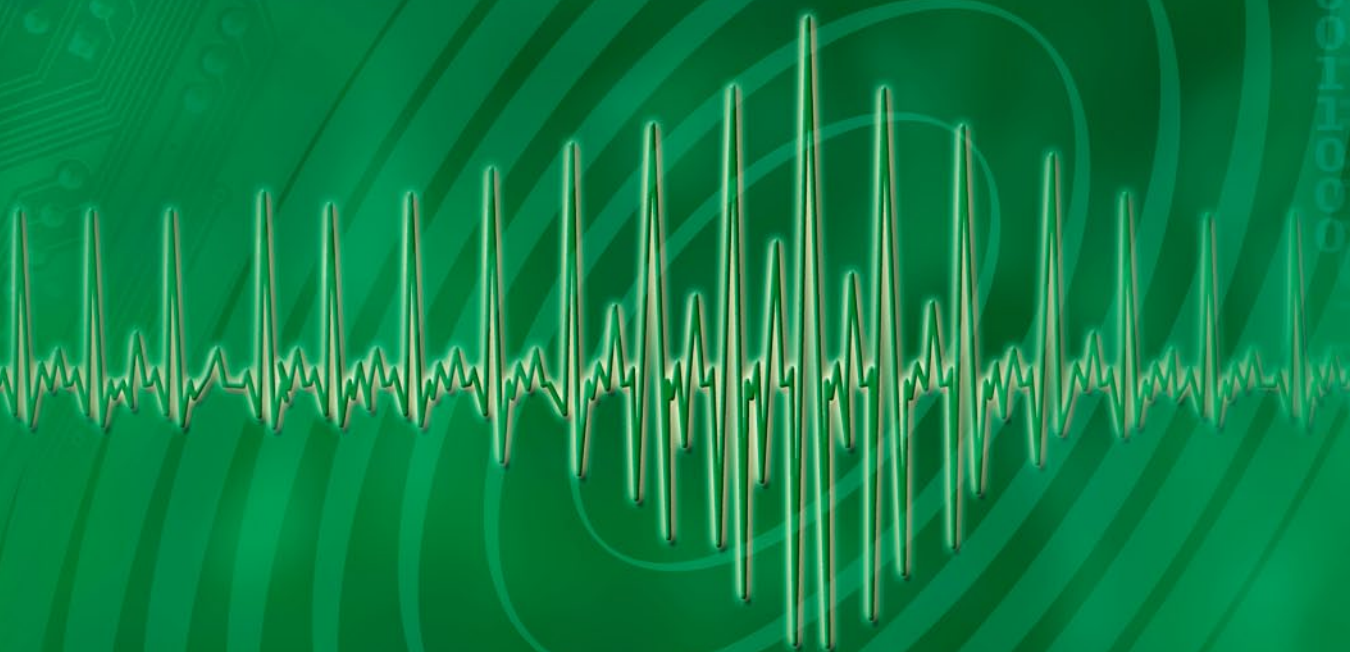




University of
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Global Entrepreneurship Monitor

Scotland **2011**

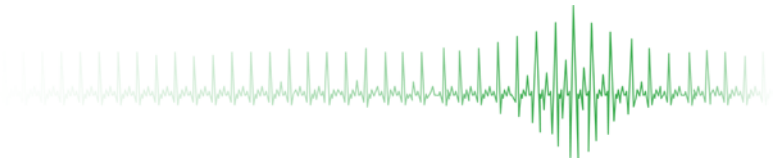


Jonathan Levie





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Whilst this work is based on data collected by the GEM consortium, responsibility for analysis and interpretation of those data is the sole responsibility of the author.

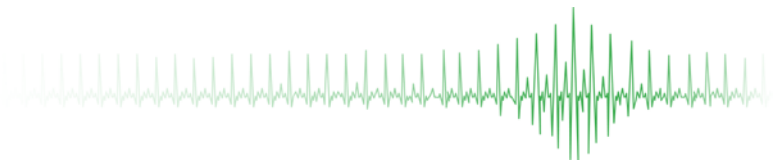
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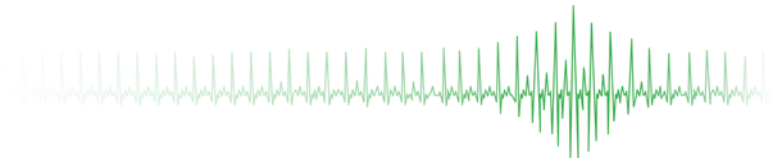


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Foreword



In an Olympic year it would be great to report that 'Business Team Scotland' will be on the global podium winning medals – sadly that's not yet the case, but there is reason for hope...

The good news is this year's GEM Scotland report indicates there are signs that the year-on-year decline in early stage entrepreneurial activity seems to have been halted, but if we are to succeed on a global stage, we need to do significantly better.

The report shows that the proportion of working-age individuals who intend to start a business has increased. In many areas we are no longer lagging behind the rest of the United Kingdom, but that should hardly be cause for celebration – where are we against our international competition?

Perhaps some of our initiatives in education are now starting to bear fruit – knowledge of how to start in business in Scotland compares favourably to the UK (28% of founders there did not know how to, compared to 14% here).

The report again cites lack of funding or availability of funding as holding back entrepreneurs – yet when the banks were flooding the market with funds not so long ago our TEA rates were the same; so what's wrong?

We seem in Scotland in some areas to have an ingrained mentality of expecting others to do things for us. Brewdog couldn't find funding conventionally so they found it unconventionally; we need more of that.

We need ambition that avoids or jumps

the hurdles, innovation that doesn't expect Government to provide, or you or me to solve problems. We need entrepreneurs that get on with it...

And of course we need ambition from our Government, our educational establishments but most importantly from our people...And the Scottish Government are doing their bit with a recently announced £1m to PSYBT; wouldn't it be great if PSYBT didn't need the cash?

The most costly thing we could do today in this ever-evolving world is to stand still, do as we have always done...

GEM Scotland allows us to see where we are, not where we are going. It's up to us to invent where we go next, so let's get on and do that – self-determining how you intend to build your business is the only way forward.

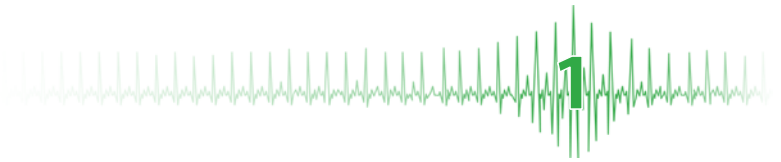
If we are to succeed, we need a greater level of ambition than comparing ourselves against other parts of the UK, even elsewhere in Europe. We need to lift our sights, and we need to lift them high. Lack of ambition is the single biggest impediment to success. I can be better every time than IQ.

In summary there is good news in this year's GEM Scotland report; let's follow it up with even better news next year and a whole range of activity to stimulate our great nation's economy. Are you up for that? I am.

Yours aye

Tom

Sir Tom Hunter



Introduction

What's new in GEM Scotland 2011?

GEM Scotland 2011 has twelve years of data to draw on, with around 2000 individuals aged between 16 and 80 interviewed each year.

The major innovation in this year's GEM survey is the measurement of employee entrepreneurial activity in a comparable way across nations: see Chapter 4.

The effect that multiple deprivation has on the entrepreneurial process is analysed in Chapter 5.

This year, instead of asking individuals who were not engaged in entrepreneurial activity what barriers prevented them from starting a business, we asked nascent entrepreneurs and business founders what difficulties they faced in starting. The results are highlighted in Chapter 6.

GEM is a major research project aimed at describing and analysing entrepreneurial processes within a wide range of countries.

GEM has three main objectives:

- To measure differences in entrepreneurial attitudes, activity and aspirations among economies.
- To uncover factors determining the nature and level of national entrepreneurial activity.
- To identify policy implications for enhancing entrepreneurship in an economy.

In 2011, GEM surveyed 54 economies, with over 140,000 individual interviews and 1850 expert interviews. 52 of these countries participated in the special topic: entrepreneurial employee activity. Participating countries in 2011 were:

Factor-driven Economies¹

Algeria, Bangladesh, Guatemala, Iran, Jamaica, Pakistan, Venezuela.

Efficiency-driven Economies

Argentina, Barbados, Bosnia and Herzegovina, Brazil, Chile, China, Colombia, Croatia, Hungary, Latvia, Lithuania, Malaysia, Mexico, Panama, Peru, Poland, Romania, Russia, Slovakia, South Africa, Thailand, Trinidad & Tobago, Turkey, Uruguay.

Innovation-driven Economies

Australia, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Japan, Korea Rep., Netherlands, Norway, Portugal, Singapore, Slovenia, Spain, Sweden, Taiwan, United Arab Emirates, United Kingdom, United States.

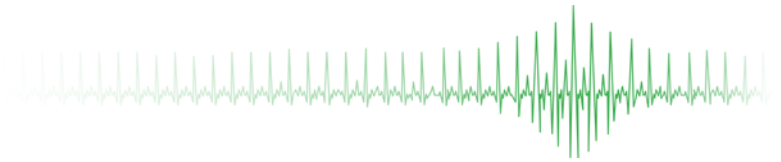
The Entrepreneurial Process

GEM views entrepreneurship as a process rather than as an event. An important manifestation of entrepreneurship (though not the only one) is new business activity. GEM collects data on the proportion of individuals in an economy who are expecting to start a business, are actively trying to start a business, are running their own young business, are running their own established business, and who have recently closed a business.

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 less than 42 months.

One of the principal measures in GEM is 'total early-stage entrepreneurial activity' (TEA), the proportion of people who are involved in setting up a business or owners-managers of new businesses. 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 (EBO).



As the GEM 2011 extended report² explained, all over the globe, policymakers and academics agree that entrepreneurship plays a critical role in the development and well-being of society. At the same time, they disagree on what entrepreneurship is. There is disagreement on whether focus should only be on high-growth entrepreneurs, or whether all new innovative firms contribute to productivity by boosting competition even if they themselves are not highly successful. There is disagreement over the economic and social benefits of less ambitious entrepreneurship. And increasingly, attention is being paid to entrepreneurial employees within established businesses.

Recognising this, the GEM 2011 extended report split Total early-stage Entrepreneurial activity (TEA) into medium/high job expectation TEA (measured as the proportion

of nascent and new business owners aged 18-64 who expected to employ at least 5 people other than the owners in 5 years' time) (MHEA for short), and solo/low expectation TEA (those who expect to employ less than 5 people in 5 years' time), or SLEA for short. In addition, it described a new measure of entrepreneurial employee activity (EEA). The latter is defined as the proportion of employees aged between 18 and 64 currently actively involved in and playing a leading role in idea development or preparation and implementation of a new activity for their employer, such as developing or launching new goods or services, or setting up a new business unit, a new establishment or subsidiary.

As shown in Figure 1.1, these three different forms of entrepreneurial activity have

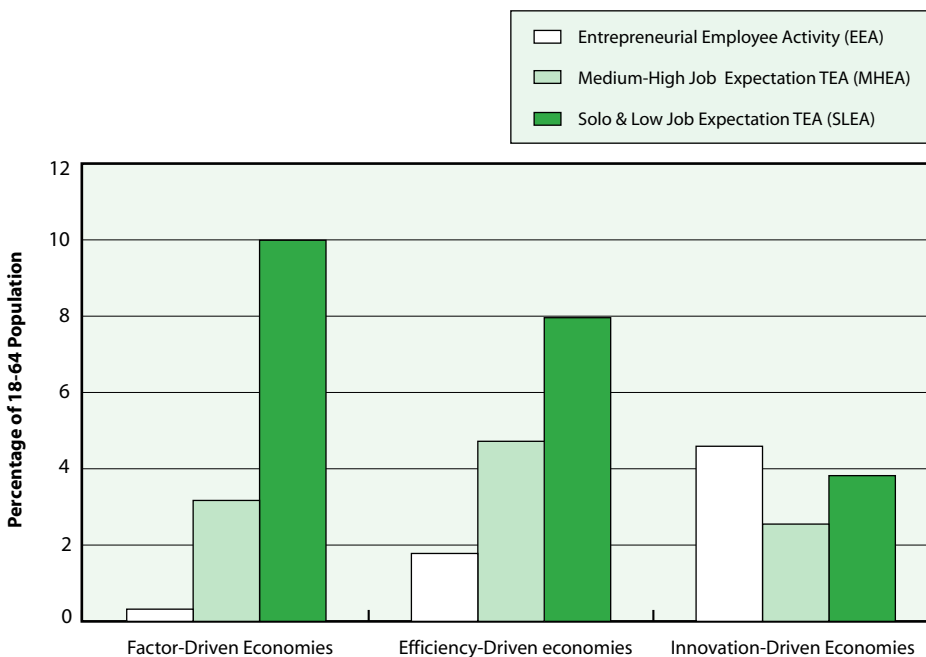
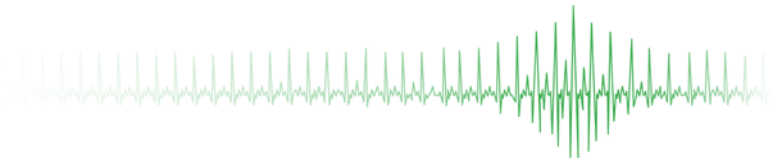


Figure 1.1: Prevalence of Three Distinct Types of Entrepreneurial Activity in working age population, for three stages of economic development

Source: GEM 2011 Extended Report, p.58



different prevalence rates according to the level of economic development of a country. Remarkably, the sum of these three rates is approximately the same for factor-driven (13%), efficiency-driven (14%) and innovation-driven (11%) economies surveyed, on average. Clearly, entrepreneurial employee activity is an important phenomenon in innovation driven economies.

