Global Entrepreneurship Monitor

United Kingdom 2015 Monitoring Report

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Disclaimer

This report is based on data collected by the GEM consortium and the GEM UK team; responsibility for analysis and interpretation of the data is the sole responsibility of the authors.

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Executive Summary

Background

In 2015, the Global Entrepreneurship Monitor (GEM) research consortium tracked rates of entrepreneurship across multiple phases in 62 economies, making it the world's most authoritative comparative study of entrepreneurial activity in the general adult population. In the UK in 2015, 9,405 adults aged 18 to 80 participated in the GEM survey.

This monitoring report for the UK compares GEM measures of entrepreneurial attitudes, activity and aspirations in the UK, Germany and the United States. It also compares the results for the four home nations of the UK.

Entrepreneurial Activity

Total early-stage Entrepreneurial Activity or TEA (the sum of the nascent entrepreneurship rate and the new business owner-manager rate - without double counting) in the UK in 2015 was 7.1%[1].

The 2015 UK TEA rate was significantly lower than 2014, but remains higher than the historical trend to 2010, which was very stable at close to 6%.

The TEA rate of 7.1% in the UK compares favourably to Germany (4.7%) but lags behind that of the US (11.9%); the gap with the US due largely to differences in the nascent entrepreneurship rate rather than the new business owner rate.

The distribution of TEA rates in 2015 was similar across the home nations: England at 7.2%, Wales at 6.8%, Scotland at 6.7% and Northern Ireland at 5.4%; there were no statistically significant changes in these rates since 2014.

Three-quarters of those involved in early-stage entrepreneurial activity were opportunity-motivated. The opportunity TEA rate was down significantly from 7.0% in 2014 to 5.3% in 2015. The necessity rate remained virtually unchanged since 2014 at 1.6%.

Employees can also be engaged in entrepreneurial activity on behalf of their employers and this is measured through the Entrepreneurial Employee Activity (EEA) Rate. In 2015 the UK's rate was 3.3%, which was significantly higher than in 2014 (2.1%). Considering both TEA and EEA together provides a more comprehensive picture of entrepreneurial activity in a nation.

Entrepreneurial Activity Types

In total 1 in 5 individuals of working age in the UK were engaged in some type of entrepreneurial activity or intended to start a business within the next three years. This is unchanged from 2014 and again, higher than the historical trend.

9.6% of working age adults expected to start a business within the next 3 years; similar to that observed in Germany (9.2%) but lower than that in the US (17.1%).

4.0% of the adult population in the UK were actively trying to start a business (*nascent entrepreneurs*), compared with 2.8% in Germany and 8.3% in the US. The UK rate in 2015 was significantly lower than in 2014.

3.1% of the working age adult population were owner-managers of a business that was 3 to 42 months old (*new business owner-managers*). This was significantly lower than 2014 but similar to the US rate of 4.0% and significantly higher than the German rate of 1.9%.

5.2% of the adult population owned and managed a business older than 42 months (*established business owner-managers*). This was unchanged from 2014, and lay between the rates for Germany (4.8%) and the US (7.3%).

1.5% of working age people in the UK discontinued a business (either through closure or sale) in the past 12 months. Discontinuations of businesses in the US (2.2%) and Germany (1.3%) were also similar.

Demographics

In 2015, the male TEA rate fell significantly (from 11.5% in 2014 to 9.5% in 2015) whilst the female TEA rate also dropped but not significantly so (5.7% in 2014 and 4.7% in 2015).

In the UK those in the age groups ranging from 25-44 have significantly higher TEA rates than the youngest (18-24) age group.

Immigrants, and returning migrants, continue to be more entrepreneurial than the resident population. In 2015 the TEA rate for immigrants was 15.4%, and that for returning migrants 10.5%, both significantly higher than that for regional in-migrants who had never left the UK (6.1%), and the life-long resident population (5.3%).

Immigrants and returnee migrants are also engaged in more opportunity entrepreneurship than the resident population; there is no difference in the necessity rates.

Attitudes and Aspirations

Attitudes of non-entrepreneurial individuals to entrepreneurship remained relatively upbeat in 2015. Opportunity perception among non-entrepreneurial males was at its highest since 2002 (42.4%), with the female rate also amongst its highest level (33.2%).

Fear of failure has continued to drop for males (down by 1.7 percentage points on 2014 to 36.8%), whilst the female rate has remained slightly above its pre-recession level at 42.6%.

Around 1 in 6 UK early-stage entrepreneurs have high job expectations, fewer than in the US at 1 in 4.The rate of established business owners with high job expectations is lower; just 6% in the UK, a similar rate to the US.

1 This differs slightly from the TEA rate reported in the 2015 GEM Global Report (6.9%) because the Global report does not weight for ethnicity.

1 INTRODUCTION

1.1 SCOPE OF REPORT

This report compares Global Entrepreneurship Monitor (GEM) measures of entrepreneurial attitudes, activity and aspiration in the UK to Germany and the United States (US)[2]. It also summarises entrepreneurial attitudes, activity and aspiration across the four nations of the UK and reports on changes in business start-up funding expectations throughout the business cycle.

1.2 GEM: HISTORY, PURPOSE AND MEASURES

The Global Entrepreneurship Monitor (GEM) research consortium has been measuring entrepreneurial activity of working age adults across a wide range of countries in a comparable way since 1998. In 2015, the study conducted surveys in 60 sovereign nations[3] and represented the world's most authoritative comparative study of entrepreneurial activity in the general adult population.

GEM's primary focus is on the study of three areas:

- To measure differences in the level of entrepreneurial activity between countries
- To uncover factors leading to appropriate levels of entrepreneurship
- To suggest policies that may enhance the national level of entrepreneurial activity.

The 2015 GEM global study was based on an analysis of adult population survey (APS) results from 60 economies and more than 198,000 adults across the world. The core of the APS is identical in each country and asks respondents about their *attitudes* towards entrepreneurship, if they are involved in some form of entrepreneurial activity, and if so what their aspirations for their business are. The global GEM Executive 2015 Report was published in February 2016[4] and can be downloaded from www.gemconsortium.org.

From the APS survey, we examine individual entrepreneurs at three key stages:

- Nascent entrepreneurs (NAE): The stage at which individuals begin to commit resources, such as time or money, to starting a business. To qualify as a nascent entrepreneur, the business must not have been paying wages for more than three months.
- New business owner-managers (NBO): Those whose business has been paying income, such as salaries or drawings, for more than three, but not more than forty-two, months.
- Established business owner-managers (EBO): Those whose business has been paying income, such as salaries or drawings, for more than forty-two months.

In addition, we measure general intention to start a business by asking individuals if they expect to start a business within the next three years (FUT). Finally, we ask individuals if they have sold, shut down, discontinued or quit a business, in the past year (BC). It is important to understand that the main subject of study in GEM is entrepreneurs rather than

2 France is also normally considered as a comparator country however the French team did not take part in the APS in 2015.

3 Although 62 countries participated in GEM in 2015 survey results were available for just 60.

4 Kelley, D., Singer, S., and Herrington, M (2016) Global Entrepreneurship Monitor 2015/16 Global Report. London: Global Entrepreneurship Research Association.

the businesses that they run. GEM measures the entrepreneurial activity of people from intention to exit. The first two stages of active business development, the nascent entrepreneur stage and the new business owner-manager stage, are combined into one index of Total early-stage Entrepreneurial Activity, or TEA[5], which is represented in Figure 1 below.

As much of this entrepreneurial activity is pre-start-up or includes very small new businesses that do not have to register for VAT, TEA rates will not necessarily match with published official statistics on business ownership and, indeed, should not be interpreted as such. Rather, GEM enables the measurement of the *propensity* of individuals in particular countries to be entrepreneurial *given* the current social, cultural and economic framework conditions that exist there.

The methodology, sample sizes and weighting systems used for the GEM UK 2015 adult population survey are explained in more detail in Appendix 1. An important change in the sample design was introduced in 2010 when 10% of respondents in each Government Office Region (GOR) were selected at random from households which had mobile phones but not fixed phone landlines. In 2015 the proportion of mobile-only households in the survey (20%) were larger than the OfCom latest estimates for the UK (15%), to account for the higher mobile phone use of some hard to reach individuals, such as young men. This change from a purely landline sampling methodology may be responsible for some of the apparent rise in the point estimates for many UK GEM measures since 2009. Once again in 2015 there are no significant differences between landline only data and the full sample which includes mobile only households. Consequently, in this report, comparisons with other countries and time-based trends within the UK are made using the full sample (landline and mobile only households). See Appendix 1 for further details on the implications of the growth in mobile only households for the GEM survey.

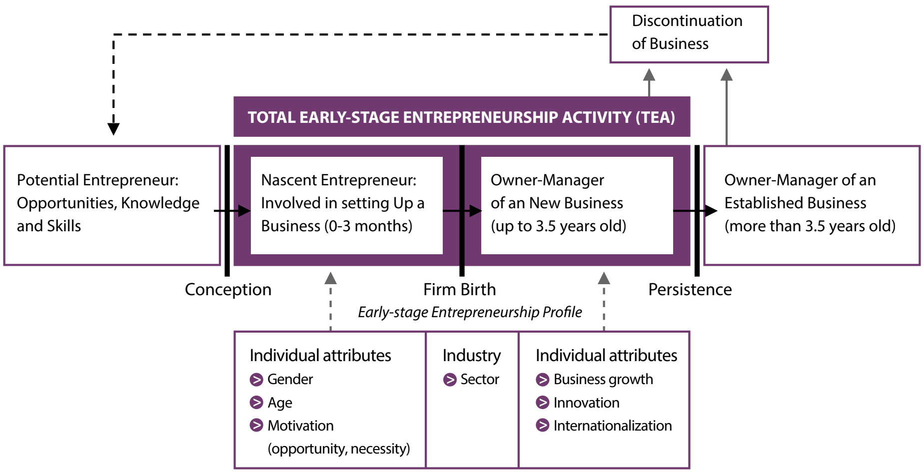
5 TEA is calculated in an identical way in each country. A telephone and/or face-to-face survey of a representative sample of the adult population in each country is conducted between May and September. Respondents are asked to respond to three questions that are the basis of the TEA index:

1) "are you, alone or with others, currently trying to start a new business independently of your work?",

2) "are you, alone or with others, currently trying to start a new business as part of your work?", and

3) "are you, alone or with others, currently the owner or manager of a business?" Those who respond positively to these questions are also asked filter questions to ensure they are actively engaged in business creation as owners and managers, how long they have been paying wages to employees, and other questions about cost and time to start up, sources of finance and numbers of jobs created. A distinction is made between two types of entrepreneurs: nascent entrepreneurs (those whose businesses have been paying wages for not more than three months) and new business owner-managers (those whose businesses have been paying salaries for more than three months but not more than 42 months). The TEA index is the proportion of nascent entrepreneurs and new business owner/managers (minus any double counting, i.e. those who respond positively to both are counted once) in the working age population.

Figure 1: The Entrepreneurial Process and GEM Operational Definitions
(Source: Singer et al., 2015, p.23)



6 Note that France is generally included as a comparator country however the French GEM team did not take part in GEM in 2015. It is expected to return in 2016.

2.1 ENTREPRENEURIAL ATTITUDES IN THE UK AND BENCHMARK COUNTRIES IN 2015

At least some of the difference in entrepreneurial activity rates between countries may be explained by differences in attitudes of the population towards entrepreneurship. Some researchers have suggested that GEM attitudinal data is best treated at the group rather than individual level, because individuals who are already entrepreneurs may feel compelled to provide positive answers in the APS. Table 1 compares attitudes in 2015 in the UK, Germany and the US for that portion of the working age (18-64) population who are not already nascent entrepreneurs or business owner/managers[6].

Points of note include the following:

- Rates of awareness of a recent start-up entrepreneur have remained broadly unchanged since 2014; the UK up 1 percentage point, Germany by 0.7 of a point and the US up by 2 percentage points. The rate in Germany remains lowest of the respective countries.
- At 37.6%, the proportion of the UK non-entrepreneurial working age population who perceived that there were good opportunities in the next 6 months was lower than in the US but higher than in Germany. The US was the only country of the three whose rate declined over the year, down from 45.8%.
- The start-up skills perception rate in the UK was down from 38.4% in 2014 to 37.5% in 2015; the rate in Germany remained stable whilst there was a 3 percentage point increase in the US rate. As a result the gap in skills perception between the UK and US widened to 10 percentage points.
- Fear of failure among those who perceived opportunities fell in both the UK and US; the UK down from 43.0% to 39.5% and the US from 34.2% to 32.8%. In contrast the rate in Germany rose from 44.8% to 47.0% and is now significantly higher than both the UK and US.

Table 1: Attitudes towards entrepreneurship in the UK, US and Germany in 2015 - percentage of working age population who are neither nascent entrepreneurs nor existing business owner/managers, who expressed an opinion and agreed with the statement at the top of the column
(Source: GEM APS 2015)

	I know someone who has started a business in the last 2 years	There are good start-up opportunities where I live in the next 6 months	I have the skills, knowledge and experience to start a business	Fear of failure would prevent me starting a business (for those who agree there are good start-up opportunities)
United Kingdom	**25.8**	**37.6**	**37.5**	**39.5**
Germany	20.9	35.5	31.2	47.0
United States	24.1	43.8	47.3	32.8

2.2 ENTREPRENEURIAL ATTITUDES IN THE UK IN 2013-2015

Table 2 shows estimates of changes in attitudes towards entrepreneurship by gender in the UK among the non-entrepreneurially active working age population between 2013 and 2015, and Figure 2 (next page) shows the trend from 2002 to 2015. Two points can be noted here. The first is the continued increase in 2015 in the proportion of non-entrepreneurs who think there will be good start-up opportunities in the local area within the next six months.

Secondly, there is still a wide divergence between the proportion of the non-entrepreneurial population in the UK who think that successful business founders have a high status in society (80%), and the proportion who think that most people would agree that starting a business is a good career choice (58%). The UK is not unique in this respect and a similar gap is observed in Germany, Sweden, Luxembourg, Finland and Ireland. However, these countries contrast with Spain, Portugal, Romania and Belgium where the proportions of the non-entrepreneurial population who agree that starting a business is a good career choice are as high as those who regard successful business founders as having a high status in society[7]. In the UK this gap has remained steady despite the increase in the share of the non-entrepreneurial working age population who say they see stories about people starting successful new businesses in the media. In 2015 60% of the non-entrepreneurial population agreed with this statement, the highest share on record.

