a 350% increase in the flow rate.

Combining these two conclusions, if we educate thinkers who "fear failure" on the "true" failure rate, over half would no longer see fear of failure as a barrier to starting. The flow rate from "thinking" to "actively trying to start" for this group would then increase by 350%. This in turn would increase the nascent entrepreneurship rate overall by about 25%.

Distortion of market for new business funding

Removing the new firm failure rate myth might reduce the assumption of some bankers that new firm lending is high risk because of a high new firm failure rate¹², and encourage more entrepreneurs to consider this form of finance¹³. The current low rate of informal investment and low expectation of gain among informal investors in Scotland and the UK¹⁴ might increase if people knew the true odds of business failure. Since access to finance and fear of getting into debt are cited as major barriers by thinkers, this could increase the nascent entrepreneurship rate even further.



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Distortion of market for enterprise education

It is common for new business trainers, consultants, and resource providers such as incubators to misquote support failure rates as a scare tactic to drum up business. The example cited above is only one of many. If the true rate of business failure were better known, the stated purpose of enterprise training and incubation facilities could shift from avoiding failure to helping clients become more successful.

Business failure and regulation of bankruptcy

In the Flash Eurobarometer 2004 Entrepreneurship survey, respondents were asked "if you were to set up a business today, which are the two risks you would be most afraid of?" In the UK, 47% of respondents were most concerned about going bankrupt and losing their property, slightly higher than the EU25 average and much higher than the US rate of 36%.

Business failure is seen as a major cause of personal bankruptcy, even among experts in insolvency law¹⁵. Believing that risk of bankruptcy inhibits people from starting businesses, the UK government reduced the bankruptcy discharge period from three years to one year for "honest" bankrupts in 2002. A similar Scottish law was passed in 2006.

In 2005¹⁶, 955 bankrupts across England and Wales were asked "what was the cause of your bankruptcy? a) Credit misuse b) Failed business c) Other, please comment". Only 16% reported business failure, while 49% reported credit misuse. The study's author noted that the view that bankruptcy was mainly due to business failure came from the R3 survey of insolvency practitioners, which was subject to high response bias. He questioned whether the recent focus of bankruptcy law on the bankrupt entrepreneur was correct, given so few bankruptcies are businessrelated.

Entrepreneurs caught up in Scotland's outdated bankruptcy system have suffered, but relatively few Scottish entrepreneurs get bankrupted. The results of the English and Welsh study, applied to Scotland, imply that around 869 people in Scotland were sequestrated (bankrupted) for business reasons in 2006. This was only 0.3% of both the total estimated business stock¹⁷, and the estimated number of business owner/managers¹⁸.

Entrepreneurial recycling¹⁹: an economic virtuous circle

Vested interests often treat low business failure rates as if they were high. This media example carried the headline "Gloomy year as business failure rates soar":

"The full year total of over 16,000 was 9pc up from the 14,972 insolvencies in 2001. But the DTI said the number of companies going bust represented only 1.1pc of all active companies. Simon Appell, of corporate rescue specialist Kroll, said: "The figures offer grim reading for UK businesses and there is no sign of any light at the end of the tunnel."²⁰

By any standard, a failure rate of 1% per annum is low²¹. Yet doom-laden language was employed. Misinterpretation of business failure statistics can lead to calls for government to focus on firm failure, as in this Scottish example:

"Whoever takes over needs to look at what continues to hold the country back and re-prioritise its agenda. That means addressing the business failure rate (instead of business creation)..."²².

This approach to business closure is mistaken. Business churn (entries and exits of economic units, including businesses) increases long-run productivity by sharpening competition and by introducing new technology and innovations²³. It allocates resources away from an economy's industries that are increasingly uncompetitive and towards industries that are. A Scottish example would be the decline of its electronics industry, and rise of its creative industries, over the past 10 years.

In the 2006 GEM Scotland survey, 20% of those who had closed a business within the last 12 months were still business owner/managers, while a further 11% were actively trying to start another business but did not also own and manage other businesses. Thus around one third of those who had closed a business in Scotland in the past year were still running or trying to start another business. The UK proportions are similar (19% and 11%)²⁴.