Key Findings of GEM2011 Global Extended Report

National Patterns of Entrepreneurial Activity

Across countries, patterns of entrepreneurial activity are not random. Less ambitious entrepreneurship (SLEA) tends to be less prevalent at higher levels of economic development. However, it's still more prevalent than ambitious entrepreneurship (MHEA) even in innovation-driven countries.

Employee entrepreneurial activity (EEA) increases with per capita income, in contrast to TEA rates which decline with per capita income. While this is suggestive of a substitution effect, some innovation-driven countries (e.g. United States, Australia, Netherlands) have high rates of both TEA and EEA.

These varying patterns may be partly related to the degree of social security in a country, to the prevailing attitudes towards entrepreneurship as a career choice, to the degree of employer support for employees who come up with new ideas, and to other economic and institutional characteristics.

Entrepreneurial Attitudes, Intentions and Activity over the Great Recession

For efficiency-driven and innovation-driven economies, the GEM indicator of perceived opportunities exhibits a clear business cycle pattern, with lower values in 2008 and 2009. For innovation-driven economies the dip in perceived opportunities to start a business coincided with a drop in intentions to start a business and in early-stage entrepreneurial activity. Such a drop was, in general, not observed in efficiency-driven economies. Here entrepreneurial intentions and early-stage entrepreneurial activity remained rather stable, before taking off to an overall high in 2011.

1 Phases of economic development are decided on the level of GDP per capita and the extent to which countries are factor-driven in terms of the shares of exports of primary goods in total exports. See Porter, M.E. and Schwab, K. (2008), The Global Competitiveness Report 2008-2009, Geneva, Switzerland: World Economic Forum.

2 Most of the information in this chapter is taken from the 2011 GEM Extended Report: Entrepreneurs and Entrepreneurial Employees across the Globe (Bosma, Wennekers and Amorós, 2012) available from www.gemconsortium.org.



Summary Highlights for GEM Scotland 2011

2

- In 2011, the proportion of working age individuals in Scotland who intended to start a business in the next three years rose significantly from 6.0% to 9.8%.
- In contrast with previous years, entrepreneurial attitudes, activity and aspirations were very similar in Scotland and the UK. Scotland performed well in relation to its benchmark nations on most activity and aspiration measures.
- Scotland's Total Early-Stage Entrepreneurial Activity (TEA) rate in 2011 was up from 4.2% to 6.2%, although this apparent rise was not statistically significant. For the first time since 2008, the Scottish TEA rate and UK TEA rate estimates were not significantly different. TEA rates also rose in other Arc of Prosperity and innovation-driven countries.
- A long slow decline in both low expectation and high expectation early-stage entrepreneurial activity was arrested in 2011.
- Like the UK as a whole, fewer than half of the Scottish working age population thought that most people would agree that starting a business is a good career choice, despite the relatively high status afforded to successful entrepreneurs across the UK.
- The proportion of employees in small Scottish businesses that are engaged in new business activity for their employer is significantly lower than in the UK. However, these employees were just as likely as their UK counterparts to agree that their employer provided support to individuals who come up with ideas for new goods and services.
- In 2011, entrepreneurial intention rates were just as high in more deprived as in less deprived communities. However, TEA rates were significantly lower. Poorer access to funding and less business opportunities locally may at least partially account for this.
- Half of non-entrepreneurs think that access to finance would be the greatest barrier to them starting a business. Similarly, almost half of entrepreneurs cite access to finance as one of the biggest difficulties they faced in starting their business.
- A quarter (25%) of entrepreneurs mentioned getting staff as one of their biggest difficulties in starting their business, compared with only 6% across the UK. By contrast, 28% of UK entrepreneurs mentioned not knowing how to start and run a business as one of their biggest difficulties, but only 14% of Scottish entrepreneurs mentioned this.
- The self-employed in Scotland are significantly more likely than employees to strongly agree with statements that describe aspects of self-empowerment in work. They are also significantly more likely to be very satisfied with their work and work income. Finally, they are more likely to live in high income households.

Entrepreneurial Business Attitudes, Activity and Aspirations in Scotland: 2011 Update

Table 3.1: Entrepreneurial attitudes among non-entrepreneurial individuals in the Scottish, UK and Arc of Prosperity adult population samples, 2002 to 2011 (% agree with statement)

Source: GEM UK and Global Surveys.

Note: 2009 AOP estimates exclude Ireland; 2011 AOP estimates exclude Iceland

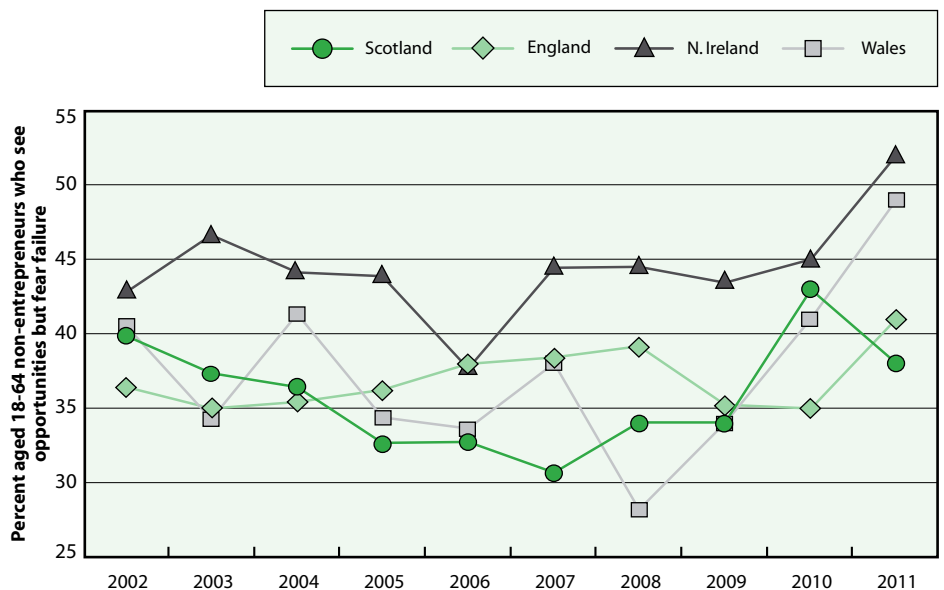
Item	Know someone who started a business in past 2 years			Good opportunities for starting a business in the next 6 months			Have knowledge, skills to start a business			Fear of failure would prevent me starting a business (among those who see opportunities)		
	Scot	UK	AOP	Scot	UK	AOP	Scot	UK	AOP	Scot	UK	AOP
2002	19	21	46	23	26	44	37	41	36	40	37	33
2003	23	22	50	34	32	41	41	43	34	37	35	36
2004	26	24	43	33	33	43	47	46	36	36	36	36
2005	25	25	44	29	35	52	42	46	36	33	36	36
2006	25	25	43	34	34	52	45	45	36	33	37	39
2007	23	24	44	36	36	55	39	44	35	31	38	34
2008	20	24	43	33	27	41	41	44	36	34	38	35
2009	22	23	45	21	23	40	40	44	34	34	35	34
2010	27	31	38	25	27	42	44	47	37	43	36	35
2011	28	28	36	25	28	49	38	37	31	38	41	40

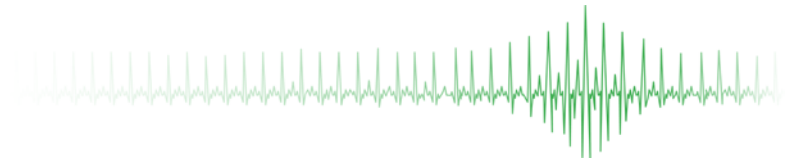
This chapter reports measures of entrepreneurial attitudes, activity and aspirations in Scotland in 2011. Where relevant, comparisons are made with the UK and UK home nations, Arc of Prosperity countries, and other innovation-driven, high income nations, and with measures

in previous years¹. In recent years, there has been a significant increase in mobile-only households across the UK². To mirror this increase, in 2011, 13% of the GEM sample across the UK consisted of mobile-only households, compared with 10% in 2010 and none in previous

Figure 3.1: Trend in fear of failure among non-entrepreneurial individuals who see opportunities in the four home nations of the UK, 2002 to 2011

Source: GEM UK Surveys 2002 to 2011





years. There was no significant difference in TEA rates between mobile only households and other households in Scotland in 2011.

Entrepreneurial Attitudes

Table 3.1 displays historical trends of entrepreneurial attitudes among the non-entrepreneurially-active population – those who were not nascent, new or established business owner-managers. The picture for Scotland in 2011 is mixed. Opportunity perception remained relatively weak, and skills perception dropped significantly. However, fear of failure did not increase in Scotland, unlike the UK as a whole. This pattern can be clearly seen in Figure 3.1. Overall, entrepreneurial attitudes in Scotland were very close to the UK average.

GEM also collects data on how individuals perceive the attitudes of the general population towards entrepreneurs. As Figure 3.2 shows, the British Isles, including Ireland, Scotland and the UK as a whole are unusual internationally in that four-fifths of the population agree that successful entrepreneurs have high status, but less than half of the population agree that starting a business is a good career choice. In most countries, roughly similar proportions of the population agree with these two statements. Positive perception of the status of entrepreneurs has steadily increased in the UK from 72% of the population in 2003 to 80% in 2011. In Scotland, it remained around 74% from 2003 to 2010, only increasing to 80% in 2011. While positive perception of starting a business as a career declined over the 2003 to 2011 period, Figure 3.3 shows that it remained higher among younger than older adults³.

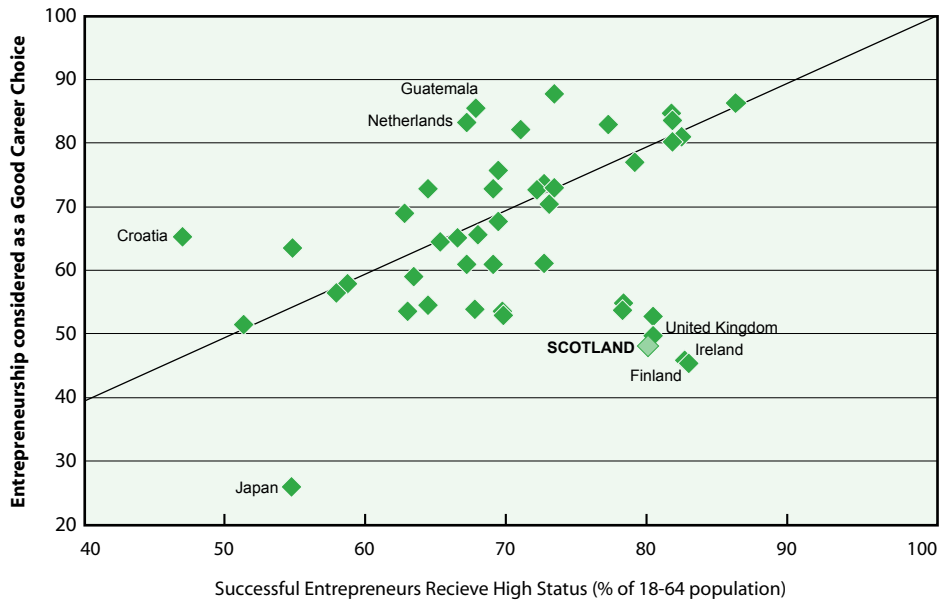
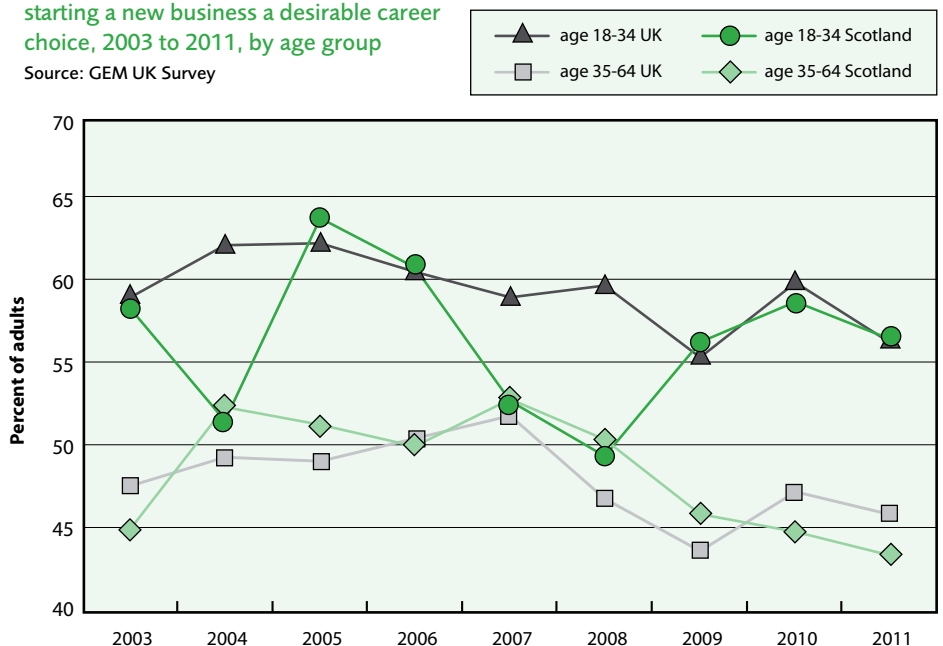