Table 2 also shows that in 2015 males still tend to have more positive entrepreneurial

7 Global Entrepreneurship Monitor (GEM): 2015 Global Report. www.gemconsortium.org

Table 2: Entrepreneurial attitudes in the UK among households in 2013, 2014 and 2015 (% non-entrepreneurially active respondents aged 18-64 expressing an opinion and agreeing with the statement)
(Source: GEM UK Adult Population Survey (APS) 2013, 2014, 2015)

	2013	2014	2015	2013	2013	2014	2014	2015	2015
	All	All	All	Male	Female	Male	Female	Male	Female
I personally know someone who has started a business in the last two years	25.2	24.7	25.8	26.8	23.7	26.9	22.7	28.4	23.4
There will be good start-up opportunities where I live in the next six months	33.2	36.8	37.6	37.6	29.0	40.4	33.4	42.4	33.2
I have the skills, knowledge and experience to start a business	37.0	38.4	37.5	43.9	30.8	46.9	30.9	44.9	30.8
Fear of failure would prevent me from starting a business (for those who agree there are good start-up opportunities)	41.4	43.0	39.5	40.1	43.0	38.5	48.0	36.8	42.6
Most people consider that starting a business is a good career choice	54.5	57.3	57.5	55.8	53.3	58.1	56.5	57.9	57.1
Those successful at starting a business have a high level of status and respect in society	79.5	78.4	79.8	79.7	79.3	79.1	77.7	79.0	80.4
You will often see stories about people starting successful new businesses in the media	48.8	58.8	59.9	52.2	45.6	60.3	57.4	61.9	58.0

attitudes than females in several important respects. The gap is particularly marked in skills self-perception, with a 14 percentage point difference between the two genders. Females also appear more cautious having a higher, albeit narrowing, fear of failure rate. Opportunity perception (among non-entrepreneurs) rose among males over the year whilst for females it remained unchanged, leaving the male rate 9 percentage points higher than for females.

Taken together, these trends support the view that females continue to possess a differing set of attitudes to entrepreneurship compared to males.

Perceptions of the extent to which there are good start-up opportunities in the local area in the next 6 months have followed the same trend for males and females since 2003, with both experiencing a drop in confidence after 2007 and a record

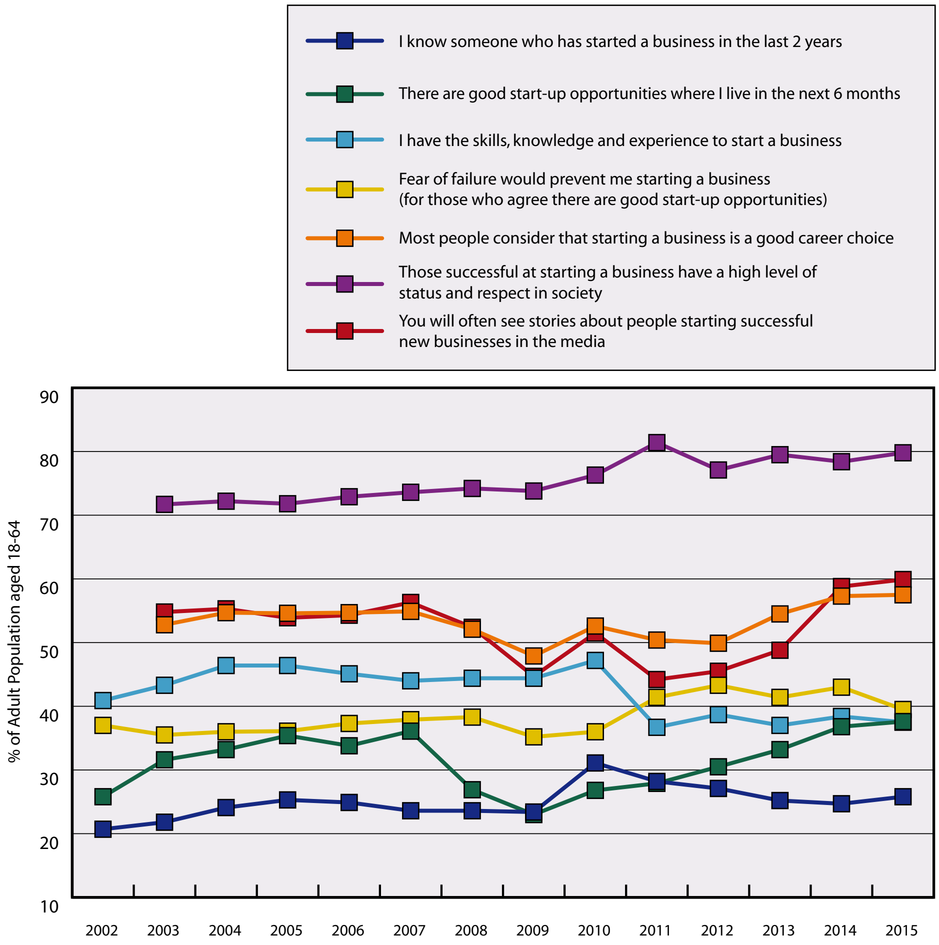


Figure 2: Entrepreneurial attitudes in the UK, 2002-2015: (% non-entrepreneurially-active respondents aged 18-64 expressing an opinion and agreeing with the statement

(Source: GEM UK APS 2002-2015)

low in 2009. Since 2011 the increase in male opportunity perception has risen faster than females, whilst the female rate has also flatlined between 2014 and 2015, leading to a widening of the gap between the two (Figure 3). Fear of failure amongst females has been consistently higher than males across the same period; and despite a closing of the gap in 2013, the difference has widened in 2015 to 6 percentage points.

2.3 ATTITUDES TOWARDS ENTREPRENEURSHIP IN THE UK HOME NATIONS

The self-reported attitudes towards entrepreneurship of the non-entrepreneurially active working age population in the four UK home nations in 2015 are presented in Table 3 (next page). The key findings are as follows:

- The item "I personally know someone who has started a business in the last two years" may reflect the prevalence of new

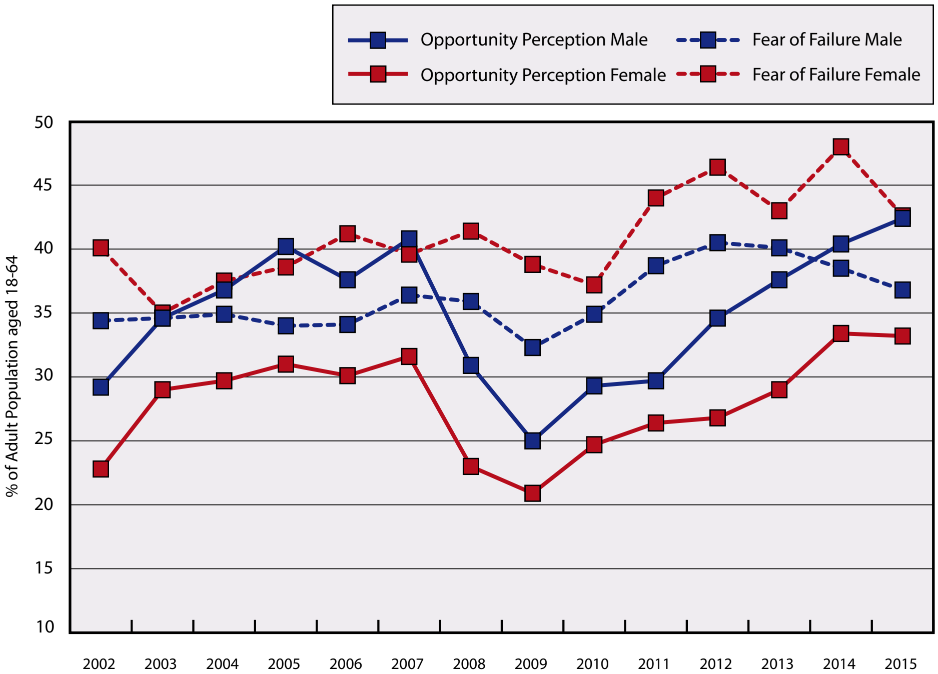


Figure 3: Male and female attitudes towards Good Opportunities and Fear of Failure (% non-entrepreneurially-active respondents aged 18-64 expressing an opinion and agreeing with the statements "There are good start-up opportunities where I live in the next 6 months"; "Fear of failure would prevent me from starting a business")
(Source: GEM UK APS 2002-2015)

business start-up in a nation as well as the amount of networking by individuals. In 2015 there were no significant differences in the proportions reporting this across the four UK nations, with around one quarter of the non-entrepreneurial population agreeing with the statement.

- A significantly lower proportion of the non-entrepreneurially active population in Wales (29.6%) reported that there were good start-up opportunities in their local area in the next 6 months than in England (38.6%) and Scotland (34.6%). The rate in Northern Ireland (31.1%) was also significantly lower than in England.[8]
- The proportion of non-entrepreneurially active respondents who thought they had the skills to start a business was significantly lower in Northern Ireland than in England and Wales, with just one third agreeing with the statement.
- The fear of failure rate for Northern Ireland was also significantly higher than that for England and Scotland, with half of those that thought there were good start-up opportunities agreeing that fear of failure would prevent them starting a business.
- The proportion of non-entrepreneurial individuals in the home nations who agreed that "most people consider that starting a business is a good career choice" was also significantly lower in Northern Ireland than in England and Scotland with just over half of respondents agreeing.
- The proportion of non-entrepreneurial individuals who agreed that "those successful at starting a business have a high level of status and respect in society" was the same across the home nations at around 80%.
- Despite the significantly lower results for Northern Ireland in several of the attitudinal measures those agreeing with the item "you will often see stories about people starting successful new businesses in the media" was actually significantly higher in Northern Ireland than in the other home nations.

8 The 2002-2015 home nation data for the 'Good Opportunities' attitude variable in the GEM UK pooled dataset is included in the Appendix (Table 3c)

Table 3: Perceptions of entrepreneurship among non-entrepreneurially active individuals in the UK Home Nations, 2015
(Source: GEM UK APS 2015)

	England	Wales	Scotland	Northern Ireland	United Kingdom
I know someone who has started a business in the last 2 years	25.9	24.8	26.4	24.1	**25.8**
There are good start-up opportunities where I live in the next 6 months	38.6	29.6	34.6	31.1	**37.6**
I have the skills, knowledge and experience to start a business	37.6	38.9	37.2	32.8	**37.5**
Fear of failure would prevent me from starting a business (for those who agree there are good start-up opportunities)	39.6	40.5	35.7	49.6	**39.5**
Most people consider that starting a business is a good career choice	57.6	56.7	59.3	51.8	**57.5**
Those successful at starting a business have a high level of status and respect in society	79.7	80.1	80.4	79.6	**79.8**
You will often see stories about people starting successful new businesses in the media	59.5	59.5	61.3	67.2	**59.9**

3.1 ENTREPRENEURIAL ACTIVITY IN THE UK AND BENCHMARK COUNTRIES

GEM views entrepreneurship as a process in which individuals become increasingly engaged in entrepreneurial activity. Figure 4 illustrates the proportion of respondents by stage of entrepreneurial activity in the UK over the period 2002 to 2015. In this figure, individuals who engaged in more than one stage of the process at a time are included **in their most established stage** (see Figure 4b in Appendix for gross rates for each stage).

In the UK in 2015, one fifth of working age individuals were either engaged in entrepreneurial activity or intended to start a business within the next three years, a similar share to 2014. The nascent entrepreneurship rate stood at 3.8% which, although lower than 2014, was above the pre-2011 long run average. The rates of both new and established business ownership were also down slightly on the year before however the most noticeable change was the increase in intention to start a business, rising from 5.8% in 2014 to over 7% in 2015.

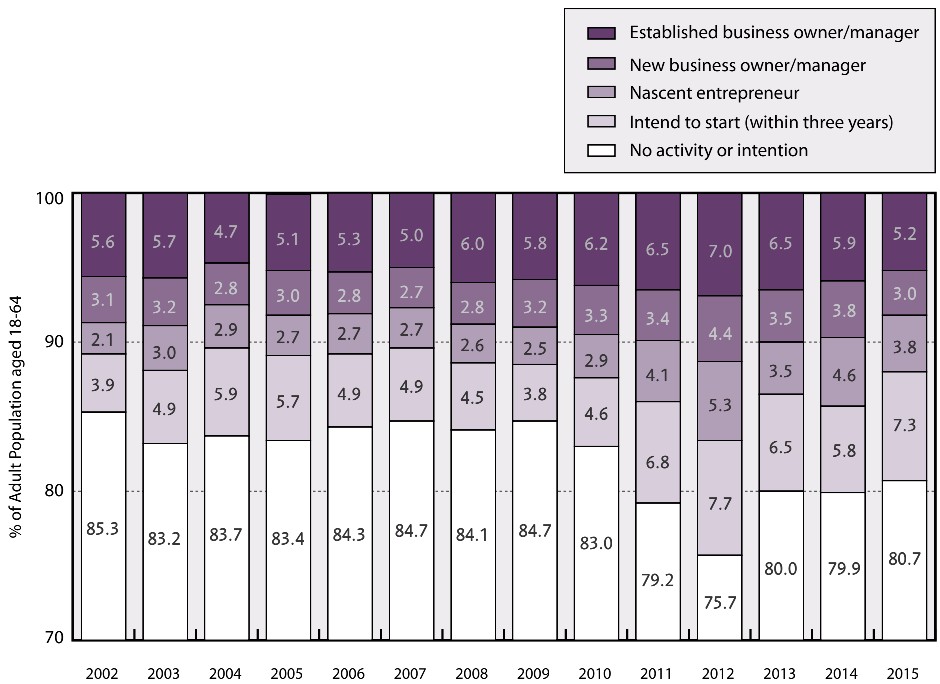


Figure 4: Participation in Entrepreneurship in the UK by most established stage of entrepreneurial activity, 2002 to 2015
(Source: GEM UK APS 2004 to 2015)