Table 6.1 shows that in Scotland, 40% of those who closed a business for business reasons in the previous 12 months were currently early-stage entrepreneurs, rapidly recycling their economic efforts through new businesses. Owners who closed for personal reasons were much less likely to start again. Combining the 2004 to 2006 GEM surveys, 14% of Scottish owner/managers who



Table 6.1: Proportion of those who have closed a business in the past year and current early-stage entrepreneurial activity status by reasons for closure

Source: GEM 2006 UK and Scotland surveys

	U	ік	Scotland		
Reason for closure	Entrepreneurs	Not entrepreneurs	Entrepreneurs	Not entrepreneurs	
Too much competition	33	67		60	
Lack of customers	27	73	40		
Financial reasons	23	77			
Found another job	11	89			
Retirement	8	92	8	92	
Personal reasons	16	84			

- 1 Stokes, D. and Blackburn, R. (2002) Learning the hard way: The lessons of owner-managers who have closed their businesses. Journal of Small Business and Enterprise Development 9(1):17-27.
- 2 Barclays Bank (2001) Barclays Business Starts and Closures Survey 2000. London: Barclays Bank Small Business Bulletin.
- 3 Teena Lyons, "Oxford, England, Business Mentoring Program Finds High Rate of Success", Financial Mail on Sunday, 22 February 2004
- 4 "VAT registrations and de-registrations are the best official guide to the pattern of business start-ups and closures" (DTI News Release URN 05/11112 October 2005, p.5).
- 5 Median one year survival rate of business bank accounts from September 1992 to March 2007 is 82%. Source: Barclays (2007) Small Firms in Britain, 2007: A Review by Barclays Local Business Banking. London: Barclays plc.
- 6 Calculated from published VAT statistics, 1994 to 2003.
- 7 Based on Scottish Government estimate of 265,435 businesses. Some personal bankruptcies may be caused by corporate insolvencies if personal guarantees are called, some corporate insolvencies may be for related companies and several personal bankruptcies could relate to the same failed business. Thus summing personal bankruptcies caused by business failure (16% of 5430 sequestrations, based on the survey by Tribe, referenced below) and company liquidations (549) provides a conservative estimate. England and Wales estimate based on the 2005 proportion of UK private sector businesses in England and Wales of 90.98% regional breakdowns for 2006 are not available - and 4.466.700 private sector businesses in the UK at the start of 2006. There were 13,137 company liquidations and 62,955 personal bankruptcies in England and

Wales in 2006. If Protected Trust Deeds and Individual Voluntary Agreements are included, the rate rises to 1%.Source: BERR, Insolvency Service.

- 8 Don G. (2005). An analysis of young company mortality. Edinburgh: Equitas.
- 9 Allinson, G., Braidford, P., Houston, M. and Stone, I. (2005) Myths Surrounding Starting and Running a Business. London: Small Business Service.
- 10 Correcting for the stratified nature of the study, calculated using the sample proportions cited by Allinson et al. (2005), p.6
- 11 Chi-square statistic = 22.296, df = 5, p < .001.
- 12 For example, Richard Banks, managing director, wholesale banking, Alliance and Leicester is quoted as stating at an analysts meeting in 2003 "something like half small business startups fail in the first three years." Fair Disclosure Wire. Waltham: Aug 2, 2005; while Richard Cracknell, head of franchising at Barclays, was quoted in a Financial Times article of June 22, 1999, as saying "Almost 90% of franchisees are still trading after three years compared to less than 50 percent of ordinary startups" (Peter, 1999, p. 1, Surveys edition).
- 13 A very low percentage (around 4%) of entrepreneurs fail to secure bank funding if they ask for it. See Fraser, S. (2004) Finance for Small and Medium-sized Enterprises: A Report of the 2004 UK Survey of SME Finances, Coventry: Warwick Business School; and Harding, R., Brooksbank, D., Hart, M., Jones-Evans, D., Levie, J., O'Reilly, M. and Walker, J. (2006) GEM United Kingdom 2006 Report, London: London Business School.