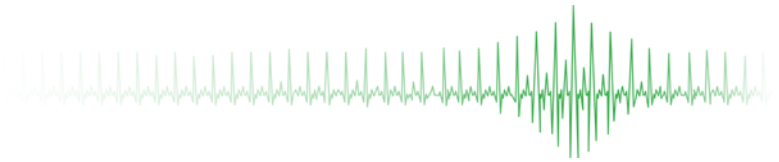
Figure 3.2: National-level correlation of proportion of adults aged 18 to 64 who agree that those successful at starting a new business have a high level of status and respect and that most people consider starting a new business a desirable career choice, 2011, 43 countries plus Scotland

Source: GEM 2011 UK and Global Surveys

Figure 3.3: Trend in agreement with statement that most people consider starting a new business a desirable career choice, 2003 to 2011, by age group

Source: GEM UK Survey





There is relatively low agreement in Scotland and the UK with the statement "you will often see stories in the public media about successful new businesses". At 45.4% in 2011, this was at its lowest point since 2003 and compared with an international average across 43 countries in 2011 of 58.9%, suggesting that there remains considerable scepticism among the Scottish and UK public at large about the wisdom of embarking on an entrepreneurial career.

Entrepreneurial Activity

In 2011, representative samples of the working age population (aged 18-64) were surveyed in 54 countries. Figure 3.4 shows the estimates of Total early-stage Entrepreneurial Activity (TEA) in each of the 23 innovation-driven (high income) sovereign nations participating in GEM2011,

plus Scotland, ordered by TEA rate⁴. TEA measures the proportion of nascent and new business owner/managers in the population of working age adults. In "innovation-driven" nations such as Scotland, stimulating innovation and entrepreneurship should be a focus of government attention, according to the World Economic Forum⁵.

If the vertical bars on either side of the point estimates for TEA for any two countries do not overlap, they have statistically different TEA rates⁶. Figure 3.4 shows that Scotland ranked in the third quartile of innovation-driven countries in 2011, up from the fourth quartile in 2010 and 2009. Only Slovenia had a significantly lower TEA rate than Scotland in 2011, while only two countries had TEA rates statistically higher than those of Scotland.

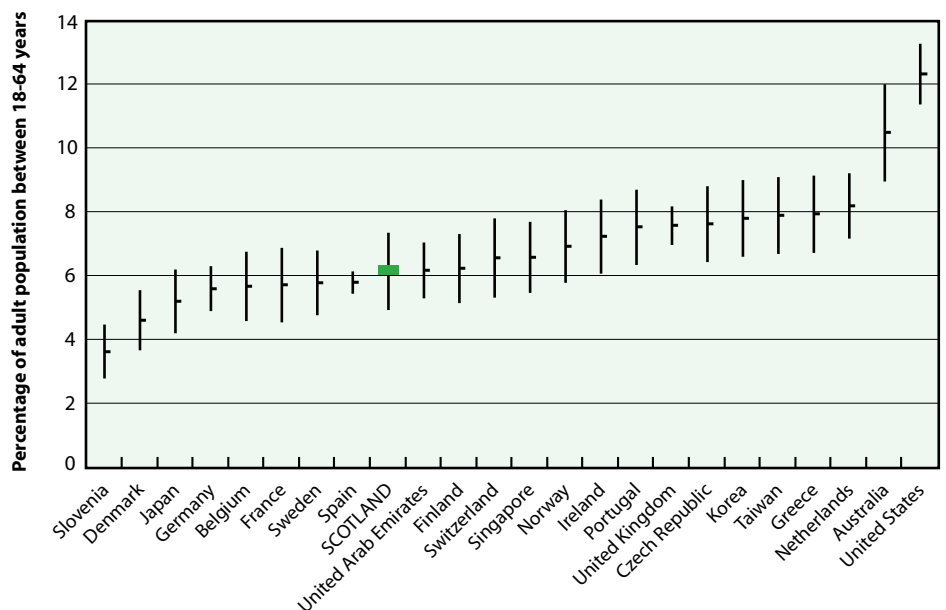


Figure 3.4: National 2011 TEA rates for 23 sovereign innovation-driven nations and Scotland, ordered by TEA rate
Source: 2011 GEM UK and Global Surveys

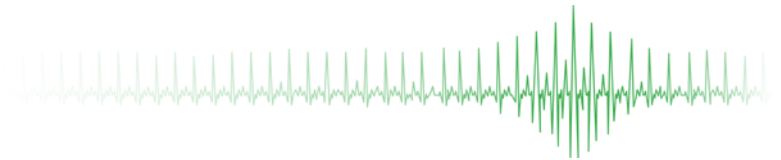


Table 3.2 benchmarks the TEA rate for Scotland for 2011 against the UK, "Arc of Prosperity" nations that participated in 2010 and 2011 (Denmark, Finland, Ireland, and Norway) and 19 high income/innovation-driven sovereign nations that participated in GEM in 2009 and 2010. Rates in Scotland grew by almost 50%, apparently higher than growth of the UK and the benchmark country group estimates, compared with no change between 2009 and 2010. Despite this apparently large increase, the difference was not statistically significant, so considerable caution is warranted. The Scottish TEA rate was not significantly different from the UK rate in 2011, and close to the average for 4 Arc of Prosperity nations.

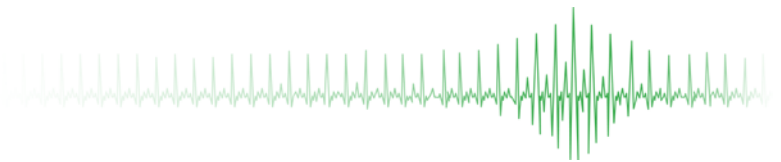
On 6 December 2011, official business birth and death statistics for the United Kingdom in 2010 were released by the Office for National

Statistics. This data combines VAT and PAYE statistics on new business registrations in the 12 months to November. It showed the number of business births in Scotland rose in 2010 by 5% on 2009, very close to the GEM estimate of an increase of 3% but different from the Committee of Scottish Clearing Banks estimate of a decline of 2%. In marked contrast to the GEM estimates for 2011, the Committee of Scottish Clearing Banks estimate for 2011 was a further decline of 5%.

The correlation of annual changes in the Scottish TEA rate with annual changes in official business births for 2005 to 2010 is 0.86. In other words, 74% or three quarters of the variability in changes in annual official business births over this period is mirrored by changes in the annual TEA rate. As a proxy measure of change in annual official business births,

	TEA		% change	Scottish TEA as a % of other TEA rates	
	2010	2011		2010	2011
Scotland	4.2	6.2	48%		
UK	6.5	7.6	17%	65%	82%
19 High income/ innovation-driven nations (like-for-like)	5.5	6.9	25%	76%	90%
4 Arc of Prosperity nations (like-for-like)	6.0	6.3	5%	70%	98%

Table 3.2: Scottish and benchmark TEA rates, 2010 and 2011
Source: 2010 and 2011 GEM UK and Global Surveys



the Scottish TEA rate continues to perform relatively well up to 2010. It remains to be seen if the official statistics match the apparent rise in the Scottish TEA rate in 2011, particularly as the increase was in the nascent entrepreneur rate rather than the new business owner-manager rate, as discussed in more detail below.

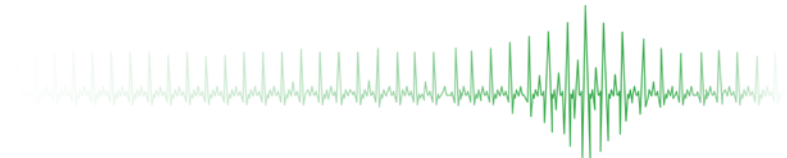
Table 3.3 shows trends in four different entrepreneurial activity rates in Scotland, the UK and Arc of Prosperity countries. For the first time in this series, the Scottish intention and early-stage entrepreneurial activity rates are on a par with both UK and AOP countries. This is partly because Iceland, which has relatively high activity rates, did not participate in GEM in 2011, but it is clearly also partly because of significantly higher intention rates in Scotland in 2011, the highest recorded since 2000.

Table 3.3: Entrepreneurial activity in the Scottish and UK adult population samples, 2002 to 2011 (% agree with statement)

Source: GEM UK and Global Surveys

Note: Numbers in bold denote significant differences between Scottish and UK samples in the same year. Ireland did not participate in GEM in 2009, and Iceland did not participate in 2011.

Item	I expect to start a business in the next 3 years (%)			Total early-stage Entrepreneurial Activity (TEA) rate (%)			Established Business Owner-manager (EBO) rate (%)			I have shut down a business in the last 12 months (%)		
	Scot	UK	AOP	Scot	UK	AOP	Scot	UK	AOP	Scot	UK	AOP
2002	5.9	6.7	11.9	5.0	5.4	8.0	4.4	5.6	7.7	1.3	1.7	2.2
2003	6.8	8.0	10.9	5.6	6.4	7.9	5.3	5.7	7.4	1.4	2.0	2.3
2004	6.5	8.6	11.4	5.0	5.8	7.6	4.8	4.7	6.5	1.6	1.8	2.1
2005	6.2	8.7	11.7	5.7	6.0	7.9	4.1	5.1	7.1	1.6	1.9	2.3
2006	5.8	7.9	11.1	4.1	5.8	7.6	4.2	5.3	6.9	1.6	2.0	2.2
2007	5.6	6.8	11.5	4.6	5.5	7.9	3.9	5.8	7.5	1.3	2.0	2.4
2008	5.1	6.8	10.6	4.5	5.5	7.6	5.5	6.0	7.2	1.2	2.1	2.9
2009	4.3	6.2	10.5	3.6	5.8	7.2	4.8	5.8	7.6	1.2	2.2	1.7
2010	6.0	7.3	10.6	4.2	6.5	6.9	6.5	6.2	7.5	1.0	1.2	2.4
2011	9.8	9.8	9.1	6.2	7.6	6.3	5.2	6.5	7.1	0.7	1.6	1.7



GEM distinguishes between two principal motivations for starting a business: to take advantage of an opportunity (opportunity motivation) and because the founder had no better choices for work (necessity motivation). Figure 3.5 shows that both opportunity-based and necessity-based nascent entrepreneurial activity increased significantly in the UK between 2010 and 2011. The point estimates for opportunity-based nascent entrepreneurial activity in Scotland doubled, but this difference is not quite statistically significant. It also shows that in 2011, necessity-based nascent entrepreneurial activity was significantly higher in the UK than in Scotland. Figure 3.6 shows that new business owner-manager rates did not change significantly between 2010 and 2011, and that there were no significant differences between Scotland and the UK on these measures in either year. In all cases, however, opportunity-based activity is significantly more prevalent than necessity-based activity.