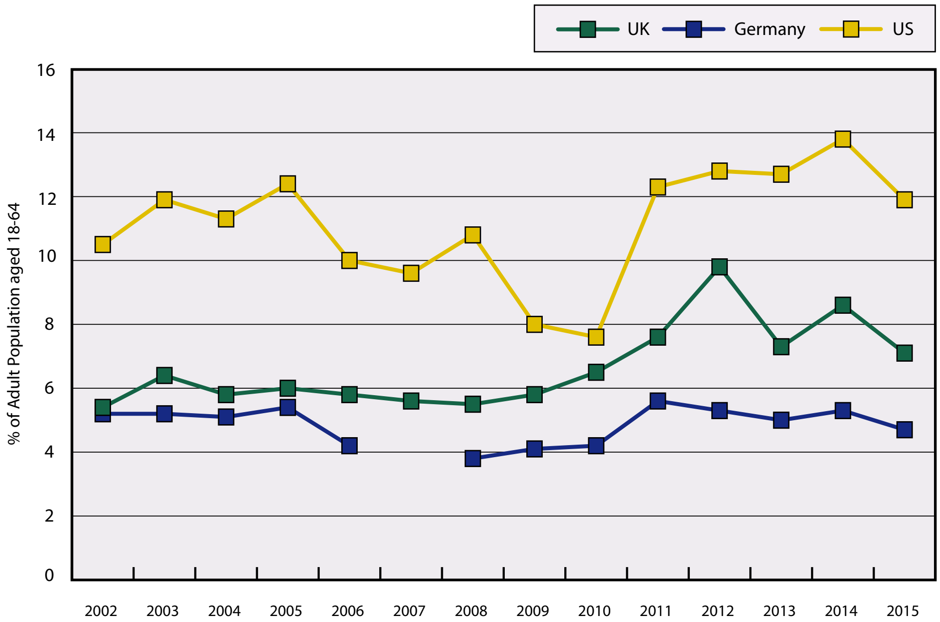
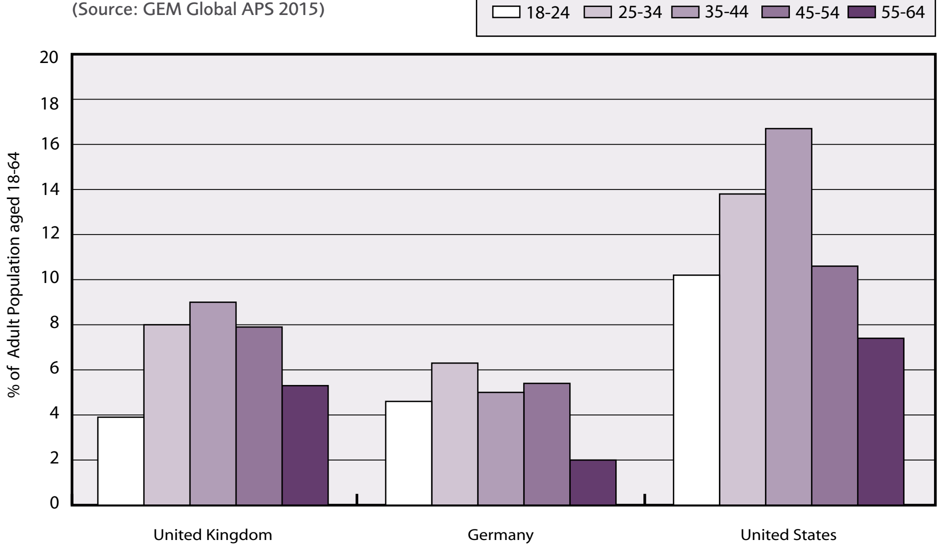


Figure 5: Total early-stage Entrepreneurial Activity (TEA) in UK, Germany and US (2002-2015)

(Source: GEM Global APS 2002-2015)

Figure 6: Total early-stage Entrepreneurial Activity (TEA) in the UK, Germany and the US by Age Group (2015)

(Source: GEM Global APS 2015)



Total early-stage Entrepreneurial Activity (TEA) is the sum of the nascent entrepreneurship rate and the new business owner/manager rate. Figure 5 shows trends in TEA rates for the UK, Germany and the US between 2002 and 2015. Notably there was a downward trend for all countries between 2014 and 2015 with the US rate dropping to 12% after its peak of 14% in 2014. The UK rate was also down significantly on the year (7.1% compared to 8.6%), and although the trend has been more volatile in recent years than previously, it appears, like the US, to have remained above the long-run average observed prior to 2010.

Figure 6 compares the TEA rate by age group for the UK, Germany and the US in 2015. In both the UK and US the distribution is similar with TEA rates peaking in the 35-44 age group. In the UK those aged 25-44 have significantly higher TEA rates than those aged 18-24. TEA rates in Germany are more evenly spread across the age groups. However, like the US, it has higher rates among 18-24 year olds than 55-64 year olds.

Figure 7 shows the trend in TEA rates in the UK by age group over the three years 2013 to 2015. The 2015 rates are similar to those observed in 2013 for all age bands except the youngest. The rates in 2015 are also significantly lower than in 2014 for the three youngest age groups ranging from 18-24 to 35-44[9].

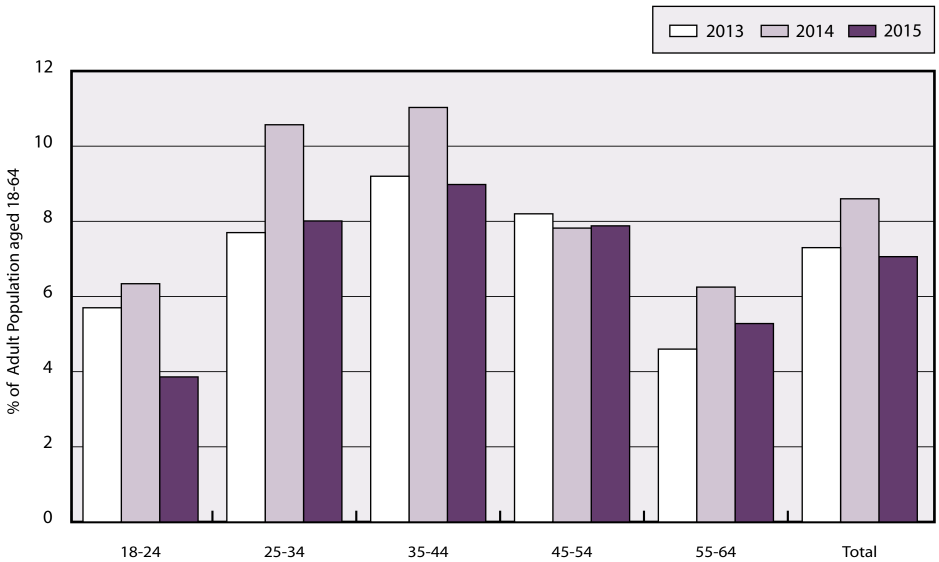
In addition to TEA, GEM measures the proportion of established business owner-managers (EBO) in the working age population. Established business owner-managers have owned or managed a business for more than 42 months. GEM also measures the proportion of individuals of working age who closed down a business in the last 12 months, that is, one that did not continue under a different form of ownership.

The ratio of established business ownership to early-stage entrepreneurship gives a proxy measure of transition rates from early stage entrepreneurship to established business ownership and can be interpreted as a proxy survival measure. The ratio of closure to business ownership (new plus established)

9 More detailed data on the long-term TEA rates by broad ageband (18-29, 30-49, 50-64) are provided in Appendix Table 11, along with the male and female rates for 50-64 year olds (Appendix Table 12) and opportunity and necessity rates for 50-64 year olds (Appendix Table 13).

Figure 7: Total early-stage Entrepreneurial Activity (TEA) in the UK by Age Group (2013 to 2015)

(Source: GEM APS 2013, 2014, 2015)



gives a proxy of entrepreneurial dynamism or "churn". The 2015 results for the UK, Germany and the US are given in Table 4.

The 2015 UK estimates are all lower than 2014 with the exception of intention to start a business (FUT) and business closure (BC); the same is observed for Germany. In the US there are increases in intention rates and established business ownership (EBO).

Other points of note include:

- All of the estimates for the UK lie between Germany, on the lower end, and the US, on the higher end.
- Rates of proxy early-stage business survival are similar in the UK and US, with Germany slightly higher whilst proxy business churn rates are identical in all three countries.

Table 4: Measures of entrepreneurial activity in the UK, Germany and the US, 2015
(Source: GEM APS 2015)

	I expect to start a business in the next 3 years	Nascent Entrepreneurial Activity rate (paying wages for 3 months or less)	New Business Owner-manager rate (4-42 months)	Nascent + New business owner-manager rate	Established Business Owners (>42 months)	Business closure rate (business closed in the last 12 months that has not continued)	Proxy early-stage business survival rate	Proxy business churn rate
	(FUT)	(NEA)	(NBO)	(TEA)	(EBO)	(BC)	(EBO/TEA)	BC/(NBO+EBO)
United Kingdom	**9.6**	**4.0**	**3.1**	**7.1**	**5.2**	**1.5**	**0.7**	**0.2**
Germany	9.2	2.8	1.9	4.7	4.8	1.3	**1.0**	**0.2**
United States	17.1	8.3	4.0	11.9	7.3	2.2	**0.6**	**0.2**

3.2 OPPORTUNITY AND NECESSITY-BASED ENTRY INTO ENTREPRENEURSHIP

Different people may have different motivations to enter into entrepreneurial activity. For example, in some cases, the motivation to start a business may be based on necessity, that is, there are no better alternatives for work. Others may be motivated to start a business by opportunity, or the potential for new market creation. GEM identifies early-stage entrepreneurs according to their original motivation to start: opportunity or necessity. Most early-stage entrepreneurs can be classified into either of these two groups[10].

Opportunity-motivated early-stage entrepreneurship rates (Opportunity TEA) and Necessity-driven early-stage entrepreneurship rates (Necessity TEA) for the UK, Germany and the US in 2015 are presented in Figure 8. In all countries, levels of necessity TEA were considerably lower than levels of opportunity TEA. In the UK three-quarters of those involved in early-stage entrepreneurial activity were opportunity-motivated. At 5.3% of the working age adult population, this was similar to the 2010 rate of 5.1%; 1.6% were identified as necessity-driven early-stage entrepreneurs which was up significantly from 0.7% in 2010. Compared to 2014, opportunity TEA levels

10 This is a rather simplistic classification and the GEM UK team were involved in a study for BIS in 2014 which sought to develop a more sophisticated framework (see Stephan et al., (2015) "Understanding the Motivations for Entrepreneurship", BIS Research Report No. 212, March 2015). https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/408432/bis-15-132-understanding-motivations-for-entrepreneurship.pdf

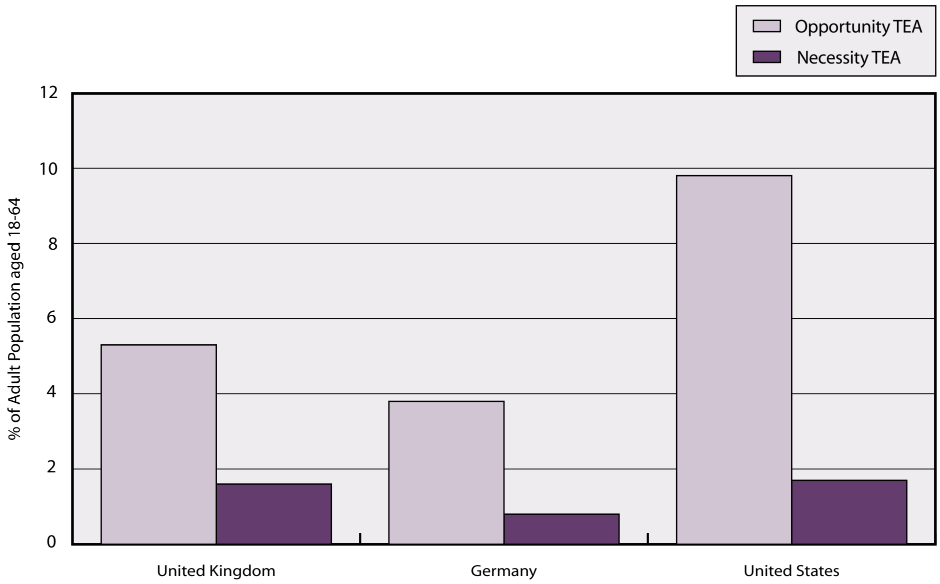


Figure 8: Necessity and opportunity TEA rates in the UK, Germany and the US in 2015
(Source: GEM APS 2015)

fell, particularly in the UK and US and whilst necessity TEA remained broadly the same for these two countries; the rate in Germany rose from 0.8% to 1.2%.

The UK opportunity-driven TEA rate lies above Germany but below the US however the UK necessity rate in 2015 was almost identical to that of the US. Figure 9 shows that there was a significant decline in opportunity-based entrepreneurial activity in the UK for both nascent and new business owners between 2014 and 2015. In contrast there were no significant changes in necessity-based entrepreneurial activity.

3.3 MALE AND FEMALE ENTREPRENEURIAL ACTIVITY COMPARED

In the UK the female TEA rate in 2015 was 4.7%, which was not significantly different to the rate of 5.7% in 2014. In contrast, the 2015 male rate of 9.5% was down significantly on the 11.5% rate in 2014.

Figure 10 presents a summary of Total early-stage Entrepreneurial Activity (TEA) rates for the UK, Germany and the US by gender in 2015. In most high income countries, males are around twice as likely to be early-stage entrepreneurs as females, and this was the

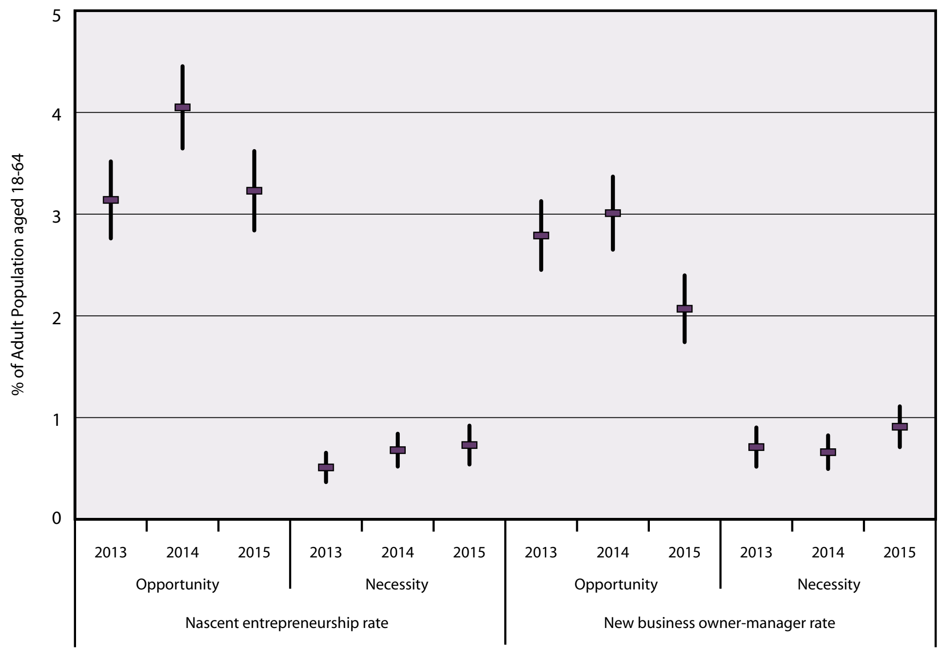


Figure 9: Necessity and opportunity nascent and new business owner-manager rates in the UK showing 95% confidence intervals, 2013, 2014 and 2015
(Source: GEM APS, 2013, 2014 and 2015)

case for the UK and Germany in 2015. In the US the female TEA rate was around three-fifths of the male rate.

The UK female to male TEA ratio of 49% in 2015 is similar to the previous year and the long-run average. In the US the ratio, at 63%, is down on previous years, where an average of 69% was observed.

The ratio of UK to US female early-stage entrepreneurial activity remained static at around 51% between 2014 and 2015 as there was a similar drop in female TEA rates in both countries. For males, the gap between the US and UK widened somewhat in 2015; the US male TEA rate decreased from 16.5% to 14.6%, the UK male TEA decreased from 11.5% to 9.5%, resulting in a widening of the male UK to US ratio from 70% to 65%.