14 See GEM Scotland 2005 report.

15 Milman, D. (2005). Personal Insolvency Law, Regulation and Policy. Aldershot: Ashgate Publishing, p.18. Storey, D. J. (1995) Understanding the Small Business Sector. London: Routledge, p.79. had closed their business in the last 12 months were nascent entrepreneurs, compared with 11% across the UK.

In conclusion, Scotland does not have a business failure problem. It does not have a business closure problem or an entrepreneurial recycling problem. The real issue is the general – and mistaken - belief that new businesses have high failure rates and that business closure is the same as business failure.

16 Tribe, J. (2006) Bankruptcy Courts Survey 2005 – A Pilot Study. Final Report. Kingston upon Thames: Centre for Insolvency law and Policy, Kingston University London.

17 See note 7

- 18 250,523, based on GEM Scotland 2006 survey estimate of business owner managers, including selfemployed, aged 18-80, and UK Government mid-year Scottish population estimates for 2005.
- 19 Mason, C. and Harrison, R. (2006). After the Exit: Acquisitions, entrepreneurial recycling and regional economic development. Regional Studies 40:55-73.
- 20 Newcastle Chronicle & Journal, 8 February 2003
- 21 The Scottish company insolvency rate has, at between 0.6% and 0.8% of company stock, been consistently lower than the rate in England and Wales for the past 15 years (see Teasdale, P. and Minty, J., Scottish Economic Statistics 2004). The GEM business closure rate for UK 18-64 year olds was slightly under the average for all GEM nations in 2006 (2.01 versus 2.15).
- 22 Murden, T. (2003), "Take a dose of humility to avoid becoming a 'smug, unsuccessful Scotland", Scotland on Sunday, 7 September 2003
- 23 Robinson, C., O'Leary, B. and Rincon, A (2006). Business start-ups, closures and economic churn: A review of the literature. Final report prepared for the Small Business Service, 23 August. London: National Institute of Economic and Social Research.
- 24 Stokes and Blackburn (2002) found that 62% of the owner-managers who closed a business in their study continued as business owners, 9% retired and 29% sought employment. Those who started again tended to state they had learnt a great deal from the previous business, and were better prepared this time round.



Scottish Entrepreneurship Policy and Programmes Review 2006

Entrepreneurship Policy in Scotland in 2006 was dominated by the publication of a Business Growth report by the Scottish Parliament's Enterprise and Culture Committee, the response of the Scottish Executive to it, and the updating of legislation on bankruptcy. In Programmes, focus was on the continued restructuring plans of Scottish Enterprise and a cash crunch it faced early in the calendar year, both of which affected some start-up programmes.

The Enterprise and Culture Committee's report¹, published in March 2006, represented the culmination of a near 15-month, extensive inquiry into business growth in Scotland. The report argued that Scotland's business growth rate was "currently lagging behind other parts of the UK and our international competitors". It recommended a step-change in investment, including "using public money to catalyse the creation of two or three long-term private investment funds, each worth £200-300 million, providing investment capital at all levels of the young and expanding company market".

The report's primary recommendation for a step change in investment was controversial, in part because of debate over how investment was measured. In its official reply², the Scottish Executive noted "Scottish Enterprise has recently taken the strategic decision to focus more on businesses with the potential for high growth." It concluded: "...the Executive views targeted and focused intervention to promote business growth as being a key part of the effort to raise the competitiveness and dynamism of the Scottish economy."

In 2006, the Bankruptcy and Diligence etc. (Scotland) Bill passed all stages by December. It was originally promoted as a bill to help entrepreneurs who had failed in business to restart, but it soon became evident that it would primarily affect those who had got themselves into personal financial difficulties.