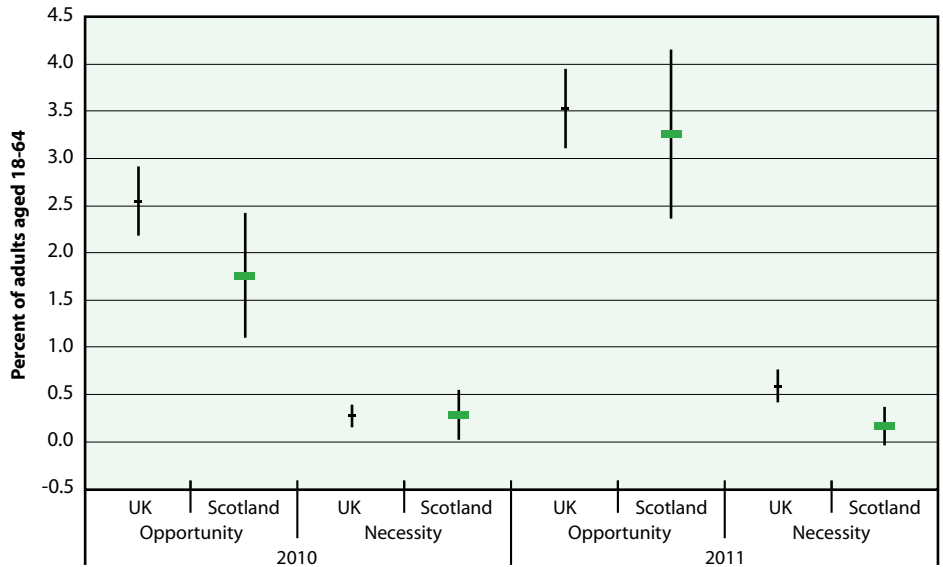
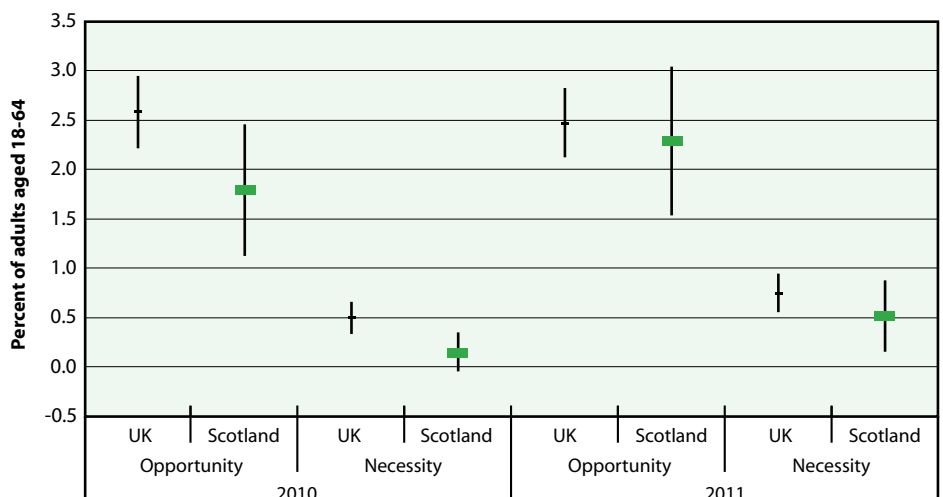


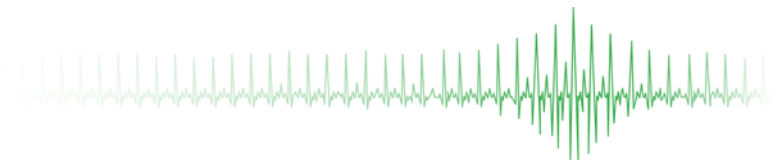
Figure 3.5: Opportunity and necessity nascent entrepreneurship rates in the UK and Scotland, 2010 and 2011, showing 95% confidence intervals

Source: UK GEM 2010 and 2011 surveys

Figure 3.6: Opportunity and necessity new business owner-manager rates in the UK and Scotland, 2010 and 2011, showing 95% confidence intervals

Source: UK GEM 2010 and 2011 surveys





Entrepreneurial Aspirations

Table 3.4 shows estimates of how aspirational Scots early-stage entrepreneurs are compared with their peers in the UK and Arc of Prosperity countries. Equivalent data for three measures of entrepreneurial aspiration are available for six years. On each of these, the measures for Scotland do not appear very different from those of the UK or AOP countries. Although the annual estimate for the percentage of all TEA entrepreneurs whose businesses were in high or medium technology sectors was significantly lower in Scotland than in the UK in 2011, the pattern over the long term does not suggest a persistent difference.

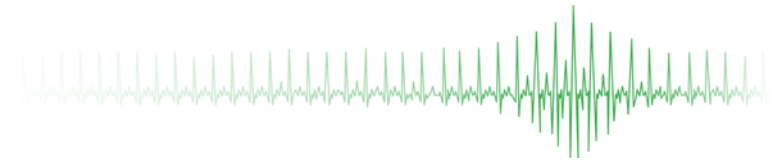
In the GEM 2011 Extended Report, a distinction was made between Solo-Low expectation early-stage entrepreneurial activity (SLEA), defined as the TEA rate for those who expected to employ no more than four people in five years' time, and Medium-High expectation early-stage entrepreneurial activity (MHEA), defined as the TEA rate for those who expected to employ at least five people in five years' time. The pattern since 2002 for the UK and Scotland for these two components of TEA is displayed in Figure 3.7. It shows a slowly increasing trend in SLEA for the UK, but an apparent slow decline for Scotland, which appears to have been arrested in 2011. For MHEA, the long term pattern appears to have been slow decline in both the UK and Scotland with a recovery in 2011.

Table 3.4: Entrepreneurial aspirations in the Scottish, UK and Arc of Prosperity nations adult population samples, 2002 to 2011 (% agree with statement)

Source: GEM UK and Global Surveys

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

Item	High Job Expectation (% of TEA entrepreneurs expect greater than ten jobs and growth > 50% in five years)			New Product Market (% of all TEA entrepreneurs)			High or Medium technology sectors (% of all TEA entrepreneurs)		
	Scot	UK	AOP nations	Scot	UK	AOP nations	Scot	UK	AOP nations
2006	9.1	19.8	16.2	18.0	22.0	23.8	7.4	9.3	9.5
2007	18.0	16.5	16.2	22.9	19.7	24.2	5.3	9.4	9.3
2008	11.2	15.2	19.8	20.0	22.0	25.0	13.7	12.0	10.1
2009	14.4	17.6	18.1	18.9	25.8	35.8	15.0	8.3	3.5
2010	21.2	14.4	17.4	36.1	25.0	33.6	9.1	13.5	7.5
2011	21.8	17.3	18.1	38.0	39.2	35.3	3.0	10.8	8.6
Average 2006 to 2011	16.0	16.8	17.6	25.7	25.6	29.6	8.9	10.6	8.1



Conclusion

Entrepreneurial intention and, possibly, opportunity-driven nascent entrepreneurial activity increased in Scotland in 2011, mirroring increases across the UK, although attitudes remained muted. Since the new business owner-manager rate is a smoothed measure, it is not surprising that at this stage in the economic cycle, we see an increase in intention and nascent entrepreneurial activity but no increase in the new business owner-manager rate. This increase in activity in the earliest stages of the entrepreneurial process could

feed in to actual new business creation rates over the next year or two. Levels of medium to high expectation early-stage entrepreneurial activity in Scotland appear to have increased since 2009.

Like the UK as a whole, fewer than half of the Scottish working age population thought that most people would agree that starting a business is a good career choice, despite the relatively high status afforded to successful entrepreneurs across the UK. We return to this issue in Chapters 6.

- 1 "Arc of Prosperity" is a term used by the Scottish Government to describe five small, high income, independent nations that surround Scotland in an arc from Ireland to the west, Iceland to the North, and Norway, Finland and Denmark to the east.
- 2 According to a Ofcom Survey in early 2011, 15% of households in the UK were mobile-only. Source: Ofcom (August 2011) *The Communications Market in 2011*, Figure 1.76. Available at www.ofcom.org.uk
- 3 The high fluctuation of estimates for Scots aged 18 to 34 between 2003 and 2009 in Figure 3.3 is probably due to small sample size; only approximately half the sample was asked this question in those years.
- 4 Comparison of Scotland with factor-driven or efficiency-driven countries is less useful because their environments are so different.
- 5 Porter, M.E. and Schwab, K. (2008), *The Global Competitiveness Report 2008-2009*, Geneva, Switzerland: World Economic Forum.
- 6 "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 3.4 by vertical bars on either side of each data point. The length of the vertical bars is a function of the sample size, the smaller the sample size, the lower the length. 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.

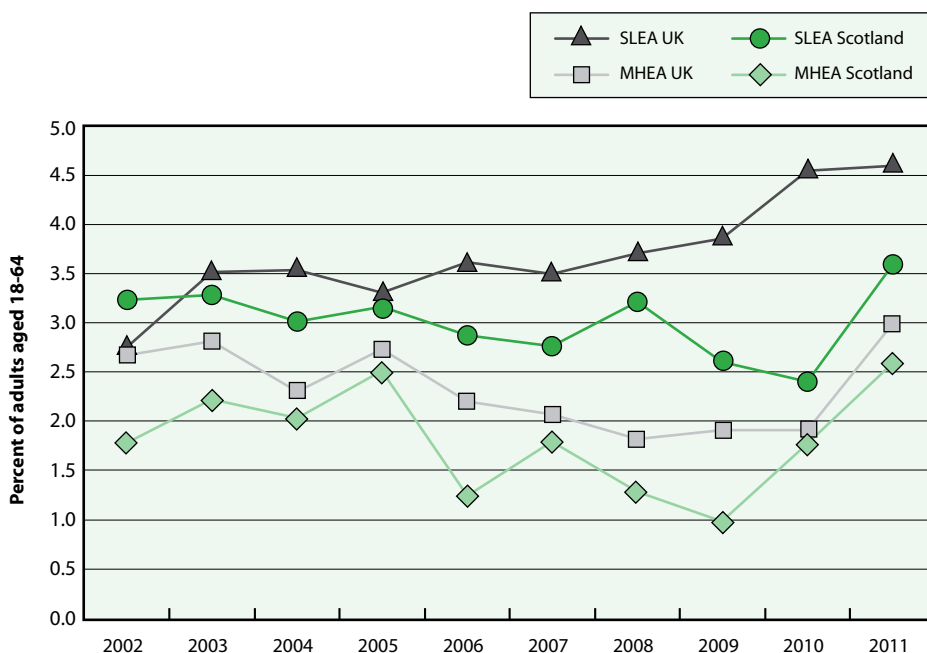


Figure 3.7: Solo-Low expectation TEA rates (SLEA) and Medium-High expectation TEA rates (MHEA) in the UK and Scotland, 2002 to 2011

Source: GEM UK and Global Surveys

This chapter considers entrepreneurial employee activity (EEA), defined as the proportion of employees aged 18-64 who play a leading role in the creation and development of new business activities for the organization in which they work, specifically those involved in developing or launching new goods or services or setting up a new business unit, a new establishment or subsidiary. While GEM has developed a range of measures for this activity, this chapter focuses on the measure which is most analogous to early-stage entrepreneurial activity (TEA): Private Sector Entrepreneurial Employee Activity (PEEA), or the proportion of employees in private for-profit organisations who are currently engaged in leading new business activities for their employer. GEM distinguishes two phases of entrepreneurial employee activity: idea development for a new activity and preparation and implementation

of a new activity. Figure 4.1 shows how these activities relate to the principal GEM measures of entrepreneurial activity.

Table 4.1 lists the TEA rate and PEEA rate for Scotland and all innovation-driven nations that participated in the entrepreneurial employee special topic in 2011. It shows Scotland lying in the third quartile for TEA and the sum of TEA and PEEA, but in the second quartile for PEEA. It lies behind all three participating Arc of Prosperity nations (Denmark, Finland, and Ireland). The US and Australia have high rates of TEA but medium levels of PEEA. Countries with high rates of PEEA, for example Sweden, Finland and Belgium, have medium levels of TEA. The United Kingdom has medium to high levels of both activity measures, while Scotland ranks just below the middle of the table on both scores.

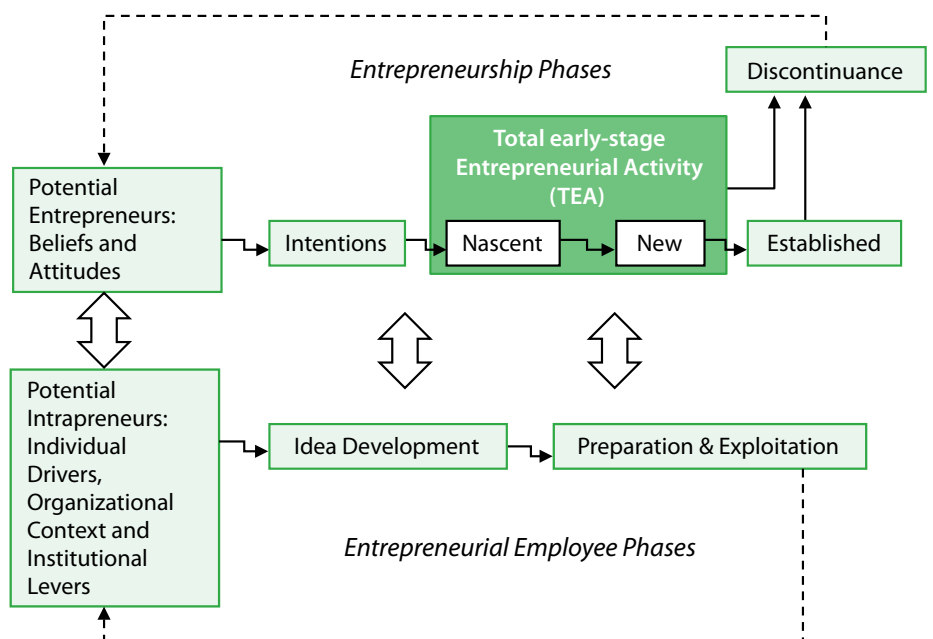
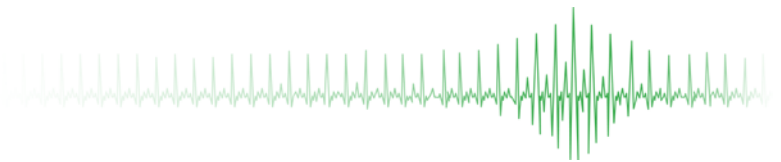


Figure 4.1: Operational Definitions of the Entrepreneurship Process, including Employee Entrepreneurial Activity
 Source: GEM 2011 Extended Report, p.54



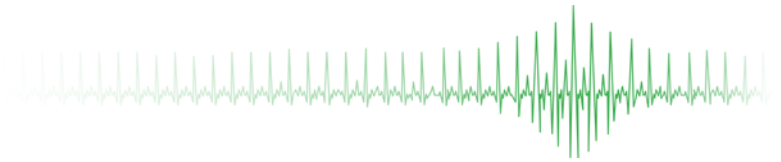
The correlation between TEA and PEEA rates across all 53 participating nations is negative (-.437, N=53, p=.001). This suggests that entrepreneurial activity can be expressed in different ways in different countries. In turn, this may depend on the rewards and disincentives for independent versus employee entrepreneurial activity.