Comparing Figures 10 and 11, the gap in participation rates between males and females in 2015 is generally smaller among established business owner-managers (EBO) than among early-stage entrepreneurs (TEA); this is in contrast to the position in 2014. For example UK female early-stage entrepreneurial activity is 49% of male activity in 2015, while female established business ownership is 59% that of males. Likewise in Germany the female to male ratio for early-stage activity is 54% but is 62% for the established business ownership ratio. The US differs in that the ratios across the two measures are remarkably similar; female

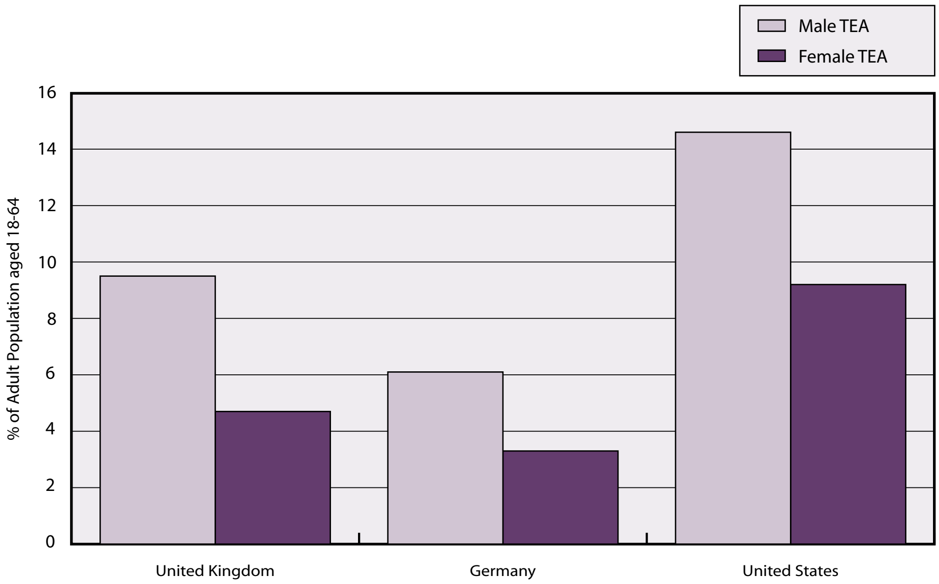
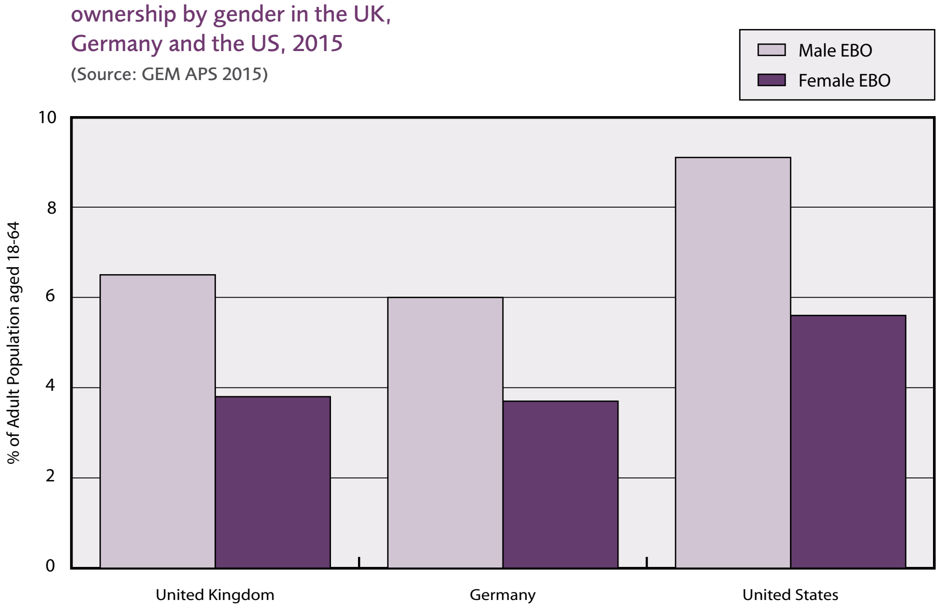


Figure 10: Total early-stage entrepreneurial activity by gender in the UK, Germany and the US in 2015
(Source: GEM APS 2015)

Figure 11: Established business ownership by gender in the UK, Germany and the US, 2015
(Source: GEM APS 2015)



established business ownership is 61% that of males and female early-stage entrepreneurship 63% that of males.

Figure 12 shows the downward trend in female TEA rates in each of the nations in 2015. Despite the fall the UK rate remains higher than the pre-2010 period average; the US rate also remains above the average observed from 2005-10. Of the observed countries Germany's female TEA rates have remained most stable over the entire period since 2002.

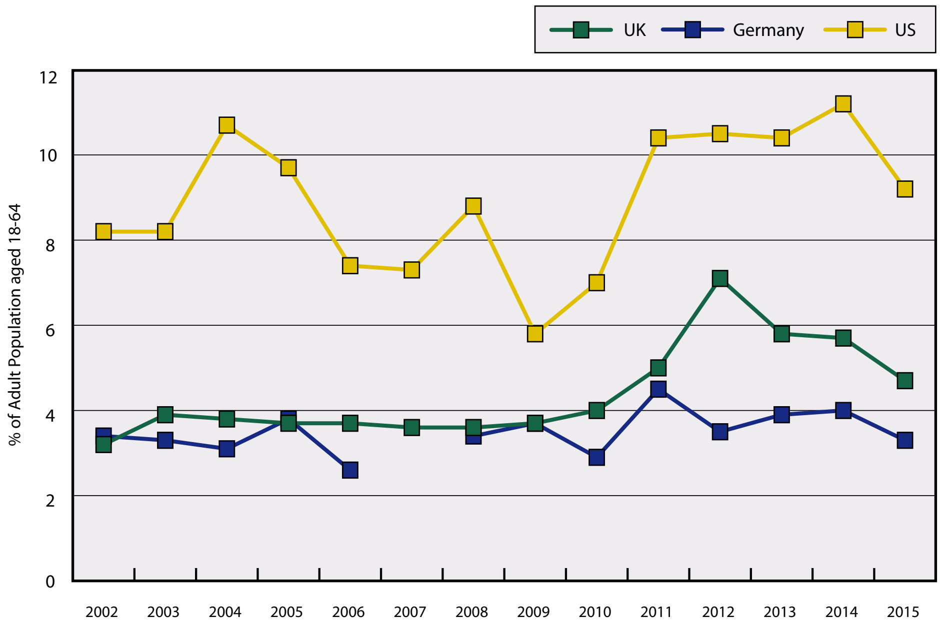


Figure 12: Female early-stage entrepreneurial activity in the UK, Germany and the US, 2002-2015
(Source: GEM APS, 2002-2015)

3.4 ENTREPRENEURIAL ACTIVITY IN THE UK HOME NATIONS

Table 5 displays different measures of entrepreneurial activity in the four home nations of the UK for 2015. Together, these measures allow us to assess the degree of dynamism and stability across different parts of the UK.

TEA rates in the home nations were not significantly different to those in 2014. The TEA rates across the home nations were also not significantly different from each other; this was equally the case for the nascent and new business owner rates. Amongst the established business owner rates Northern Ireland was significantly lower than England; Northern Ireland, along with Scotland, also had significantly lower rates than England of intentions to start a business. There was no difference across the home nations in either the proxy early-stage survival rates or the business churn rates.

Table 5: Measures of Entrepreneurial Activity in the UK Home Nations, 2015
(Source: GEM APS 2015)

	I expect to start a business in the next 3 years	Nascent Entrepreneurial Activity rate (paying wages for 3 months or less)	New Business Owner-manager rate (4-42 months)	Nascent + New business owner-manager rate	Established Business Owners (>42 months)	Business closure rate (Business closed in the last 12 months that has not continued)	Proxy early-stage business survival rate	Proxy business churn rate
	(FUT)	(NEA)	(NBO)	(TEA)	(EBO)	(BC)	(EBO/TEA)	BC/(NBO+EBO)
England	10.0	4.0	3.2	7.2	5.4	1.5	0.7	0.2
Wales	8.0	4.3	2.5	6.8	4.8	1.2	0.7	0.2
Scotland	7.5	3.8	2.9	6.7	4.4	1.3	0.7	0.2
Northern Ireland	7.4	3.5	2.1	5.4	3.1	1.5	0.6	0.3
United Kingdom	**9.6**	**4.0**	**3.1**	**7.1**	**5.2**	**1.5**	**0.7**	**0.2**

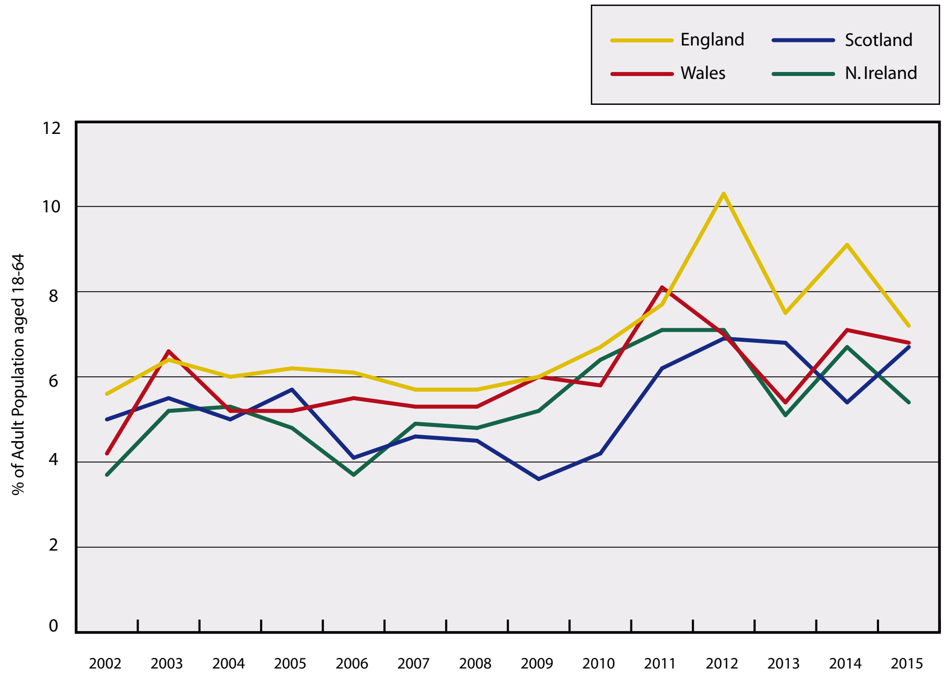


Figure 13: Total early-stage Entrepreneurial Activity in the UK Home Nations, 2002-2015

(Source: GEM UK APS 2002-2015)

Since 2010 TEA rates in the home nations have been quite volatile, particularly when contrasted against those in the early part of the previous decade (Figure 13). Scotland's TEA rate fell below the other home nations during the recession whilst England's moved above; suggesting diverging responses to the decline in job opportunities. By 2015 it appears the rates are once again converging, albeit at a higher level than the long-run average.

TEA rates may be expected to vary depending on the extent of deprivation in an area. Figure 14 displays TEA rates in the home nations in 2015 based on Index of Multiple Deprivation quintiles, where the first quintile refers to the most deprived area, and the fifth quintile the least deprived. Although there appears to be variation in entrepreneurial activity across the quintiles for all home nations,

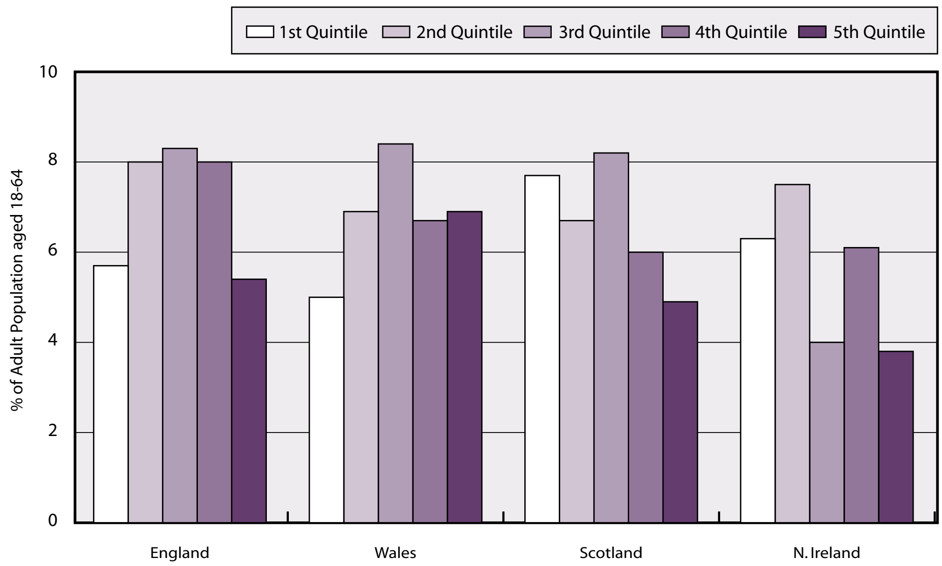


Figure 14: Total early-stage Entrepreneurial Activity in the UK Home Nations by Index of Multiple Deprivation 2015

(Source: GEM UK APS 2015)

the differences are not statistically significant either within or between nations. There was also no significant drop in TEA rates in any of the quintiles since 2014.

Female early-stage entrepreneurial activity in the UK in 2015 was 4.7% compared to 9.5% for males; there were no significant differences in the female rates across the home nations. Females, however, had significantly lower TEA rates than males in all home nations except Scotland, as Figure 15 shows[11]. Northern Ireland, as in previous years, has the lowest ratio of female to male TEA (46%[12]) which was on a par with England (47%) and not far below the UK average of 49%. The ratios in both Wales and Scotland were above the UK average at 52% and 77% respectively. The high ratio in Scotland is a result of a combination of a relatively low male TEA rate combined with a relatively high female rate.

11 Expressing the female TEA rates as a proportion of the economically active population rather than the working age population, as shown here, does not alter the results. In the UK the respective rates expressed as a share of the economically active population are 5.2% for females and 10.1% for males.

12 Caution should be taken in interpreting annual changes in ratios such as these. Margins of error may be larger in ratio measures.