In December, the 2006 review "Measuring Progress Towards a Smart, Successful Scotland" section on "A culture of enterprise and more businesses of scale" concluded "The number of new business starts has increased but Scotland is still well below the UK average and is ranked third bottom amongst UK regions... The proportion of new businesses reaching a modest scale over a three year period has grown slightly since 1999 but remains small... although some progress has been made, raising Scotland's entrepreneurial and business growth performance to the desired levels remains a key challenge for the Scottish economy."³

2006 was a turbulent year for start-up entrepreneurship programmes, mainly because of budget difficulties at Scottish Enterprise, and a planned partial shift in emphasis from business starts to business growth. Several programmes were scaled back or deferred, and rumours circulated in the press that the Business Growth Fund would be suspended.

The effect of this on actual start-up rates is unclear. The number of business starts assisted by the Business Gateway Network, which handled 40,000 enquiries from pre-start entrepreneurs during the year, was the same in 05/06 as in 04/05 (9263 compared with 9387). Of these businesses 42 per cent were by women and 41 per cent were by young people (aged 18-30). A review of Business Gateway suggested that the annual costs of Business Gateway of £17m delivered economic benefits worth £40m. Scottish Enterprise's High Growth Start-up Unit helped 11 significant new ventures get established, compared with 16 in 04/05⁴.

The total amount Scottish Enterprise spent on Growing Businesses rose from £92 million to £125 million, but the "Culture of Enterprise" share of this declined from 39% to 25%. The Scottish Co-Investment Fund invested £10.2m in 62 deals that leveraged more than £21m from private sector partners during 2005/06. The three Intermediary Technology Institutes committed research funds of £46m in 2005/06. The Scottish Seed Fund, designed to improve the availability of finance for start-up and young growing companies in Scotland, and the Scottish Venture Fund which aimed to provide second round funding for deals in the £2-5 million range, were launched in the autumn.

- 2 A summary is available at http://www.scotland.gov.uk/ Publications/2006/06/27171110/12
- 3 Available at http://www.scotland.gov.uk/Publications/ 2006/12/19161336/0
- 4 All data from Scottish Enterprise Annual Reviews and Annual Accounts for the accounting years 04/05, 05/06, and 06/07.

¹ Available at http://www.scottish.parliament.uk/ business/committees/enterprise/reports-06/ecr06-05-Vol01-00.htm



GEM and Entrepreneurship Policy in Scotland

This year's report highlights several issues that are relevant for entrepreneurship policy. These include the attitudes of a new generation of young, better educated entrepreneurs. Ninety percent of nascent entrepreneurs or business owner/managers in the 2006 GEM Scotland survey aged 18 to 24 have taken business or enterprise training in school or college, including work experience in an SME, or attended a public sector business or enterprise training programme, compared with 59% of 25 to 34 year old entrepreneurs. A similar phenomenon is apparent across the UK.

Compared to their UK counterparts, significantly less of young Scottish entrepreneurs believe that there are good start-up opportunities in their local area and that most people would think that starting a business is a good career move. Significantly more of them are concerned about what happens if the business fails. This is a warning that we still have much to do in Culture of Enterprise. As the policy-directed shift in resources from encouraging start-ups generally to encouraging growth continues in Scotland, it is important not to lose sight of that.

Scotland's TEA rate fell significantly behind the UK rate in 2006. Even if TEA levels recover in 2007, Scotland's relatively small pool of people with experience of running a business acts as a brake to increasing activity. One way around this is to raise the flow rate from people who are thinking about starting a business ("thinkers") to those actively trying to start a business (nascent entrepreneurs). For many thinkers, a significant barrier to start-up is fear of failure. Yet the new business failure rate is much lower than most people suppose.