Figure 4.2 (next page) shows a scatter plot of TEA and PEEA rates. It shows three clusters of countries: High PEEA/medium TEA: Belgium, Denmark, Finland and Sweden; High TEA/medium PEEA: the US and Australia, and medium to low TEA and PEEA, in which Scotland is situated. The UK sits almost in the dead centre of the scatterplot. No participating

Table 4.1: TEA and PEEA rates for Scotland and benchmark countries, 2011

Source: GEM 2011 surveys.

SCOTLAND	Total Early-stage Entrepreneurial Activity (TEA)	Private Sector Entrepreneurial Employee Activity (PEEA)	sum of TEA and PEEA rates	% of highest TEA rate	% of highest PEEA rate	% of highest sum of TEA and PEEA
United States	12.3	3.4	15.7	100	53	100
Australia	10.5	3.1	13.6	85	50	87
Sweden	5.8	6.3	12.1	47	100	77
Netherlands	8.2	3.3	11.5	67	52	73
Finland	6.3	4.9	11.2	51	78	71
Belgium	5.7	5.4	11.1	46	85	70
United Kingdom	7.3	3.6	10.9	59	57	69
Czech Republic	7.6	2.6	10.2	62	41	65
Ireland	7.3	3.0	10.2	59	47	65
Taiwan	7.9	1.7	9.6	64	27	61
Portugal	7.5	2.0	9.6	61	32	61
Denmark	4.6	4.8	9.5	38	77	60
Korea Rep.	7.8	1.6	9.5	63	26	60
Scotland	6.2	2.8	9.0	50	44	57
Greece	8.0	1.0	8.9	64	15	57
Singapore	6.6	2.2	8.8	53	34	56
Switzerland	6.6	2.0	8.6	53	32	55
France	5.7	2.4	8.2	46	38	52
Germany	5.6	2.5	8.1	46	40	52
Japan	5.2	2.7	7.9	42	42	50
United Arab Emirates	6.2	1.5	7.7	50	24	49
Spain	5.8	1.6	7.5	47	26	47
Slovenia	3.7	2.7	6.4	30	43	41



innovation-driven country had high rates of both TEA and PEEA, which again supports the idea that alternative forms of entrepreneurial behaviour are expressed under different cultural and regulatory regimes.

Employees were asked if their employers provided support at least to some extent or to a large extent when employees come up with ideas for new goods or services. The results suggest that the Scottish responses (72.5% and 26.4%) were very similar to those for the UK (72.8%, 27.8%), and that these compared favourably with the average for the seven innovation-driven countries in which these questions were asked (66.6%, 25.7%)¹.

Scottish entrepreneurial employees in business have a similar demographic profile to business entrepreneurs. They are more likely to be aged between 35-44, male, well-educated and come

from high income households. Male and female PEEA rates in Scotland in 2001 were 4.7% and 1.0%, compared with the UK average of 5.8% and 1.4%. These differences are proportionally twice as wide as the difference by gender in the TEA rate (8.0% and 4.3% in Scotland and 10.2% and 5.0% in the UK).

Taking a wider measure of employee entrepreneurial activity, there was no significant difference in Scotland in the proportion of male and female employees in Scotland who had engaged in new business activity for their employers in the past three years in the idea generation phase, whether in a leading or supportive role (79% of males versus 71% of females), although the UK difference, with a larger sample, was significant (83% versus 74%)². A significantly higher proportion of male than female employees in Scotland were involved in the preparation and exploitation

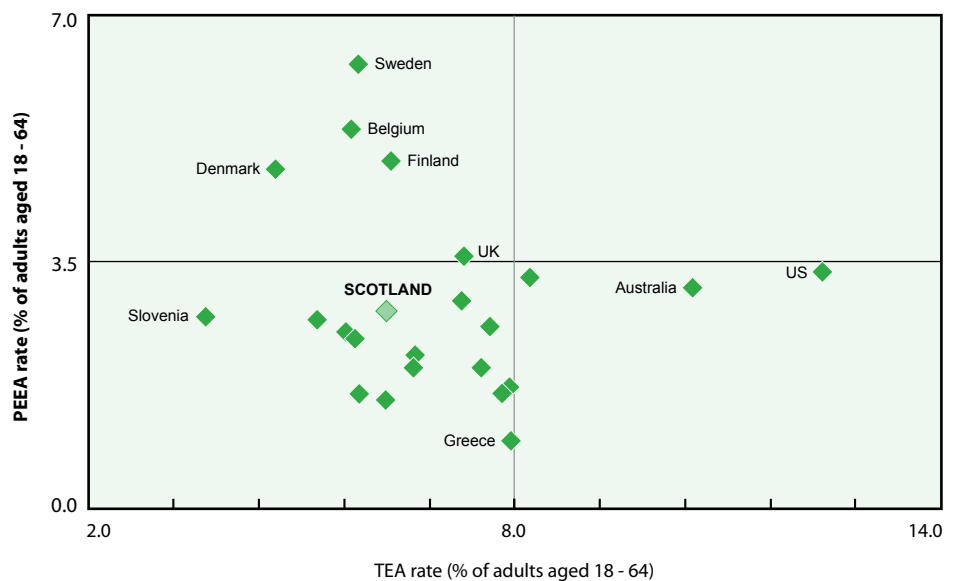
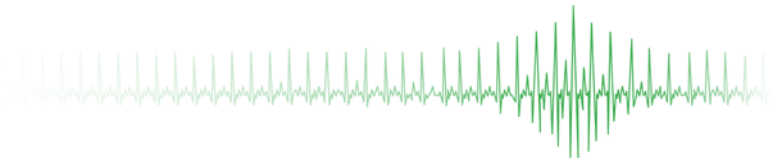


Figure 4.2: Scatter plot of TEA and PEEA rates in 22 innovation-driven sovereign nations and Scotland, 2011
Source: GEM 2011 surveys.



stage (71% compared with 51%³), but this was not true of the UK as a whole (68% and 65%). Figure 4.3 shows that in the UK sample, the propensity that an employee was engaging in entrepreneurial activity for their employer was not affected by the employer's number of employees⁴. In the Scottish sample, however, the propensity that an employee was engaging in entrepreneurial activity for their employer increased with the employment size class of their employer⁵.

The 95% confidence intervals shown in Figure 4.3 suggest a relative lack of employee entrepreneurial activity in smaller Scottish businesses. This does not appear to be because of a lack of support for employee entrepreneurial activity in these smaller businesses. Four out of five (80%) Scottish private for-profit employees in businesses

with less than 30 employees agreed that their employer provided support at least to some extent when employees come up with ideas for new goods or services, compared with 75% across the UK, while 31% in both the UK and Scotland thought their employer did this to a large extent.

In conclusion, Scotland sits in the lower left quadrant of the range of private sector entrepreneurial activity in innovation-driven countries measured by both TEA and PEEA rates, as shown in Figure 4.2. There is potential to increase the employee entrepreneurial activity rate among smaller Scottish businesses in particular. But the problem in Scotland may lie with a relative lack of initiative on the part of employees in small Scottish businesses rather than a lack of support from their employers.

- 1 These countries were Australia, Germany, Greece, Korea, Netherlands, United Kingdom and Slovenia.
- 2 Chi-square (continuity corrected) = 7.895, p=.005, N=680
- 3 Chi-square (continuity corrected) = 4.274, p=.039, N=138
- 4 (Chi-square=7.575, p=.056, N=2408). The proportion of UK private for-profit sector employees in each employment size class was 29%, 22%, 25%, 24%. Proportions were also very similar across employer size classes in England, Wales and Northern Ireland.
- 5 (Chi-square=17.797, p=.000, N=466). The proportion of Scottish private for-profit sector employees in each employment size class was 30%, 23%, 23%, 24%. The average size of employer in the smallest size class was 12 for both Scotland and the UK.

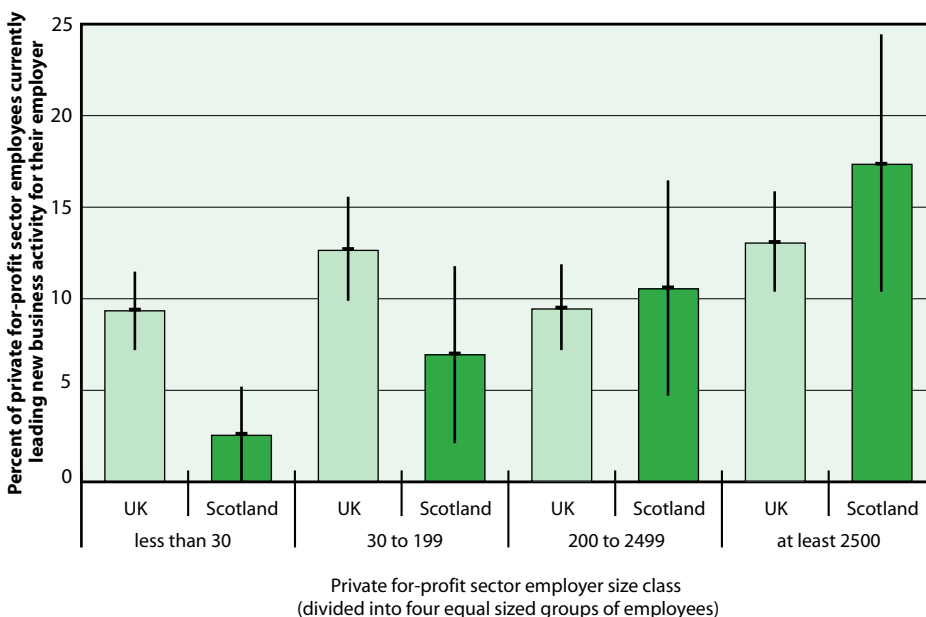
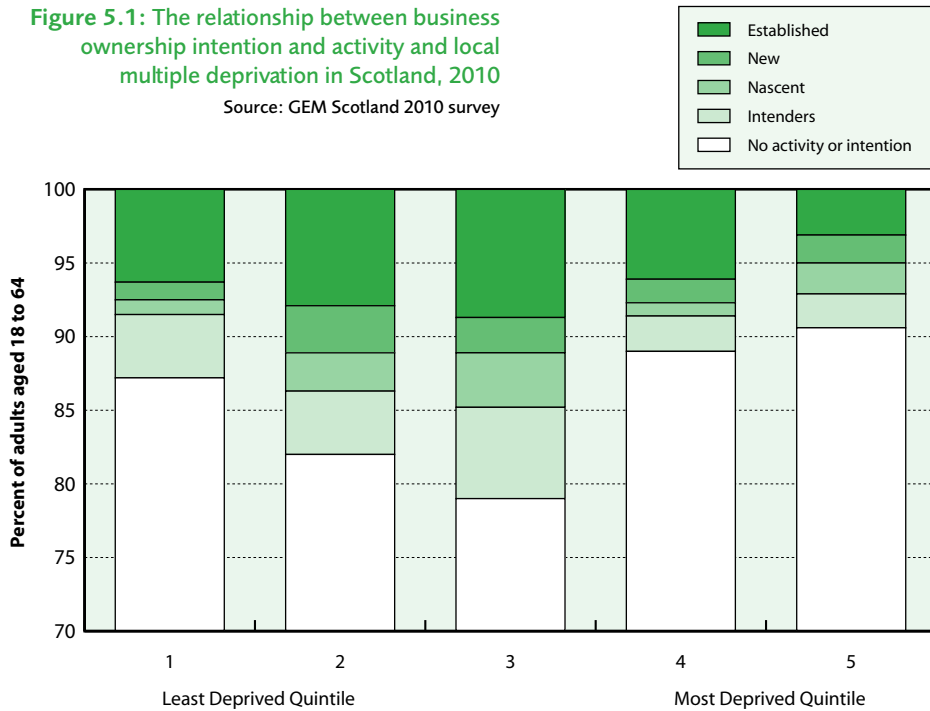