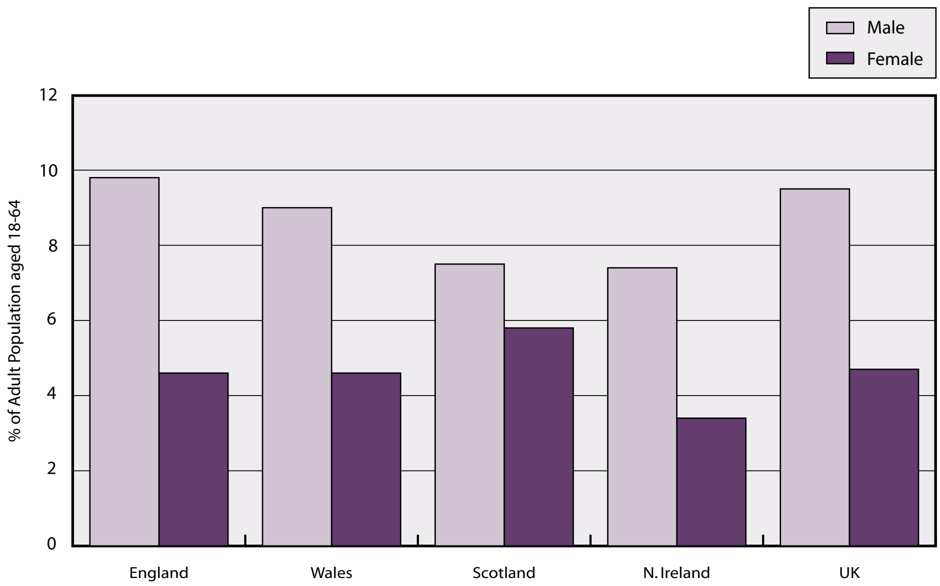


Figure 15: Male and Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2015
(Source: GEM UK APS 2015)

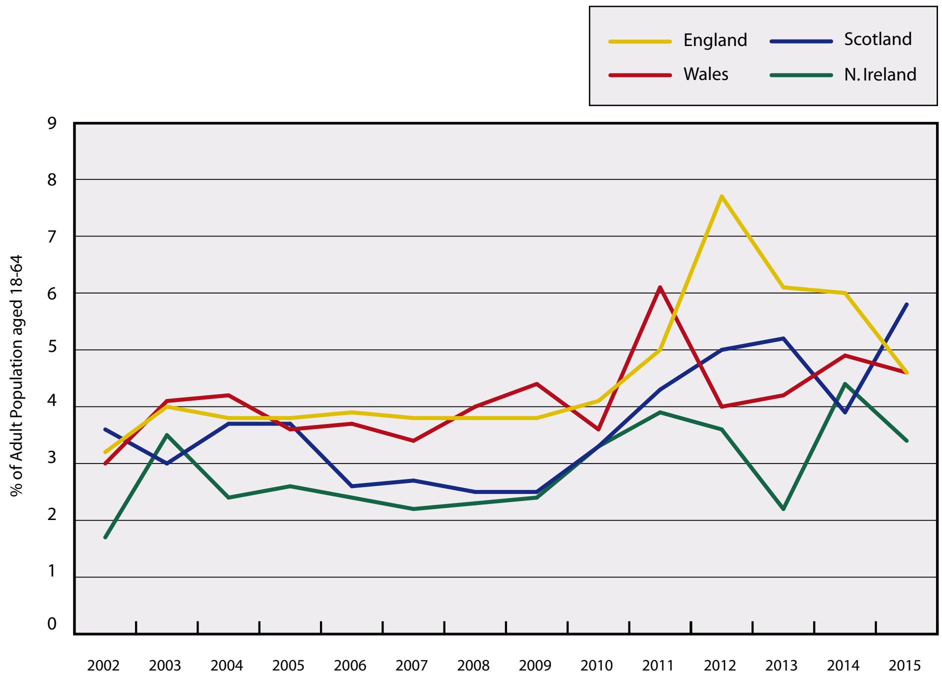
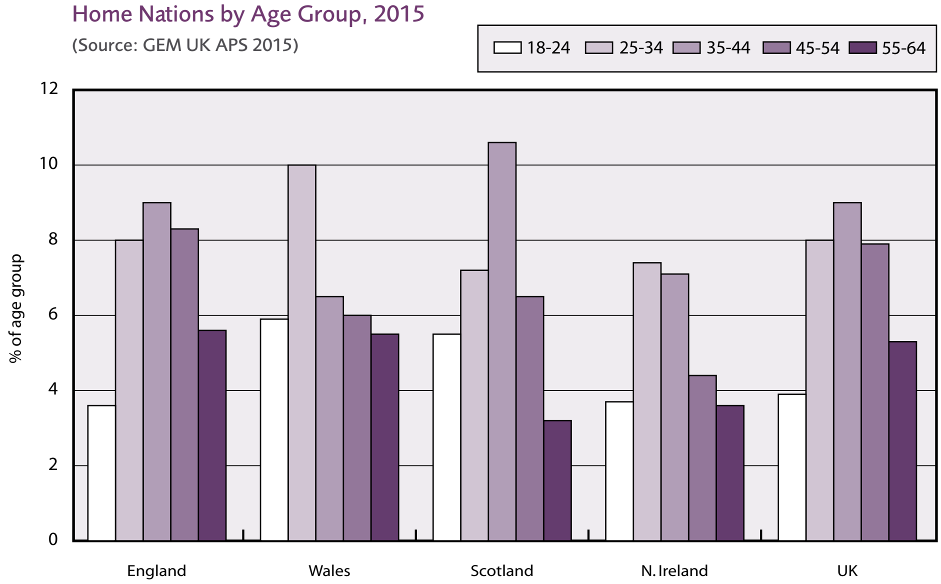


Figure 16: Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2002-2015
(Source: GEM UK APS 2002-2015)

Figure 17: Total early-stage Entrepreneurial Activity in the UK Home Nations by Age Group, 2015
(Source: GEM UK APS 2015)



Although the trend in female entrepreneurship has been upwards across all home nations since 2002 (Figure 16), due to the recent declines the rates in 2015 are actually not statistically significantly different from those observed in 2002. The female TEA rates peaked in each home nation in different years Wales 2011, England 2012, Northern Ireland 2014 and Scotland 2015. Excluding Scotland, these peak rates were all significantly higher than the respective rates at the start of the period of observation.

Figure 17 shows the entrepreneurial activity rates of different age groups across the home nations. In England TEA rates for 18-24 year olds were significantly lower than all other age groups except 55-64 year olds; this was not the case in Wales, Scotland or Northern Ireland. In fact in the other nations there were no significant differences in the TEA rates by age, despite the relatively high rates for individuals aged between 25-34 years in Wales and those aged 35-44 in Scotland. It is also worth noting that the TEA rate for 18-24 year olds in England was not significantly different from that in the other home nations.

When 18 to 29 year olds are grouped together (Figure 18), a decrease in entrepreneurial activity between 2014 and 2015 is observed in all the home nations except Scotland; the latter increasing from 4% to 7%. This is the second consecutive year that the trend in Scotland for this age group contrasts with the other home nations. For Scotland, England and Northern Ireland TEA rates for the young are similar to those observed in 2013 whilst the rate in Wales remains 2 percentage points higher than its 2013 rate.

3.5 ENTREPRENEURIAL ACTIVITY BY ETHNICITY AND RESIDENT STATUS

As in 2014, the TEA rate of the white ethnic population in the UK in 2015 was significantly lower than that of the non-white population, at 6.4% compared to 11.7% for the latter (Figure 19). The significant decline in the overall TEA rate between 2014 and 2015 was also driven by the drop in entrepreneurial activity of the white population, whose activity rate fell from 8% to 6.4%.

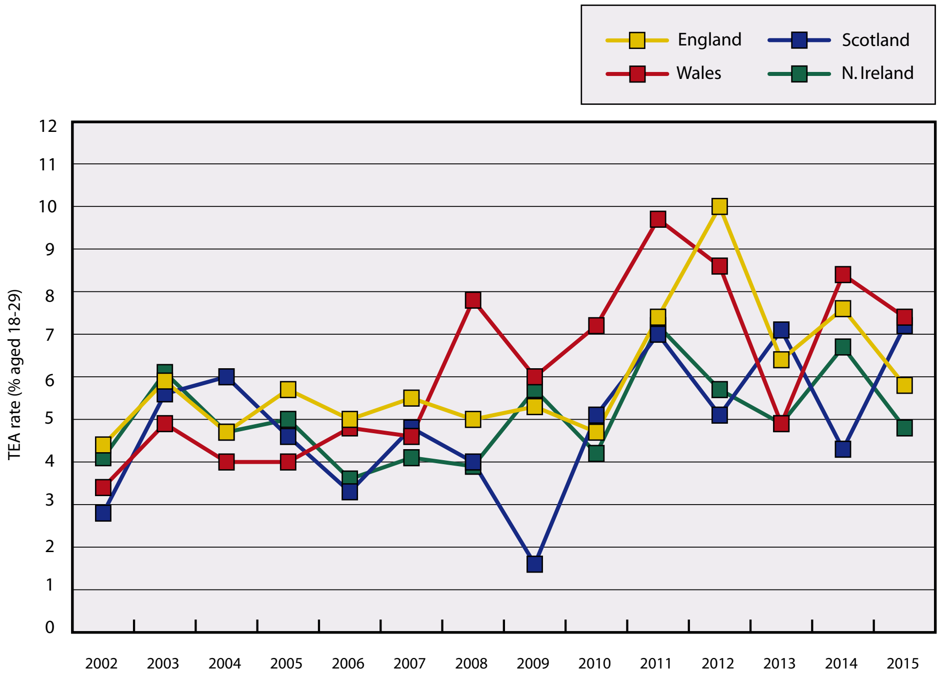
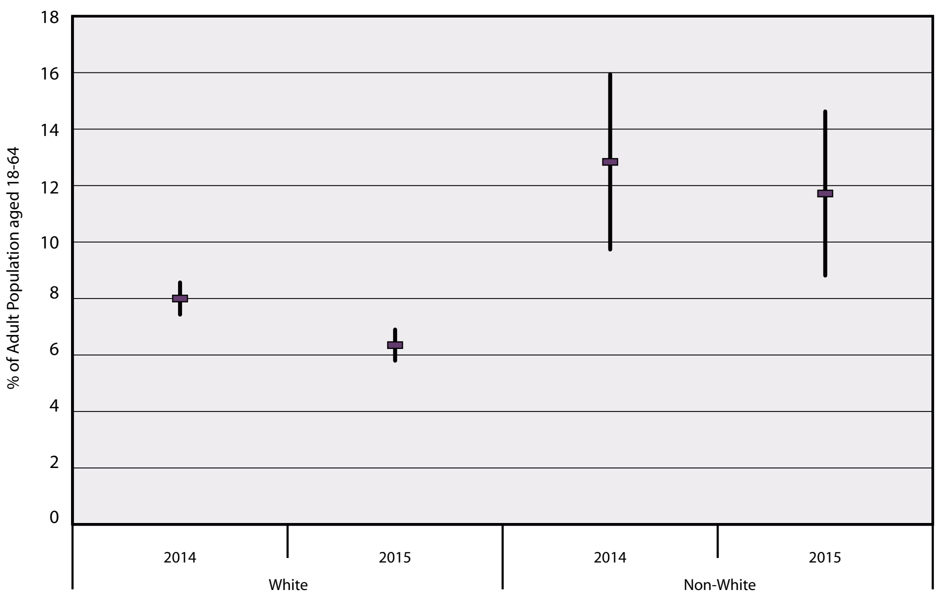


Figure 18: Trend in Total early-stage Entrepreneurial Activity in the UK Home Nations for 18 to 29 year olds, 2002 to 2015
(Source: GEM UK APS 2002-2015)

Figure 19: Total early-stage Entrepreneurial Activity Rate by White and Non-White Ethnic Status 2014-2015
(Source: GEM UK APS 2014, 2015)



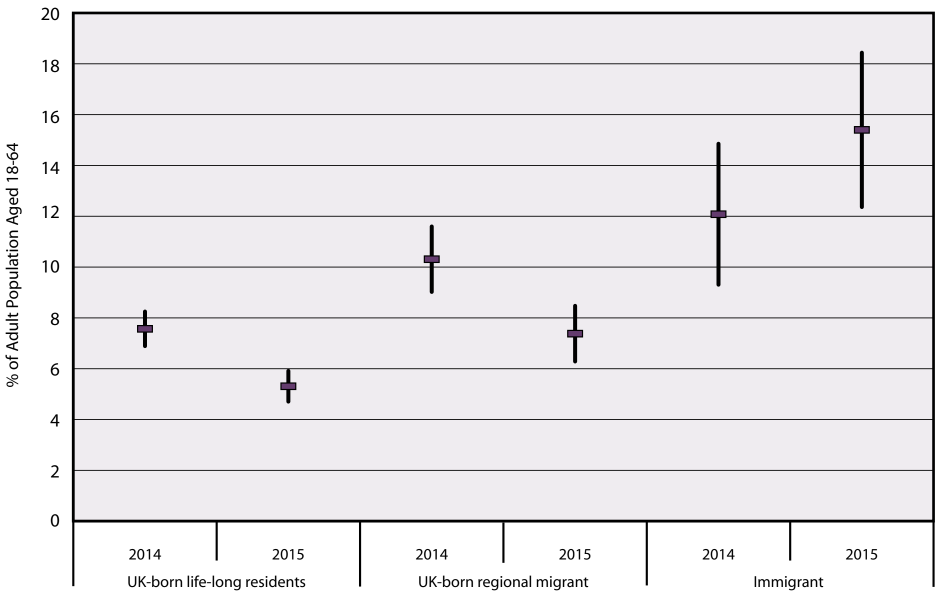


Figure 20: Total early stage Entrepreneurial Activity Rate by Migrant Status 2014-2015
(Source: GEM UK APS 2014, 2015)

Figure 21: Total early stage Entrepreneurial Activity Rate by Migrant and Resident Status 2015
(Source: GEM UK APS 2015)

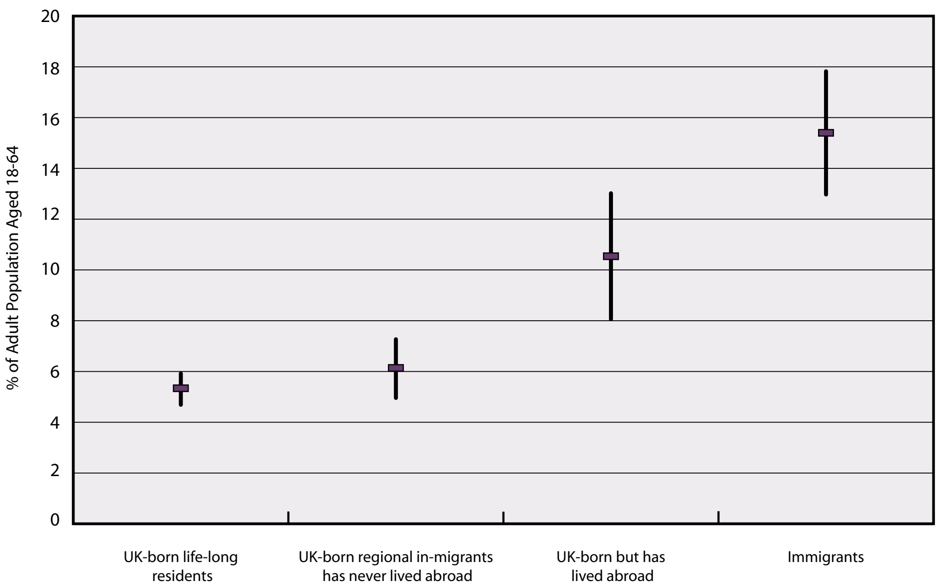


Figure 20 further shows that in fact the drop in the TEA rate over the year was due to a decline in activity for both the lifelong resident population and the regional in-migrant[13] population; TEA for lifelong residents fell by 2 percentage points to 5.3% whilst for regional in-migrants there was a 3 percentage point drop to 7.4%. The rate for immigrants was up, but not significantly so.