In June 2007, Professor Gavin Reid of the University of St Andrews published research on small new Scottish firms that reached virtually identical conclusions to the studies on business closure cited in Chapter 6¹. He found that only about one sixth of Scottish businesses that started in 2002 and had closed by 2005 were financially distressed at closure. He commented: "What we are finding is a common misclassification of many firms that go out of business as 'failures'. Such firms can find a niche, exploit it rapidly, wind up the business and start another elsewhere. This isn't a bad thing - it should be viewed as good for both individuals and the economy - you put in the effort where it counts, then move to better opportunities, with no waste."2

The way Professor Reid's research was reported in the press reveals a lot about how ingrained the new business failure myth is in Scotland. For example, the Daily Record completely mangled the message that most limited life firms were not failures by carrying the story under the headline: "Small Firms Take Big Hit"³. An article in The Herald led with the sentence: "A leading academic has cast doubt on Scotland's notoriously high business attrition rate, alleging that many firms which cease to trade are wrongly categorised as failures."⁴

Clearly, there is more work to do to convince a sceptical press and public that most new entrepreneurs are not doomed to fail, and that entrepreneurial recycling is a positive, wealth creating phenomenon. Given what we know about fear of failure among "thinkers" and nascent entrepreneurs, if thinkers knew the true new business failure rate, the nascent entrepreneurship rate could increase by 25%⁵. This is a significant lift. In addition, there would likely be an increase in actual start-up attempts by nascent entrepreneurs.

Scottish entrepreneurship policymakers should adopt as a policy goal the destruction of the new business failure rate myth. A programme to implement this should be integrated into the current enterprise education and training system and it should also involve an information campaign aimed at to those thinking about starting a business, the media, and the new business "support" industry, some of whom use fear of failure to sell their wares.

1 Reid, G.C. (2007) The Foundations of Small Business Enterprise. London: Routledge, Abingdon

- 2 University of St Andrews press release.
- 3 Daily Record 19 June 2007, p.39
- 4 Rogerson, P. (2007) Company failure data muddies economic picture, says study
- The Herald (Glasgow), 19 June , p.28
- 5 See Chapter 6 for a detailed explanation of the assumptions and calculations behind this conclusion.



Appendix 1

Traditional analyses of economic growth tend to focus on large corporations and neglect the role played by newer and smaller firms. GEM takes a more comprehensive approach and considers the economic contribution of all businesses within a country. Specifically, GEM views the national economic growth and the aggregate level of economic activity in a country as being associated with newer and smaller firms as well as established firms. Small and new firms generate innovations, fill market niches, and increase competition, thereby promoting economic efficiency. By considering the complementary nature of economic activity among different groups of firms, GEM links a nation's economic activity to the interplay of established, new, and small firms. This perspective gives a clearer understanding of why entrepreneurship is vital to the whole economy. Figure 1 is a synthetic representation of GEM's conceptual model with respect to economic growth.

The relationship between entrepreneurship, large firms and macroeconomic activity is complex. Over time, the availability of longitudinal GEM data will allow researchers to analyze the causal link between entrepreneurship and economic growth and the exact role played by smaller and newer firms with respect to the competitiveness and productivity of a country. In the meantime, much can be learned about the entrepreneurial process and related policy issues by using cross-country data to make sense of the ways different levels of development influence the type, quality and quantity of entrepreneurship.

Since its inception in 1999, one of GEM's major activities has been the creation of a large dataset and the construction of harmonised measures of entrepreneurial activity. Individual level data on all participating countries is publicly released on www.gemconsortium.org

two years after collection and one year after release to national teams, which get individual level data for their own country in the year of collection. In addition to individual level data, obtained through representative samples of randomly selected adults, each GEM national team conducts interviews with experts in their respective countries chosen to represent nine entrepreneurial framework conditions. These national experts also complete a standardized questionnaire so that quantitative measures can be constructed of their opinions concerning the environment for entrepreneurship in their country. Between 2000 and 2006, over 800,000 adults aged 18-64 were interviewed about their entrepreneurial attitudes, intentions and activity in over 50 countries, and over 6,000 country experts in entrepreneurship completed a detailed expert questionnaire on the environment for entrepreneurship.



1 Part of this text is taken from Minniti, M, Bygrave, W and Autio, E. (2006). Global Entrepreneurship Monitor 2005 Executive Report, London Business School and Babson College. London, UK and Babson Park, MA, p.14.



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