Figure 4.3: Propensity of employees to be currently leading new business activity for their employer by private for-profit sector employer employment size class, in the UK and Scotland, 2011

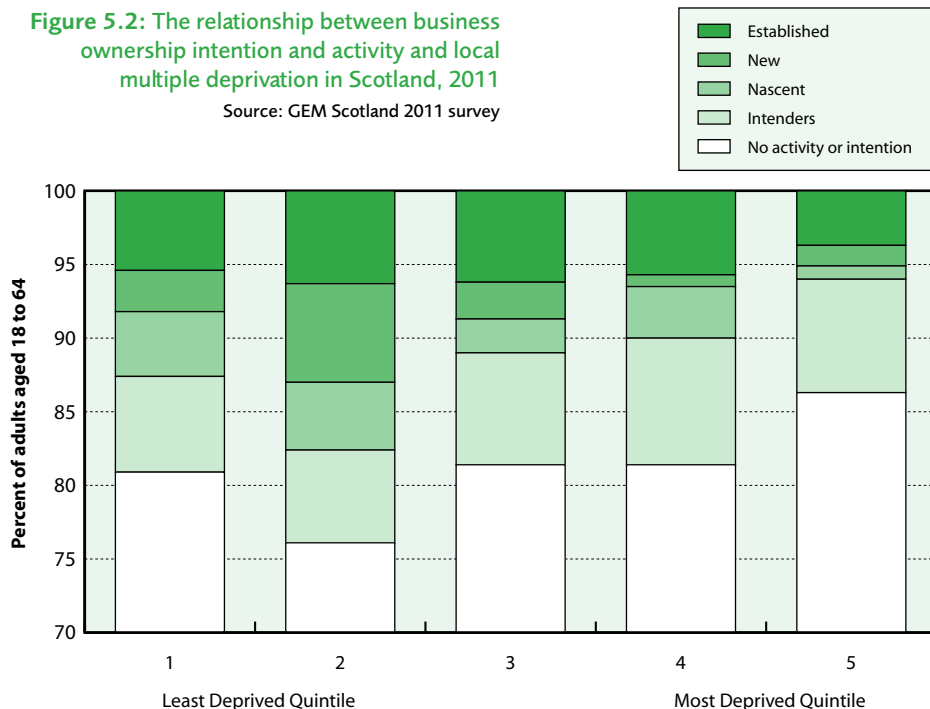
Source: GEM 2011 UK and Scotland surveys.

Figure 5.1: The relationship between business ownership intention and activity and local multiple deprivation in Scotland, 2010
Source: GEM Scotland 2010 survey



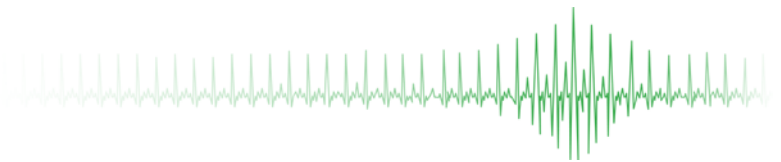
It is well known that Scotland has many communities that suffer from multiple deprivation: poor levels of health, education, income, employment, housing, security, and travel time to key services. Multiple deprivation in Scotland is measured using a wide range of measures of these issues within small localities of around 750 individuals, known as datazones. According to the 2009 Scottish Index of Multiple Deprivation, four of the five Local Authorities with the largest proportion of their datazones in the 15% most deprived category are in the West of Scotland: Glasgow (43.5%), Inverclyde (38.2%), Dundee (30.2%), West Dunbartonshire (26.3%) and North Ayrshire (24.0%)¹.

Figure 5.2: The relationship between business ownership intention and activity and local multiple deprivation in Scotland, 2011
Source: GEM Scotland 2011 survey



In Scotland, more deprived local areas appear to have less nascent, new and established business ownership activity. Figures 5.1 and 5.2 show the patterns for 2010 and 2011, where GEM survey respondents aged 18-64 were allocated to five equally sized groups (quintiles), based on the ranking of the datazone in which they live. In the 2010 sample, the fourth and fifth quintiles had markedly less activity than the second and third. In 2011, entrepreneurial activity decreased from the second to the fifth quartile, although intention rates appeared to be relatively strong in all quintiles.

Figure 5.2 suggests that relatively low levels of new business activity in more deprived local areas are not due to lack of interest: intention rates were high in these areas in the 2011 sample. The issue appears to be translation of intention into action. This interpretation was



supported by a more sophisticated analysis that controlled for the demographic characteristics of individual respondents, including age, gender, education and household income. Using a binary logistic regression, the multiple deprivation variable had no independent effect on intention rates, but a significant effect on early-stage entrepreneurial activity, and in a pattern identical to that in Figure 5.2². In other words, the pattern in Figure 5.2 is not solely due to demographic differences in individuals in these quintiles; the locales they find themselves in have an additional effect.

Some clues as to what may be preventing transition to entrepreneurial activity in the most deprived locales can be gleaned from what non-entrepreneurial individuals in different communities think the barriers are to them starting businesses and what individuals who have started business feel were the biggest difficulties they faced in starting their business. The former is available for 2010 and the latter for 2011. Table 5.1 shows that the biggest significant difference between non-entrepreneurially active individuals (the "no activity or intention" group in Figure 5.2) in 2010 when sorted by local deprivation is the proportion who cite "getting finance for the business". Almost half (49%) of individuals in the most deprived quintile offered this reason compared to only a third of individuals in the less deprived quintiles. This does not appear to be an excuse: "lack of interest" was much more frequently cited in less deprived quintiles. Individuals in less deprived quintiles were also more likely to cite fear of failure. Health issues

Quintile	Least Deprived			Most Deprived		sig.
	1	2	3	4	5	
Getting finance for the business	35.4	30.3	35.4	43.6	48.6	0.00
Lack of interest in starting a business	34.5	32.5	33.2	26.5	22.0	0.01
The chance that the business might fail	10.0	6.8	2.9	6.0	1.7	0.00
Health	2.0	2.0	2.7	4.3	6.0	0.07
Fear of adding to existing debt/not being able to keep up with repayments	0.7	3.1	5.8	3.0	4.7	0.04

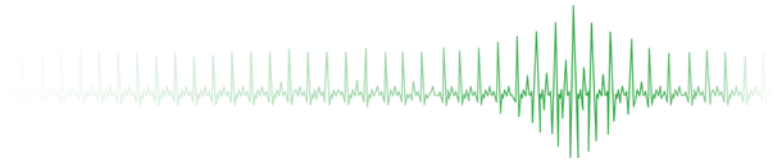
Table 5.1: Reasons given by non-entrepreneurially engaged individuals for not starting a business, by quintiles of multiple deprivation, Scotland, 2010 (N = 1146)

Source: GEM Scotland 2011 survey

Table 5.2: Proportion of respondents aged 18 to 80 who invested in someone else's new business in the past three years, and median amount invested, by three levels of multiple deprivation, Scotland, 2010 and 2011.

Source: GEM Scotland 2010 and 2011 surveys. Note: median amounts are for the unweighted sample. Sample was split in three equal parts by rank order of SIMD.

Multiple Deprivation level	Informal investment rate		Median amount invested in past three years	
	2010	2011	2010	2011
High	1.4%	1.7%	£2,500	£5,000
Medium	1.9%	2.1%	£2,500	£7,000
Low	2.7%	2.2%	£8,500	£10,000
N	1941	1862	33	27



and fear of debt may also be more frequently cited in more deprived areas, although these were much less frequently mentioned.

Access to finance was also the most frequently mentioned difficulty mentioned by business founders in 2011 (as outlined in more detail in Chapter 6). Surprisingly, there were no differences across quintiles in the proportion of entrepreneurially-active individuals who mentioned this as the biggest difficulty they faced in starting their business. This suggests that there are ways of getting finance, even in the most deprived neighbourhoods. There were no significant differences by multiple deprivation in other difficulties mentioned by Scottish business founders in 2011.

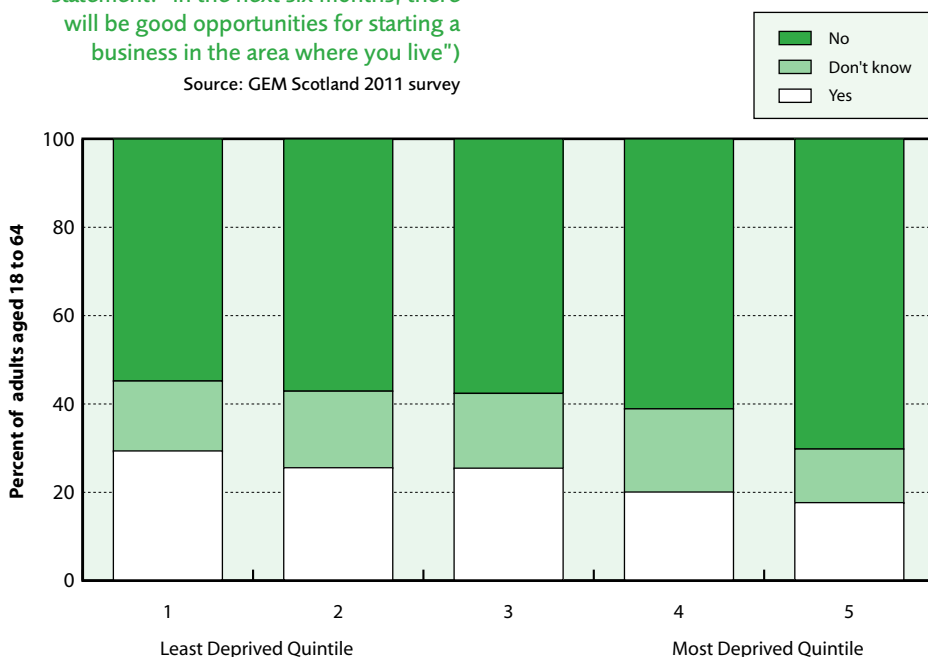
The proportion of individuals aged 18 to 80 who invest in other people's businesses appears to decline with increasing multiple deprivation, and the typical amounts invested also appear to decline, as Table 5.2 (previous page) shows³. Because very few people invest in other people's businesses in Scotland (although the proportion has doubled since before 2009) we need to treat these figures with caution. Nevertheless, the patterns are consistent for both years, and they are what we would expect, reflecting supply of individuals with cash available for investment and demand from local entrepreneurs.

One clear difference between individuals in localities with differing levels of multiple deprivation is their propensity to perceive opportunities. Respondents were asked if they agreed with the statement "in the next six months, there will be good opportunities for starting a business in the area where you live". Figure 5.3 shows that among respondents to the 2011 GEM survey, the proportion of positive responses decreased with increasing multiple deprivation and the proportion of negative responses increased⁴. In contrast, there was no difference by multiple deprivation quintiles in the proportion of respondents who agreed they had the skills, knowledge and experience to start a business, or in the proportion who agreed they would not start a business in case it might fail.

This difference in opportunity perception can also be seen in the rate of opportunity-driven early-stage entrepreneurial activity in the five quintiles, which was 7.1%, 9.8%, 4.1%, 4.1% and 1.9% respectively⁵.

Figure 5.3: The relationship between opportunity perception and local multiple deprivation in Scotland, 2011 (response to statement: "in the next six months, there will be good opportunities for starting a business in the area where you live")

Source: GEM Scotland 2011 survey



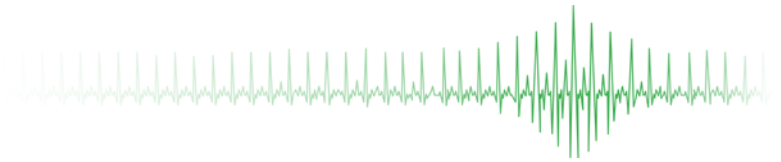


Figure 5.4 shows that there was a strong negative relationship between the proportion of people who agreed with the statement “in my country, you will often see stories in the public media about successful new businesses” and multiple deprivation in Scotland in 2011. This could be due to differences in media reading, viewing and listening patterns of people in these different areas. Using a binary logistic regression, the multiple deprivation variable had an independent, negative effect on propensity to agree with this statement, after controlling for age, gender, household income and education level (which was also a significant predictor)⁶.

Given the lower frequency of business people in their communities, and their lower awareness of successful new businesses via the media, people in deprived communities have less access to positive entrepreneurial role models. Surprisingly, however, there appeared to be no difference in the proportion of people living in areas with different levels of multiple deprivation who had a family business background, either in 2010 or in 2011.