It is notable in 2015 that immigrants (15.4%) have a significantly higher TEA rate than regional in-migrants (7.4%), who in turn have a significantly higher rate than the life-long population (5.3%). This was not the case in 2014, when there was no significant difference in the TEA rates of regional in-migrants and immigrants. It is generally the case, however, that the life-long resident population are less entrepreneurial than migrants of any type.

In 2015, UK-born respondents were asked if they had ever lived outside the UK. The TEA rate for those who had lived outside the UK was significantly higher, at 10.5%, than the rate for either life-long residents (5.3%) or regional in-migrants who had not lived outside the UK (6.1%), but not significantly different from the rate for immigrants (Figure 21). Thus, it appears that those who have lived outside the UK, whether immigrants or returnee migrants, do appear to have higher levels of entrepreneurial activity than those who have lived in the UK all their lives, irrespective of whether the latter have lived in more than one region of the UK. These migrants are also more likely to see business opportunities than life-long residents and more likely to act on them (Figure 22). There is no difference in the level of necessity entrepreneurship between migrants and life-long residents.

3.6 ENTREPRENEURIAL EMPLOYEE ACTIVITY

Whilst the TEA rate measures the extent to which the general population is engaged in the entrepreneurial process, it says nothing about the activities of employees on behalf of their employers[14]. Instead this is measured by the entrepreneurial employee activity (EEA) rate which is defined as proportion of employees aged 18-64 who play a leading role in the creation and development of new business activities for the organisation 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. Autonomy is a strong driver for all entrepreneurs to start their business and if this is now being provided in the workplace as the employee environment improves then this will drive higher levels of EEA[15].

13 Regional in-migrants are defined as those individuals that were born in the UK but now reside in a different region to that in which they were born.

14 For example, a forthcoming study from the World Economic Forum (WEF) and GEM Global ("Europe's Hidden Entrepreneurs: Entrepreneurial Employee Activity and Competitiveness in Europe") found that many European economies do not lack entrepreneurial activity at all. Instead, due to the risk- and opportunity-profiles that European economies offer, entrepreneurial individuals in Europe frequently choose to start new ventures or projects while working for their employers rather than for themselves. Where this occurs, we observe a shift into intrapreneurship, also known as entrepreneurial employee activity (EEA).

15 See Stephan, U et.al., (2015) "Understanding Motivations for Entrepreneurship", BIS Research Paper No. 212, March 2015.

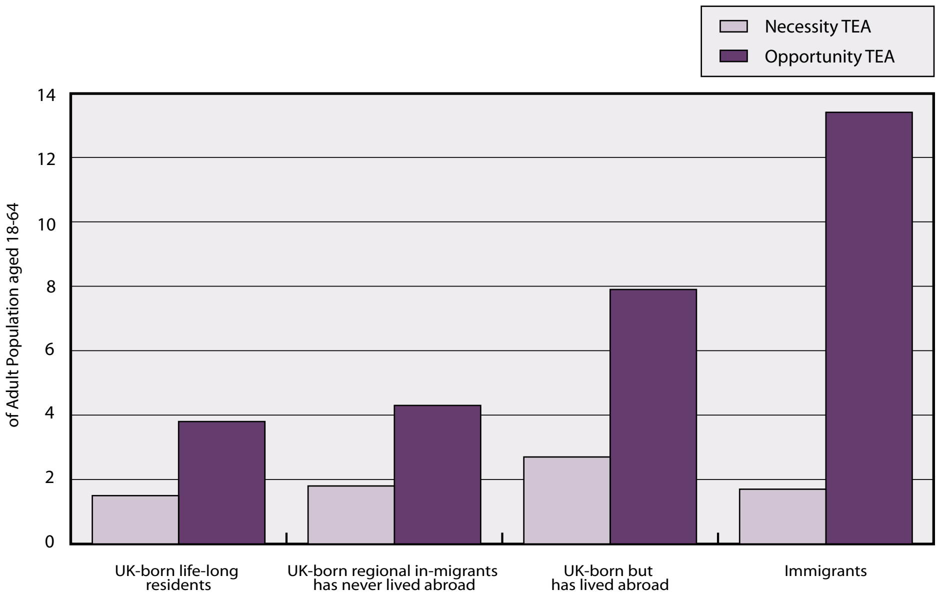


Figure 22: Necessity and Opportunity TEA by Migrant and Resident Status 2015
(Source: GEM UK APS 2015)

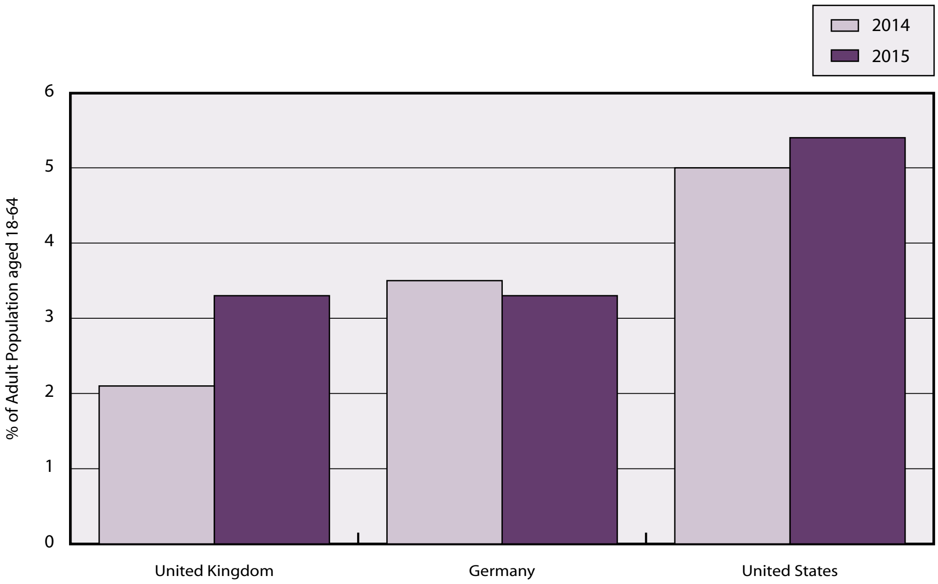
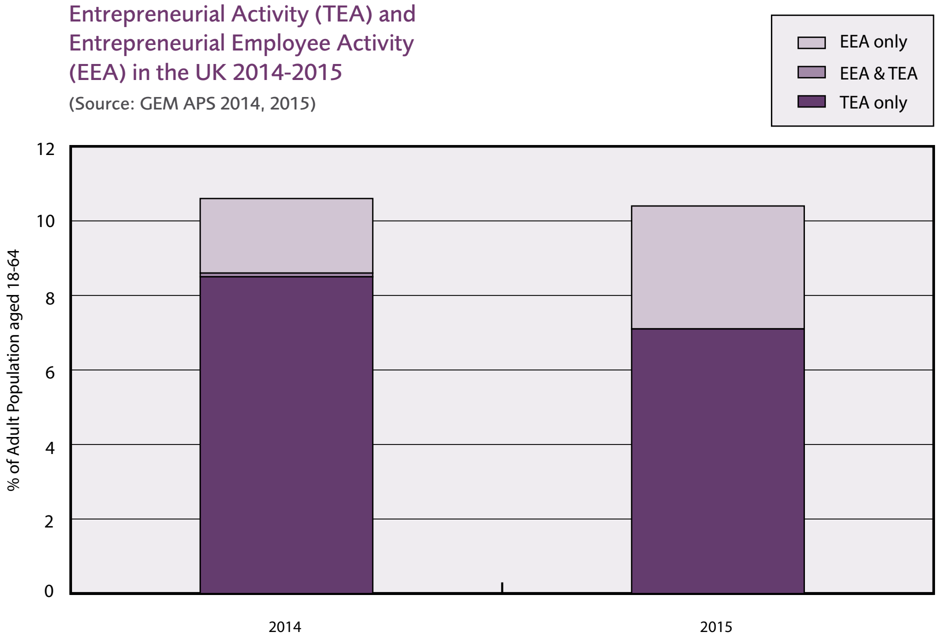


Figure 23: Entrepreneurial Employee Activity (EEA) in the UK, Germany and the US 2014-2015
(Source: GEM APS 2014, 2015)

Figure 24: Total early-stage Entrepreneurial Activity (TEA) and Entrepreneurial Employee Activity (EEA) in the UK 2014-2015
(Source: GEM APS 2014, 2015)



The EEA rate in the UK in 2015 was 3.3% which, as with other entrepreneurial measures, was on a par with that in Germany, but lower than the US (Figure 23). Unlike the TEA rate which fell over the year, the UK's EEA rate in 2015 was significantly higher than that in 2014 (2.1%).

When taken together the EEA and TEA rates provide a fuller picture of the extent of entrepreneurial activity being undertaken in a nation as it covers the actions of entrepreneurial individuals as well as entrepreneurial employees within a business; the latter found to be positively correlated with economic competitiveness. Figure 24 shows the combined rates for the UK in 2014 and 2015, including those that do both TEA and EEA. It is notable that the overall combined rate remained relatively unchanged between the two years at around 10% but within that the increase in the proportion of EEA entrepreneurs in 2015 more than accounted for the drop in TEA entrepreneurs. It is, however, difficult to interpret a trend on the basis of only two data points. Overall, the analysis suggests that failing to take account of EEA misses a large part of entrepreneurial activity and we will continue to monitor this over time.

4 ENTREPRENEURIAL ASPIRATION

The potential of entrepreneurial activity to promote regeneration and growth will reflect the types of business being established. If an entrepreneur expects to create a large number of jobs, or if the product market is new, then his or her potential contribution to growth and regeneration through entrepreneurship may be greater. The complex nature of the contribution of firms of different age and size to job creation in the UK has been highlighted in recent research[16].

To identify individuals who expect to create a relatively high number of jobs, GEM created a variable which measures the percentage of all early-stage entrepreneurs who expect to create more than ten jobs and have 50% or more growth in jobs in the next five years[17]. The results are illustrated in Table 6 for early-stage entrepreneurs (nascent and new business owners) and established business owner-managers. The table also shows the proportion of early-stage entrepreneurs and established business owner-managers who state they operate in new product markets[18], operate in "high" or "medium" technology sectors (according to OECD definitions), and have more than 25% of their export revenue[19] from outside the country.

Table 6 shows that in 2015 the entrepreneurial aspiration metrics varied considerably across the countries. Around 1 in 6 (16%) UK early-stage entrepreneurs had high job expectations which was identical to Germany but lower than the US rate of 1 in 4. In contrast, the high expectation rates of established business owners were more consistent, ranging from 5-7% for all three countries. The 2015 high job expectation rates for the UK were not significantly different to those in 2014. The share of early-

16 See, for example, Hart, M. and Anyadike-Danes, M. (2014) "Moving on from the vital 6%"; Enterprise Research Centre Insight Report, February

17 The OECD defines HGFs as: 'enterprises with average annualised growth in employees or turnover greater than 20 per cent per annum, over a three year period, and with more than 10 employees in the beginning of the observation period'. By contrast, the GEM measure is a measure of expected, not realised, growth and of 50% over five years.

18 Where the product is new to all or most customers and where there is little or no competition.

19 Note that this marks a change from previous years whereby the measure reported on the percentage of customers outside the country.

Table 6: Measures of entrepreneurial aspiration in the UK, Germany and US, 2015
(Source: GEM Global APS 2015)

	(% of TEA or EBO Entrepreneurs)							
	High Job Expectation: More than ten jobs and growth more than 50%		New Product Market		High or Medium tech sectors		Exporting: More than 25% of customers outside the country	
	TEA	EBO	TEA	EBO	TEA	EBO	TEA	EBO
United Kingdom	**15.5**	**5.7**	**38.1**	**10.2**	**12.6**	**10.6**	**20.0**	**12.8**
Germany	15.2	5.0	34.2	12.4	9.0	5.5	25.1	15.7
United States	25.2	6.8	36.0	18.0	6.2	7.3	11.7	7.8

20 GEM collects data for high, medium and low technology sectors according to OECD definitions and also asks if their technology was available one year ago, 2-5 years ago or longer than that. The latter set of variables have been reported in the past but these only give an indication of the newness of the technology in the perception of the respondent. The measure in Table 6 uses OECD definitions of technology.

stage entrepreneurs in new product markets was also relatively similar across the nations, however the US had a higher share of established businesses in these markets (18%) compared to the UK (10%).

The measures in which the UK excelled over the US include the share of early-stage entrepreneurs in high or medium tech sectors (according to OECD definitions[20]), with the UK rate twice that of the US, and in exporting. In the UK 1 in 5 early-stage entrepreneurs had more than 25% of sales outside the country compared to 12% in the US. The shares for established business owners were all lower but the pattern held with the UK rate (13%) higher than that in the US (8%). The UK exporting shares were slightly lower than those observed in Germany, although the high job expectation and new product market shares were remarkably similar in both countries. The only measure in which the UK differed was the share of businesses in high or medium tech sectors, with the UK rates for both early-stage and established businesses 4-5 percentage points higher than Germany, although these differences were not statistically significant.