In conclusion, people who live in localities that suffer from multiple deprivation are less likely to engage in business creation and ownership, and this difference holds after controlling for their personal background. Local geography matters. Living in a deprived community reduces the likelihood that one will see opportunities to start a business, external influences such as the media appear to have less impact, and start-up finance is harder to

come by. Despite this, intention rates and skills perception were strong in these areas in 2011. Bank finance is likely to be particularly hard to obtain in these areas, and entrepreneurs cannot tap family and friends for start-up funds as easily as in less deprived areas. New financial instruments and institutions may be needed if people living in deprived areas are to fulfil their intentions and potential.

- 1 www.scotland.gov.uk/Topics/Statistics/SIMD
- 2 Details of the results of this regression analysis are available on request.
- 3 Although the informal investment rates for 2010 and 2011 across levels of multiple deprivation are not statistically different, this may be because of the very low rate of informal investment in Scotland overall. The difference appears to be substantial in 2010, with a consistent pattern in a similar direction for 2011. Sign tests for investors' stated amounts invested in the past three years and their SIMD2009 score were significant for 2010 ($z=-5.570$, $p=.000$) and 2011 ($z=-5.004$, $p=.000$).
- 4 The proportions were significantly different across the quintiles (Chi-square = 22.265, $df=8$, $p=.004$).
- 5 The proportions were significantly different across the quintiles (Chi-square = 21.274, $df=4$, $p=.000$).
- 6 Details of the results of this regression analysis are available on request.

Figure 5.4: Responses to statement “in my country, you will often see stories in the public media about successful new businesses” by multiple deprivation quintiles, Scotland, 2011

Source: GEM Scotland 2011 survey



Challenges

Between 2004 and 2010, GEM UK asked non-entrepreneurially-active individuals what their biggest barriers were to starting a business or becoming self-employed. In the 2010 GEM Scotland report, their answers were analysed with particular focus on young people. In the 2011 survey, business founders and nascent entrepreneurs were asked to state the biggest difficulties they faced in starting their business. Table 6.1 lists the barriers cited by non-entrepreneurs while Table 6.2 lists the difficulties mentioned by entrepreneurs. The order and frequency of answers in Tables 6.1 and 6.2 reveal the differences between imagined and

real barriers to starting a business in Scotland.

It is striking that around half of both non-entrepreneurs and entrepreneurs in the UK and Scotland mentioned 'getting finance' as one of their biggest barriers/difficulties. This issue was mentioned about twice as often as the next most frequently mentioned barrier or difficulty.

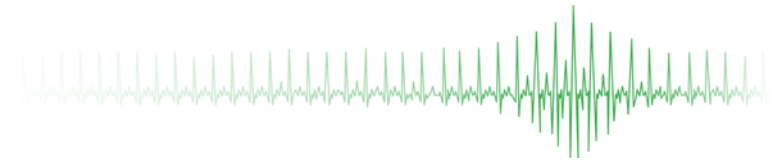
The order of the remaining issues is completely different in Scotland and the UK. Lack of interest was the second biggest barrier among non-entrepreneurially active Scots, followed by concerns over job security and debt. By contrast, the second and third most frequently mentioned

Biggest barriers to starting a business or becoming self-employed, as perceived by non-entrepreneurially active respondents aged 18-64	UK	Scotland
Getting finance for the business (2005 to 2010)	50.6	50.1
Lack of interest in starting a business (2004 to 2010)	16.6	19.0
Loss of security/income from current job (2008 to 2010)	13.8	14.5
Fear of debt/loss of security/income (2005 to 2007)	16.0	13.3
Lack of skills/knowledge (2004 to 2010)	12.7	12.4
Age (2004 to 2010)	9.0	9.7
Not having an idea for a business (2004 to 2010)	9.8	9.6
The time commitment it would require (2004 to 2010)	10.5	9.5
The economic climate at the moment (2010 only)	6.4	8.6
The chance that the business might fail (2004 to 2010)	7.6	7.3
Fear of debt (2008 to 2010)	4.0	4.5
The complexity of regulations (2004 to 2010)	2.9	2.5
The economic climate at the moment (2005 to 2010)	1.7	2.3

Table 6.1: The biggest barriers cited by non-entrepreneurial working age adults to them starting a business or becoming self-employed, by frequency of mention in Scotland, for the UK and Scotland, 2004 to 2010

Source: GEM UK and Scotland 2004 to 2010 surveys.

Note: Statistically significant differences are shown in bold.



difficulties of entrepreneurs in Scotland were 'getting staff' followed by 'lack of skills or knowledge in starting and running a business'. It is striking that the order of the second and third most frequently mentioned difficulties are reversed in the UK. Across the UK, just 6% of founders or nascent entrepreneurs mentioned getting staff as one of their biggest difficulties, compared with one in four of Scots. Getting staff seems to be an even bigger problem for Scots entrepreneurs than lack of skills or knowledge; they were half as likely to mention not knowing how to start or run a business as one of their biggest difficulties. These differences are statistically significant.

Scotland has a relatively high density central belt with very rural regions to the north and south. A check was conducted to see if this difference in finding staff might be mainly due to rural isolation. No such pattern was found. In both Scotland and the UK, entrepreneurs seemed as likely to cite staff difficulties in urban as in rural areas.

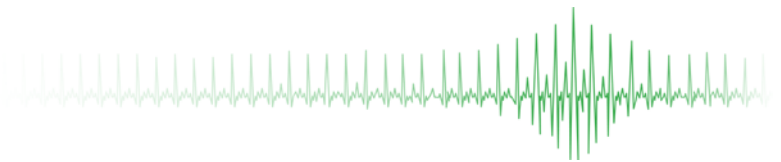
Other difficulties mentioned by more than 10% of entrepreneurs which were infrequently mentioned by non-entrepreneurially-active individuals included the complexity of regulations and getting customers.

Biggest difficulties faced by founders and nascent entrepreneurs in starting a business or becoming self-employed, 2011, aged 18-64	UK	Scotland
Getting finance for the business	46.0	43.2
Getting staff	6.3	24.7
Not knowing how to start and run a business	28.0	14.1
The complexity of regulations	15.8	12.5
Getting customers	8.4	12.0
The economic climate at the moment	9.6	8.7
The time commitment//managing family/ caring commitments	7.7	5.8
Not having an idea for a business	3.2	3.9
Loss of security/income from current job	4.1	1.6
The chance that the business might fail	4.4	1.6
Fear of debt/not being able to keep up with repayments	6.3	1.1
Health	1.5	0.9
Age	0.3	0.6
Lack of interest in starting a business	2.1	0.4

Table 6.2: The biggest difficulties faced by founders and nascent entrepreneurs in starting a business or becoming self-employed, by frequency of mention in Scotland, in the UK and Scotland, 2011

Source: GEM UK and Scotland 2011 surveys.

Note: Statistically significant differences are shown in bold.



Rewards

In 2011, a sub-sample of 2000 GEM respondents, representing a random sample of the UK adult population, were asked a series of additional questions on behalf of the European Commission DG Employment, Social Affairs & Inclusion. Those in the sample who were employed or self-employed were asked about their working conditions and work quality. While the sample size for Scotland is small (only

106 respondents compared with 1210 across the UK aged 18-64), Tables 6.3 and 6.4 show that the Scottish results are even stronger than the larger UK sample. In summary, in Scotland, the self-employed were significantly more likely to agree strongly with statements that capture different dimensions of self-empowerment and satisfaction with both their work and work income. In the UK, only the differences in self-empowerment were statistically significant.

Table 6.3: Percentage of employees or self-employed in the UK who strongly agree with statements about their working conditions and are very satisfied with their current work or work income, 2011

Source: GEM UK 2011 survey sub-sample for European Commission (N=1210)

Percentage agreeing strongly versus all other opinions	Full time employee	Part time employee	Self-employed	sig.
I can decide on my own how I go about doing my work	40.2	32.4	74.0	0.000
The work I do is meaningful to me	65.7	56.4	74.3	0.001
At my work, I am not exposed to excessive stress	16.4	25.9	33.3	0.000
Percentage very satisfied versus all other opinions				
Overall, how satisfied are you with your current work?	34.2	34.1	39.0	0.478
Overall, how satisfied are you with your current work income?	13.0	11.9	16.6	0.378

Table 6.4: Percentage of employees or self-employed in Scotland who strongly agree with statements about their working conditions and are very satisfied with their current work or work income, 2011

Source: GEM Scotland 2011 survey

Percentage agreeing strongly versus all other opinions	Full time employee	Part time employee	Self-employed	sig.
I can decide on my own how I go about doing my work	46.3	26.8	87.1	0.001
The work I do is meaningful to me	67.0	49.3	87.1	0.048
At my work, I am not exposed to excessive stress	13.0	33.0	44.7	0.007
Percentage very satisfied versus all other opinions				
Overall, how satisfied are you with your current work?	30.8	32.1	68.5	0.022
Overall, how satisfied are you with your current work income?	13.9	10.9	46.0	0.008

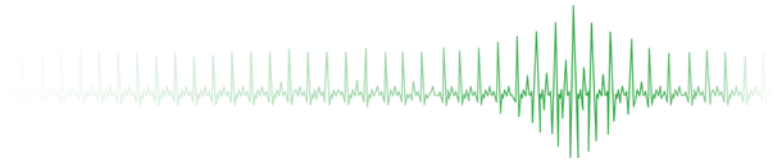


Figure 6.1 shows that in Scotland and across the UK, owner-managers are more likely than employees to live in households with relatively high household incomes – in excess of £50,000. While this association does not prove that business owner-managers earn more on average than employees, it does suggest that business owner-managers are more likely to be materially better off than employees. Taken together, these results do not support the idea that the self-employed are worse off than if they were working

for someone else. In fact, the opposite appears to be the case. Business creators in Scotland obtain greater self-empowerment and work satisfaction, and experience greater material wealth, than employees. As Chapter 3 showed, people who are successful in business also have high status in Scottish society. It is difficult to square all these advantages of self-employment with the finding that less than half of Scots think that most people would agree that starting a business is a good career choice.

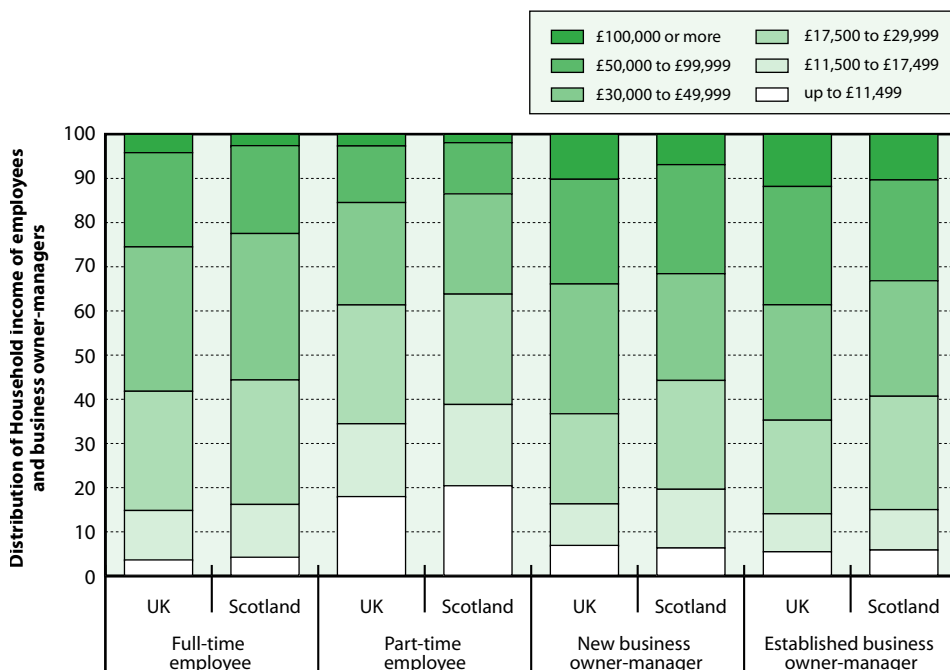


Figure 6.1: Distribution of household income of full-time and part-time employees and new and established business owner-managers across six income bands, 2002–2011

Source: pooled 2002 to 2011 GEM UK and Scotland database. UK N = 125,524; Scotland N = 10583



Scottish Entrepreneurship Policy and Programmes Review 2011

7

In February, the Scottish Parliament's Economy, Energy and Tourism Committee's "Fundamental review of the purpose of an enterprise agency and the success of recent reforms" presented its final report, but did not recommend major changes.

In June, following the release of the GEM Scotland 2010 report, The Saltire Foundation, Prince's Scottish Youth Business Trust, The Entrepreneurial Exchange, Scottish Institute for Enterprise, and Young Enterprise Scotland wrote an open letter calling on the Scottish Government to "facilitate a joined-up business-led National Entrepreneurial Action Plan"¹. In a response to a First Minister's question on 16 June, the First Minister replied "There were some good ideas in the suggestions that were made by the business organisations and we will certainly be giving them the closest examination"². Following this, consultations were held with a number of business organisations and the Welsh Assembly Government was contacted to find out more about their policies on youth enterprise.