Figure 25 shows the trend in the relative frequency of high job expectation TEA entrepreneurs for the UK, Germany and

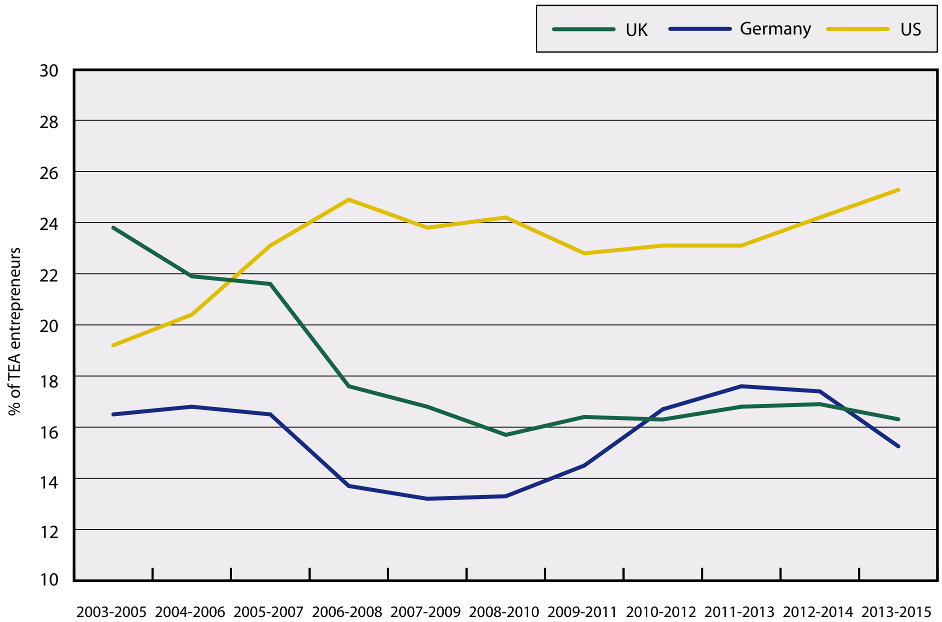


Figure 25: Relative frequency of high job expectation early-stage entrepreneurs in the UK, Germany and the US, three year rolling averages, 2003-2005 to 2013-2015
(Source: GEM Global APS 2003-2015)

the US, using a three year rolling average presentation that smooths out fluctuations from year to year due to small sample sizes. It demonstrates that the relative frequency of high job expectation among early-stage entrepreneurs in the UK has settled at around 16% since the recession, down from the peak rates of over 20% in the first half of the last decade. The US rate has also fluctuated at just under 25% since 2006-08, but in contrast to the UK, this is higher that the opening rates of 2003-05. Germany experienced a lull in high expectation rates also around 2006-08 but by the end of the decade rates had returned to those observed pre-recession. What is obvious is the continuing separation between high expectation in the US and its European comparators.

Figure 26 shows the trend in relative frequency of high job expectation among established business owner-managers, using the same method as for Figure 25. Note that the relative frequency of high job expectation among established business owner-managers is less than one quarter that of early-stage entrepreneurs. For both the UK and US the long term trend has been downwards, with the rates converging and settling at around 4% since the recession. Germany has also had a rate of around 4% since 2010, which marks a return to that observed in 2003-05.

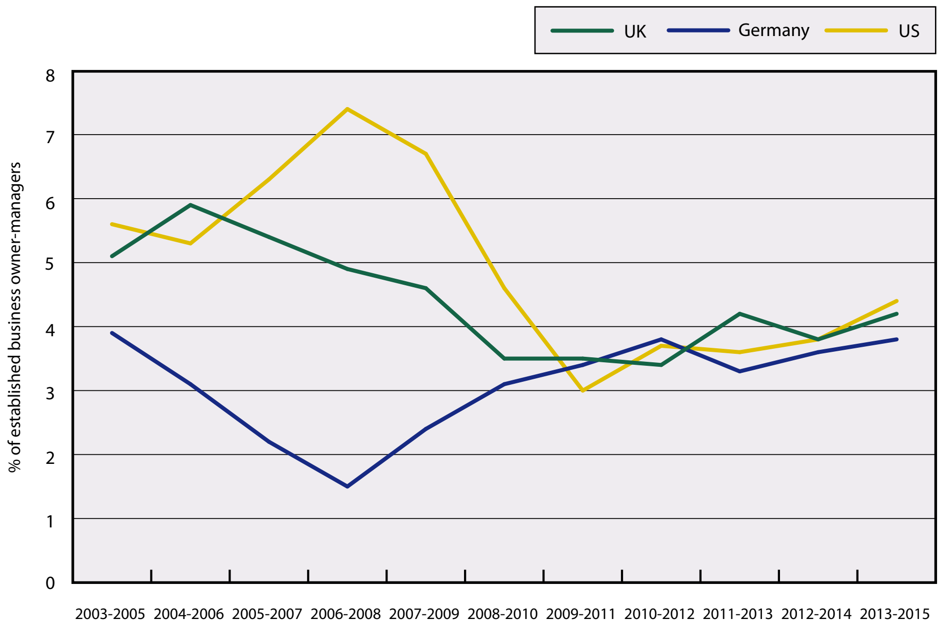


Figure 26: Relative frequency of high job expectation among established business owner-managers in the UK, Germany and the US, three year rolling averages, 2003-2005 to 2013-2015
(Source: GEM APS 2003-2015)

As highlighted in Table 6 (page 29) the UK performs relatively well in a number of the entrepreneurial aspiration metrics in comparison with other countries. Focusing specifically on these 'high value activities' Table 7 reports the share of early-stage and established businesses owners in the UK that are engaged in various combinations of high job expectation, new product markets and exporting activities (using a three year average). For both sets of business owners the majority of firms do none of these activities, however of those that do, the shares are higher for early-stage business owners than established. The proportion of early-stage entrepreneurs adopting one of these activities is almost double that of established business owners, at around one third; a further tenth are engaged in two high value activities compared to just 3% of established business owners. The results confirm the hypothesis that the owners of new, young firms are more ambitious and innovative than their incumbent counterparts.

Table 7: Percentage of TEA and EBO entrepreneurs engaged in high value activities (high job expectation, new product markets, exporting), three year average 2013-15
(Source: GEM APS 2013-2015)

	High Value Activities	
(% of TEA or EBO entrepreneurs)	TEA	EBO
None of these activities	53.7	78.6
1 of these activities	32.0	17.5
2 of these activities	11.5	3.3
3 of these activities	2.8	0.6
Total	100.0	100.0

5 ANTICIPATED VERSUS ACTUAL SOURCES OF FUNDING FOR START-UPS

Obtaining funding remains a major issue for many start-up businesses, with just under half of nascent entrepreneurs reporting that they require external funding. Since 2006, GEM has tracked the mix of funds that nascent entrepreneurs expect to use; sources of funds that they state they have actually used; and, finally those sources which they tried but failed to access.

Table 8 shows expected funding sources for start-ups in 2015[21] . Overall, the results suggest that more than half of all entrepreneurs expect to self-fund whilst 5% report that no funding will be needed. Of those expecting funding from elsewhere banks and government programmes are most favoured followed by close and extended family relations. Just over one-tenth expect funding from private investors or venture capital whilst around 8% expect to raise funds from online crowdfunding.

21 Note that in 2015 there were changes to several of the categories for expectations in funding. As a result it is not strictly comparable with previous years; Table 8 presents the data for 2015, Table 8A in the Appendix presents the previous data from 2009-2014.

Type of funding expected	2015
No funding needed	4.8
All funded by entrepreneur	52.5
None funded by entrepreneur	1.0
Close family member (spouse, parent, sibling)	19.6
Other relatives, kin or blood relations	4.5
Employer or work colleagues	5.3
Private investor or venture capital	12.5
Friends or neighbours	4.9
Banks or other financial institutions	22.1
Government programmes, donations or grants	22.2
Online crowdfunding	7.9
Any other source	6.7

Table 8: Percentage of nascent entrepreneurs expecting funding from different sources 2015
(Source: GEM UK APS 2015)

It is instructive to compare the funding expectations of nascent entrepreneurs with their experience. Figure 27 shows trends in the sources of finance that nascent entrepreneurs report that they have ever used to fund a business. Changes over the 2009 to 2015 period may reflect changes in funding preferences and in perceived, as well as actual availability, of funding. In 2015 there were significant increases in credit card use and equity finance or formal venture capital. Although not displayed, nascent entrepreneurs in 2015 were asked about crowdfunding and just under 1% of respondents said they had ever used crowdfunding to start a business.

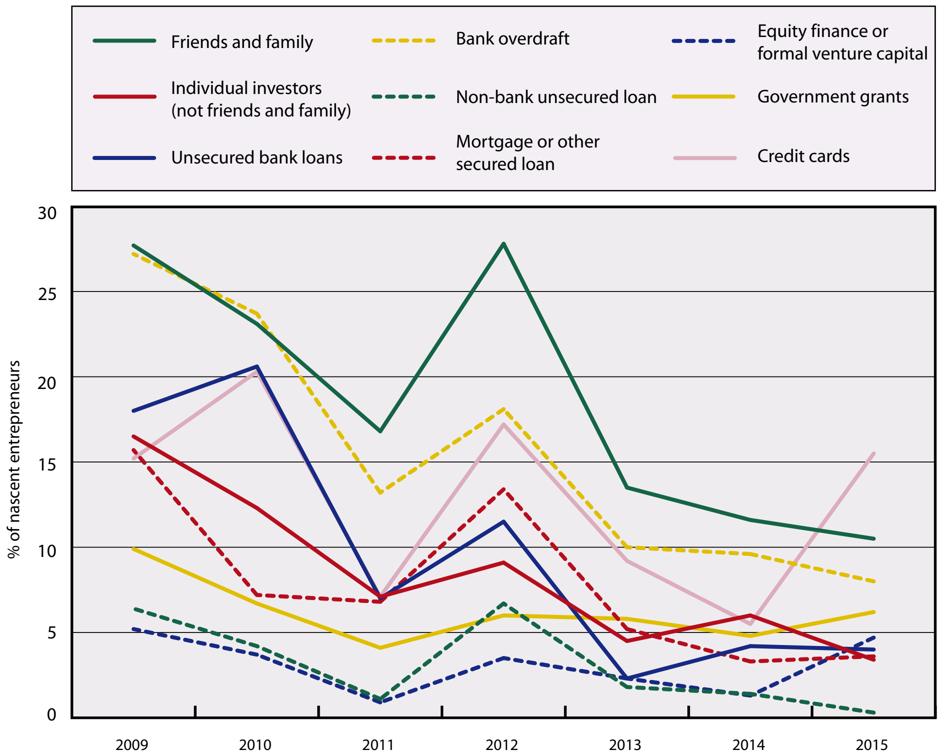


Figure 27: Percentage of UK nascent entrepreneurs who have reported ever using a type of funding for a business, 2009 to 2015

(Source: GEM APS 2009-2015)

Finally, we consider the types of funding that nascent entrepreneurs report they sought and failed to secure. Table 9 shows the annual responses although these do not necessarily reflect refusals for that year. In contrast to the situation in 2014 which saw the lowest reports of refusal for most measures since 2008, 2015 actually saw an increase for all measures. With the exception of friends and family and grants from local authorities reports of refusal were actually more than double those witnessed in 2014, and were statistically significantly higher. Reports of refusals from equity finance or formal venture capital providers was higher than in any other year over the period, although based on a relatively small number of observations. Respondents were asked in 2015 about their experience of crowdfunding and 2.5% of nascent entrepreneurs replied that they had been refused finance through crowdfunding, a similar proportion to those being refused mortgages and other secured and unsecured loans.

	2009	2010	2011	2012	2013	2014	2015
Type of funding sought and refused							
Friends and family	10.8	3.1	6.5	6.2	2.2	4.5	5.7
Individual investors (not friends and family)	10.1	3.1	3.6	7.5	1.1	1.8	4.3
Unsecured bank loans	9.5	17.0	4.2	6.9	1.9	1.0	4.3
Bank overdraft	9.4	12.3	4.5	8.0	3.2	1.5	4.7
Non-bank unsecured loan	4.2	3.1	3.5	3.3	2.9	0.1	2.8
Mortgage or other secured loan	4.0	3.1	2.5	4.9	0.2	0.2	2.1
Equity finance or formal venture capital	2.4	1.3	3.0	1.7	0.6	0.8	2.9
Government grants	7.8	7.0	5.7	6.3	2.2	2.4	5.9
Credit cards	4.9	8.4	2.0	6.6	2.1	0.2	3.7
Grants from local authorities or local enterprise organisations	n.a.	n.a.	6.1	5.0	1.7	3.3	5.4
Crowdfunding	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.5

Table 9: Percentage of UK nascent entrepreneurs who have reported being refused funding, by type of funding refused, 2009 to 2015
(Source: GEM UK APS 2009 to 2015)

22 For a discussion of the growing business angel market place in the UK see Wright, M., Hart, M and Fu, K (2015) "A Nation of Angels: assessing the impact of angel investing across the UK", Enterprise Research Centre Research Report, January 2015.

These trends in lower rates of finance sought from official sources, together with rising rates of refusal, coincide with recent changes in informal investment, or investment by individuals in other people's new businesses in the last three years, as shown in Table 10[22]. The informal investment rate in 2015 stood at 2.3%, maintaining the higher average rate of around 2% since 2010. Investment into friends or neighbours' companies increased to 39% since 2014 making it the most common investment choice followed by close family's ventures. The higher share investing in strangers' businesses observed in 2014 was maintained in 2015 at 16%, which may reflect recent increases in crowdfunding activity in the UK, as well as angel investment.

Table 10: Percentage of individuals aged 18-64 who have invested in someone else's new business in the last 3 years, and the distribution of relationships to the latest investee, 2009 to 2015
(Source: GEM APS 2009 to 2015)

	2009	2010	2011	2012	2013	2014	2015
Informal investment rate							
% aged 18-64 who have invested in someone else's new business in the last 3 years	1.2	2.9	2.4	2.6	2.1	1.9	2.3
Relationship of latest investee (% of latest investments)							
Close family member (spouse, parent, sibling)	41.0	37.0	50.2	57.5	46.8	40.3	38.0
Other relative, kin or blood relations	4.5	7.5	6.2	2.2	6.6	11.1	0.4
Work colleague	8.3	2.2	7.4	8.9	3.9	5.1	0.5
Friend or neighbour	35.5	48.5	28.4	23.4	38.7	25.5	39.2
A stranger with a good business idea	8.6	4.5	7.9	4.1	4.0	17.9	16.3
Other	2.1	0.4	0.0	3.8	0.0	0.1	5.7

6.1 GLOBAL ENTREPRENEURSHIP WEEK

The GEM UK survey includes questions on Global Entrepreneurship Week (GEW) run by Youth Business International (YBI). The objective here is to estimate whether this national campaign, designed to develop an enterprise culture, reached their target audience. Figure 28 presents the responses from 2009-2015.

Awareness of Global Entrepreneurship Week (GEW) averaged at around 20% between 2009 and 2012 but fell significantly in 2013 to around 8%, where it has since remained. Recall of participating in GEW, amongst those who had heard of it, also declined from its peak of 17% in 2011 to 7% in 2013; it has remained at 9% since. Young adults aged 18-24 have the highest rates of awareness (15.3% in 2015 compared to an average of 7% for the other age-bands) and participation (13.5% of those who had heard of GEW in 2015, compared to an average of 7% for the other age-bands).

At 13%, awareness of GEW was higher among nascent and new business owners than those in all other stages of entrepreneurial activity. Figure 29 illustrates the pattern of awareness and participation along the stages of the entrepreneurial process. Participation in GEW was also highest amongst these TEA and established business owners. Notably there was a relatively high degree of awareness of GEW amongst those with no entrepreneurial activity or future intention.