In July, a £3 million Just Enterprise programme was launched with the aim of delivering a wide range of business support to social entrepreneurs and third sector organisations across Scotland. A further £4 million pounds (increased in December by a further £2 million) was to be provided through the Enterprise Growth Fund. This would see grants of between £25,000 and £200,000 awarded to enterprising third sector organisations with the

most sustainable and ambitious business plans from 2012. These new programmes were to be administered by social enterprises which were selected through a public tender process.

In response to concerns about the future of Determined to Succeed (DtS), the Scottish Government's enterprise education programme, a statement from the Scottish Government was quoted in September as stating that, while from April 2011 the DtS budget was no longer ring-fenced, the "expectation" was "that DtS will continue to be implemented as a key part of Curriculum for Excellence."³

In September, the Scottish Government released an updated National Economic Strategy. One of the aims of the Strategy was to "foster a self-sustaining and ambitious climate of entrepreneurialism, international trade and innovation."⁴ The document reiterated the focus of the national enterprise agencies on assisting growth-oriented companies, and a focus of local authorities on "delivering effective local business support and regeneration."⁵

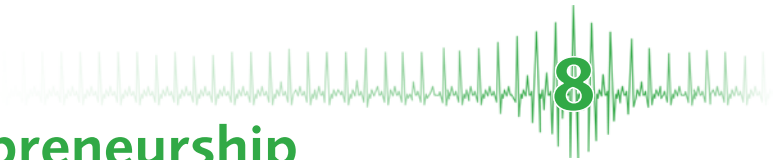
Reporting by local authorities of business creation activities in their area through their Single Outcome Agreement Annual Reports continued to be hampered by lack of timely official statistics. Some local authorities tackled this by reporting a wide range of unofficial statistics, creating a confused picture in which some measures showed increases and others showed declines in activity.

The Scottish Investment Bank (SIB), a rebadged group of funding schemes run by Scottish Enterprise, launched its first new initiative, the Scottish Loan Fund, in February 2011 with a public sector commitment of £55 million, and managed by independent fund managers, Maven Capital Partners. In March, Clydesdale Bank, Lloyds, RBS, Santander and other investors announced they would invest a further £40 million in the Scottish Loan Fund. In 2010/11, the SIB invested £23 million in 109 Scottish companies and leveraged £53.7 million of private sector investment, compared with £32 million in 115 deals which leveraged a further £68 million of private seed capital into these companies in 2009/10⁶.

- 1 www.scotsman.com, published 10 June 2011
- 2 www.scottish.parliament.uk/parliamentary-business/28862.aspx?r=6313&i=57535
- 3 www.business7.co.uk/insider-magazine/latest-news/2011/09/05/entrepreneurship-is-fear-of-failure-holding-entrepreneurs-back-from-taking-the-plunge-106408-23397283/
- 4 www.scotland.gov.uk/Resource/Doc/357756/0120893.pdf p.12
- 5 *Ibid* p. 44
- 6 www.scottish-enterprise.com/about-us/how-we-work/accountability/annual-review/investments-annual-review.aspx



GEM and Entrepreneurship Policy in Scotland



There are rays of hope in the 2011 GEM data: entrepreneurial intention rates are up and attitudes generally are more in line with benchmark nations. Scotland has moved from the fourth to the third quartile of innovation-driven nations participating in GEM in terms of early-stage entrepreneurial activity. The long slow decline in low ambition, self-employment-type start-up rates and more ambitious start-up rates appears to have been arrested, if not reversed, in 2011. Scotland's entrepreneurship profile looks much more like that of the UK as a whole than it has done for several years.

Yet when we delve behind the numbers, there are still issues that set Scotland apart. Chapter 4, for example, revealed a stark deficit in employee entrepreneurial activity – that is, new business activity being carried out by employees for their employer – in small Scottish businesses in comparison with the UK as a whole. And lack of initiative on the part of Scottish employees rather than lack of support from their employers seems to be the cause. Business Enterprise R&D expenditure (BERD) in Scotland is low. According to the Office for National Statistics, BERD expenditure was 0.52 per cent of Scottish GDP in 2010, compared to 1.09 per cent for the UK and 1.16 per cent for the EU¹. Relative to GDP, BERD in Scotland has fallen in the last ten years faster than the fall across the UK. There are many schemes in Scotland to encourage innovation among employers – and indeed this is a pillar of the Scottish Government's National Economic Strategy. But how does the State encourage employees to demonstrate initiative?

This issue can be linked to the difficulties faced by Scottish entrepreneurs in starting their businesses, as reported in Chapter 6. Entrepreneurs in Scotland were four times as likely to mention 'getting staff' as a difficulty than entrepreneurs across the UK, while non-entrepreneurially active Scots were significantly more likely to cite 'lack of interest' as a barrier to them starting a business. These issues mirror concerns about the quality of human capital in Scotland raised recently by employers and researchers in Scotland.²

The Scottish Government is committed to raising the quality of human capital in Scotland. Examples include the Curriculum for Excellence and the Opportunities for All initiative to ensure that every 16-19 year old not already in work, education or training is offered a learning or training opportunity. The National Economic Strategy, refreshed in 2011, included a commitment to support a record 125,000 Modern Apprenticeships over the next five years. The findings of this GEM survey demonstrate the need for these radical measures, and for assessment of their effects.

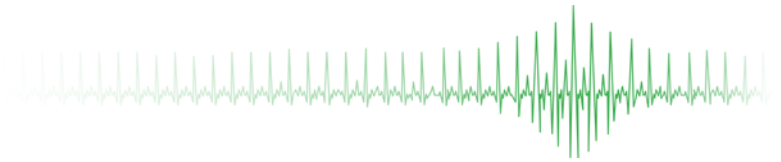
Chapter 5 demonstrated the waste of entrepreneurial potential in Scotland's most deprived communities, where lack of access to funding and a dearth of opportunities locally act as barriers to business creation. More creative ways are needed to provide entrepreneurial people in these communities with the breaks they need to successfully start. Some support models, such as PSYBT (now the Prince's Trust Youth Business Scotland) would be ideally

suitable to the needs of potential entrepreneurs in these communities, but considerable promotion activity in these communities, using communication channels used and respected by these communities, would be needed to get the message across.

Other new models to address the finance gap, such as crowd-funding platforms, are likely to develop through individual initiative, and while the Scottish Government's new initiatives to mentor and fund growth-oriented social enterprises may help scale up new initiatives in this field, experienced entrepreneurs may play their part too, through provision of their human, physical and financial resources. Recessions tend to be times when new business models are invented out of local necessity and then turn out to have global application, and crowd-funding is a modern example of this. Given the success of the Scottish Co-investment Fund in leveraging Business Angel funds, it may be time to ask how this might be extended to appropriate Scottish-based crowd-funding platforms.

1 www.scotland.gov.uk/News/Releases/2012/03/gerd2010

2 See for example www.scottish-enterprise.com/~media/SE/Resources/Documents/GHI/High-growth-firms-in-scotland.ashx or www.telegraph.co.uk/news/politics/9283188/Jim-McColl-One-in-five-school-leavers-not-ready-for-work.html



Appendix 1

In the GEM 2008 Executive Report¹, the tenth in the series, a revised GEM model was presented. This model incorporated what has been learnt about entrepreneurial activity in the past ten years, and also what has been learnt about the economics of development and where entrepreneurship and innovation contribute to economic development. In particular, GEM adopted the World Economic Forum typology of "factor-driven economies", "efficiency-driven economies", and "innovation-driven economies"².

The revised model recognises that the nature and contribution of entrepreneurship may vary across countries with different levels of economic development. The model suggests

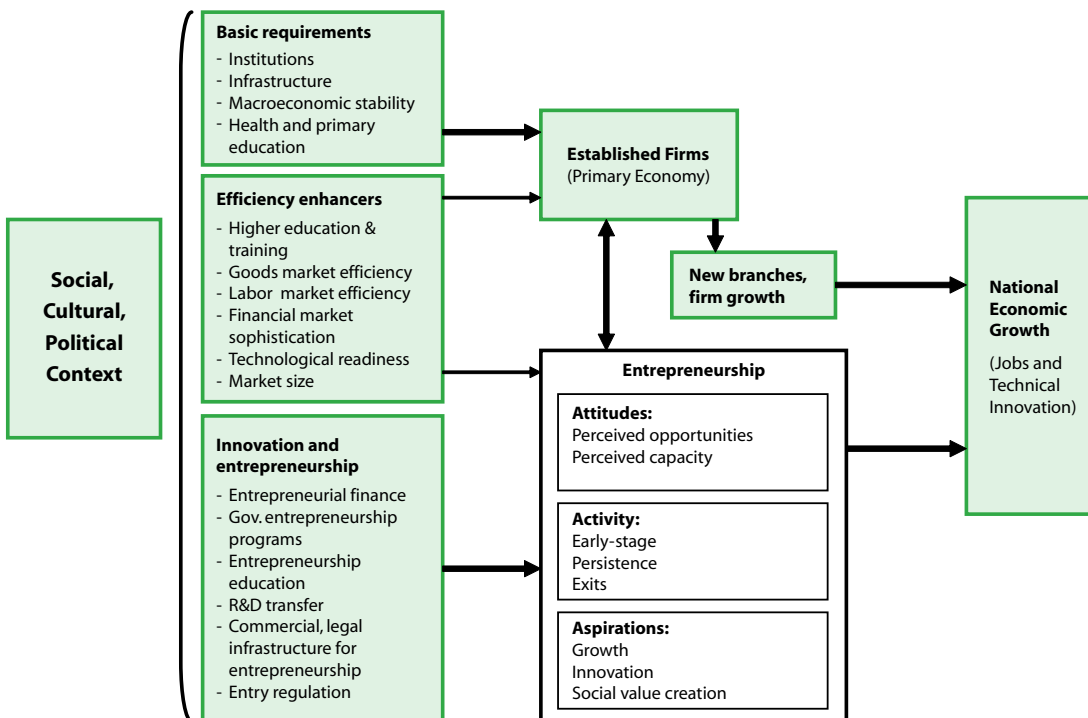
a comparative study of entrepreneurship of an economy such as Scotland should focus on other innovation-driven economies rather than factor - or efficiency-driven economies.

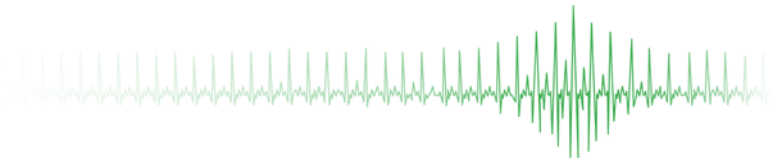
The second major adjustment to the GEM model is the recognition that entrepreneurship is multi-faceted, and is not captured by one measure but by many. This is represented in the diagram by the Entrepreneurship box which has three main components: attitudes, activity and aspirations. Given the right institutional context (as represented by the left hand side of the diagram), entrepreneurial attitudes, activity and aspiration interact to contribute to national economic growth through the provision of new economic activity. This is important because

it suggests that a narrow focus on measuring the number of business start-ups alone may miss the important impact that attitudes and aspirations, as well as institutions, may have on the effect of entrepreneurship in a nation on national economic growth.

1 Bosma, N., Acs, Z.J., Autio, E., Coduras, A., and Levie, J. (2009). *Global Entrepreneurship Monitor 2008 Executive Report*. London: GERA. Available at www.gemconsortium.org

2 Phases of economic development are decided on the level of GDP per capita and the extent to which countries are factor-driven in terms of the shares of exports of primary goods in total exports. See Porter, M.E. and Schwab, K. (2008), *The Global Competitiveness Report 2008-2009*, Geneva, Switzerland: World Economic Forum.





Appendix 2

Index of Special Topics covered in GEM Scotland reports, 2000 to 2011

Topic	Years covered
Young Entrepreneurs/Entrepreneurship and Age	2000, 2006, 2010
Financing Entrepreneurship	2000, 2003, 2004, 2010
Female Entrepreneurship/Women in Enterprise	2001, 2004
Entrepreneurship and Education/Entrepreneurship Training	2001, 2005, 2007/8
Location of Entrepreneurship	2001, 2004, 2007/8
High Potential/High Expectation Entrepreneurship	2002, 2005
Ethnic and Immigrant Entrepreneurship	2002
Country comparison: Scotland and Ireland	2002
Social Entrepreneurship	2003, 2005
University Spinouts	2003
Corporate Entrepreneurship/Employee Entrepreneurial Activity	2006, 2011
Business Closure	2006
Home-based Business	2007/8
Family Business and Entrepreneurship	2009
Motivation of Entrepreneurs	2009
Entrepreneurship in a Recession	2009
Repeat Entrepreneurs	2010
Entrepreneurship and Multiple Deprivation	2011
Start-up Challenges and Rewards	2011

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www.strath.ac.uk/huntercentre/research/gem/ or www.gemconsortium.org