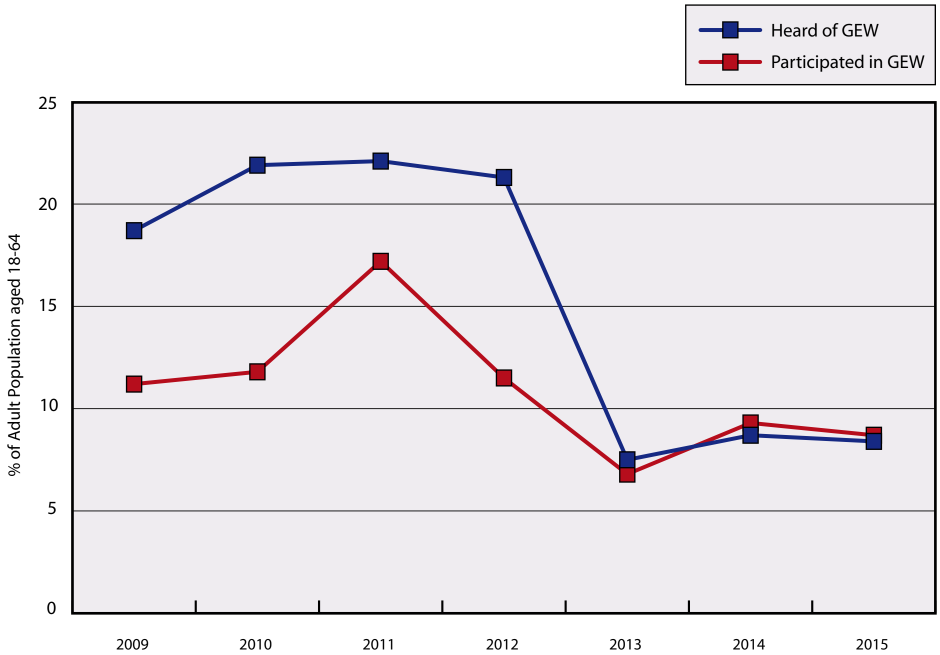
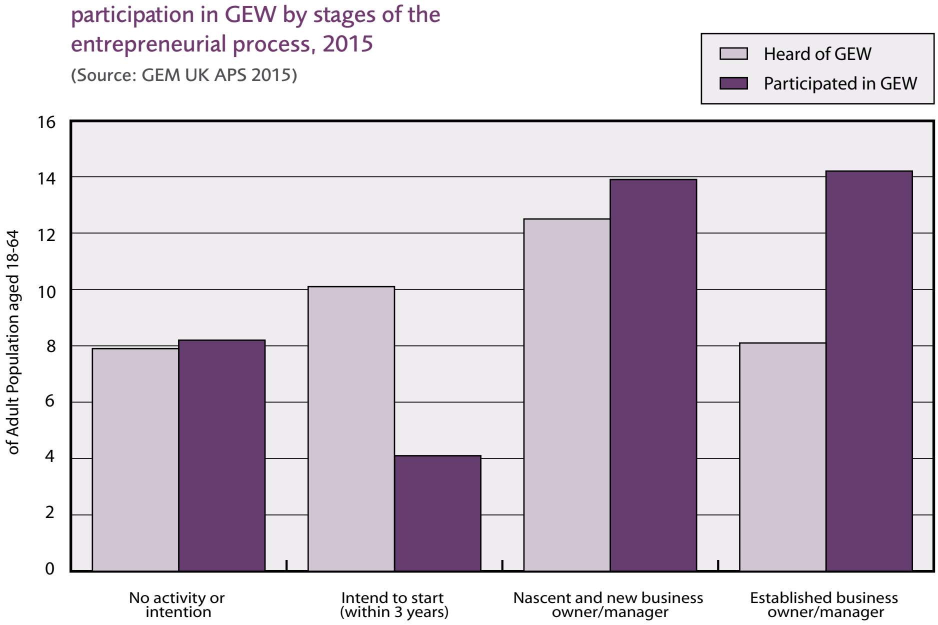


Figure 28: Awareness of and Participation in Enterprise Week/Global Entrepreneurship Week in UK, 2009-2015
(Source: GEM APS 2009-15)

Figure 29: Awareness of and participation in GEW by stages of the entrepreneurial process, 2015
(Source: GEM UK APS 2015)



Conclusion

Early-stage entrepreneurial activity in the UK in 2015 was down significantly on the previous year, however the rate returned to that last seen in 2013 suggesting that 2014 may have been somewhat of an outlier. Indeed the trend of higher TEA rates first observed in 2011 has been maintained, with the rate of 7.1% in 2015 confirming that the UK has in fact moved beyond its long-run stable rate of 6%. Rates for older people in particular have remained high.

In 2015 one fifth of working age individuals either intended to start a business within the next three years, were actively trying to start a business, or were running their own business. This proportion has also remained stable since 2013 and lies above that observed during the mid to late 2000s, in which a rate of around 16% prevailed.

Attitudes of non-entrepreneurial individuals to entrepreneurship have continued to strengthen in 2015; in particular fear of failure appears to be declining again, encouragingly more so for females than males. Opportunity perception has also risen particularly amongst non-entrepreneurial males, with females maintaining their increased rate, as observed in 2014.

The recovery of UK economy and the resulting opportunities for employee roles may result in a lower inclination towards entrepreneurial activity on behalf of the individual. This scenario may explain the decline in TEA rates over the year in the UK, coupled with the increase in entrepreneurial employee activity. However the stability of higher TEA rates since 2011, and strong attitudes in favour of entrepreneurship suggest that starting a business is now more desirable and achievable than it was in previous decades, particularly amongst the older generation.

With these higher long-run entrepreneurial rates funding becomes more important; and although more than half of entrepreneurs expected to self-fund, equal proportions expect funding from banks, government and family to be important sources of income. The increase in self-funding is evident in significantly increased use of credit cards but may also reflect increases in reported refusal rates from most of the traditional sources. In fact, coupled with the higher average rate of informal investment, it may suggest that alternative sources such as crowd-funding are becoming more commonplace in the face of more stringent formal channels.

Appendix 1

GEM UK Sampling and Weighting Methodology

GEM UK is one of the largest, longest-running national studies of entrepreneurial activity in the world, with over 200,000 individuals interviewed since monitoring began with a sample of 1,000 adults in 1998. In 2015, 9,405 adults aged 16-80 were interviewed. The distribution of respondents is not even across the UK. This is because the Hunter Centre for Entrepreneurship at the University of Strathclyde, Welsh Assembly Government, Invest Northern Ireland and Belfast City Council chose to boost sampling in their region in order to have more detail about entrepreneurship in their area.

The raw sample of 9,405 was distributed across 13 geographic areas within which representative sub-samples of the population aged 16-80 were taken. These areas and the sample sizes are: South West: 296; South East: 448; East of England: 338; London: 478; West Midlands: 337; East Midlands: 252; Yorkshire & Humberside: 292; North East: 144; North West: 381; Wales: 2,977; Scotland: 1,978; Northern Ireland: 1,484.

According to Ofcom[23], households in the UK which have access to a mobile phone but not to a fixed telephone landline has dropped slightly from 16% in Q1 of 2014 to 15% in Q1 of 2015. In 2015, 20% of the unweighted GEM sample across the UK consisted of mobile-only households. Meanwhile the decline in the proportion of households with a fixed telephone line has stabilised at 84% between 2010 and 2015. Eurobarometer estimates[24] suggest that in 2009, 20% of UK households were "mobile-only". Whatever the true figure, it is clear that fixed line surveys are not fully representative of UK households, that the distribution of mobile-only households is different to that of fixed line households, and that these differences are not fixed but change over time. In 2010, sampling methods for mobile-only households had advanced to a stage where it was felt that inclusion of this group was not only desirable but feasible (though at greater cost).

Every attempt is made to ensure that the results reported are as reliable and robust as possible. To do this, four sets of weights were calculated for the UK data:

- Weights for the whole UK that take the UK area sub-samples and the age, gender and ethnic minority proportion of the population of the UK (aged 18-64) into account, based on the latest available area estimates from the UK Office of National Statistics, typically mid-year estimates for the previous year.
- Sub-sample area weights that take into account the population distributions within GEM UK sub-sample areas by age, gender and ethnicity. These are used when we report comparisons between GEM UK sub-sample areas.
- Government Official Region (GOR) weights that create representative samples at the GOR level from all sub-samples within the same GOR.
- In addition, separate weights were constructed for England, based on balanced GOR samples for each English region, to develop a final "home nations" weight.

23 Source: Ofcom Facts and Figures. Available at http://media.ofcom.org.uk/facts/

24 See Special Eurobarometer 335, available at http://ec.europa.eu/public_opinion/archives/ebs/ebs_335_en.pdf

Appendix 2

Additional Tables and Data for Figures

Table 1b: Attitudes towards entrepreneurship in the UK, US and Germany in 2015 – percentage of working age population (including the entrepreneurially active) who expressed an opinion and agreed with the statement at the top of the column

(Source: GEM APS 2015. These estimates are comparable with measures used in the 2007 GEM UK report)

	I know someone who has started a business in the last 2 years	There are good start-up opportunities where I live in the next 6 months	I have the skills, knowledge and experience to start a business	Fear of failure would prevent me starting a business
United Kingdom	**29.7**	**41.8**	**43.7**	**37.3**
Germany	23.6	38.3	36.2	46.8
United States	29.8	46.6	55.7	31.5

Table 2b: Entrepreneurial attitudes in the UK in 2013, 2014 and 2015 (% respondents aged 18-64 expressing an opinion and agreeing with the statement)

(Source: GEM APS 2013, 2014, 2015. These estimates are comparable with measures used in the 2007 GEM UK report)

	2013	2014	2015	2013	2013	2014	2014	2015	2015
	All	All	All	Male	Female	Male	Female	Male	Female
I personally know someone who has started a business in the last two years	29.2	29.9	29.7	31.7	26.7	33.6	26.2	33.2	26.2
There will be good start-up opportunities where I live in the next six months	36.0	41.4	41.8	40.9	30.9	46.1	36.4	46.8	36.8
I have the skills, knowledge and experience to start a business	44.1	45.5	43.7	52.1	36.1	55.4	35.6	52.1	35.3
Fear of failure would prevent me from starting a business (for those who agree there are good start-up opportunities)	36.8	37.3	37.3	34.4	40.0	32.4	43.9	31.1	39.2
Most people consider that starting a business is a good career choice	54.6	58.0	58.0	55.3	53.8	58.9	57.2	58.6	57.5
Those successful at starting a business have a high level of status and respect in society	79.6	78.3	79.4	80.0	79.1	79.3	77.3	78.6	80.2
You will often see stories about people starting successful new businesses in the media	50.0	59.3	61.7	53.1	46.9	60.6	58.0	64.3	59.0

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
I know someone who has started a business in the last 2 years	20.7	21.8	24.1	25.3	24.9	23.6	23.6	23.4	31.1	28.2	27.1	25.2	24.7	25.8
There are good start-up opportunities where I live in the next 6 months	25.8	31.6	33.2	35.4	33.8	36.1	26.9	23.0	26.8	27.9	30.5	33.2	36.8	37.6
I have the skills, knowledge and experience to start a business	40.9	43.3	46.4	46.4	45.1	44.0	44.4	44.4	47.2	36.7	38.7	37.0	38.4	37.5
Fear of failure would prevent me starting a business (for those who agree there are good start-up opportunities)	37.0	35.5	36.0	36.1	37.3	37.9	38.3	35.2	36.0	41.4	43.3	41.4	43.0	39.5
Most people consider that starting a business is a good career choice		52.8	54.7	54.6	54.7	54.9	52.1	47.9	52.6	50.4	49.9	54.5	57.3	57.5
Those successful at starting a business have a high level of status and respect in society		71.7	72.2	71.8	72.9	73.6	74.2	73.8	76.3	81.4	77.1	79.5	78.4	79.8
You will often see stories about people starting successful new businesses in the media		54.8	55.3	53.9	54.3	56.3	52.4	44.7	51.5	44.2	45.5	48.8	58.8	59.9

Figure 2: Entrepreneurial attitudes in the UK, 2002-2015: (% non-entrepreneurially-active respondents aged 18-64 expressing an opinion and agreeing with the statement)
(Source: GEM UK APS 2002-2015)

Figure 2b: Entrepreneurial Attitudes in the UK, 2002-2015 (percentage of working age population expressing an opinion and agreeing with the statement
(Source: GEM APS 2002-2015)

Note: These figures are calculated on the same basis as in GEM UK Report prior to 2008 – that is, for the 18-64 year sample overall and not solely the non-entrepreneurial adult population. However, due to revisions undertaken in the pooled UK GEM database there will be small differences between these figures and those published prior to 2008.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
I know someone who has started a business in the last 2 years	23.9	24.6	26.6	27.7	27.3	25.7	25.8	26.5	33.6	32.4	32.7	29.2	29.9	29.7
There are good start-up opportunities where I live in the next 6 months	29.1	35.0	35.7	38.2	36.7	39.1	28.8	27.0	29.4	31.1	34.0	36.0	41.4	41.8
I have the skills, knowledge and experience to start a business	46.0	48.3	50.3	50.9	49.6	48.5	49.0	52.4	52.3	43.9	46.9	44.1	45.5	43.7
Fear of failure would prevent me starting a business	34.3	33.8	33.7	34.3	35.7	35.9	37.2	35.1	39.5	45.7	42.2	40.2	39.0	37.3
Most people consider that starting a business is a good career choice		51.7	54.3	54.3	54.4	54.7	51.7	48.1	52.1	49.8	49.9	54.6	58.0	58.0
Those successful at starting a business have a high level of status and respect in society		71.6	72.1	71.7	72.7	73.6	73.8	73.8	76.4	80.4	76.8	79.6	78.3	79.4
You will often see stories about people starting successful new businesses in the media		55.6	56.1	54.6	55.0	56.7	53.2	45.9	52.4	45.4	46.5	50.0	59.3	61.7

Table 3b: Entrepreneurial Attitudes in the UK regions in 2015 (percentage of working age population expressing an opinion and agreeing with the statement)
(Source: GEM APS 2015)

	England	Wales	Scotland	Northern Ireland	United Kingdom
I know someone who has started a business in the last 2 years	29.8	28.4	30.2	26.7	**29.7**
There are good start-up opportunities where I live in the next 6 months	43.1	32.7	37.7	33.0	**41.8**
I have the skills, knowledge and experience to start a business	44.0	44.8	42.6	37.1	**43.7**
Fear of failure would prevent me from starting a business	37.1	37.9	36.0	43.5	**37.3**
Most people consider that starting a business is a good career choice	58.2	56.9	59.3	52.0	**58.0**
Those successful at starting a business have a high level of status and respect in society	79.3	79.5	80.0	79.6	**79.4**
You will often see stories about people starting successful new businesses in the media	61.5	59.8	61.7	67.6	**61.7**

Table 3c: Good Opportunities for Start-up in the local area in next 6 months 2002 to 2015 - percentage of non-entrepreneurially active working age population expressing an opinion and agreeing with the statement
(Source: GEM APS 2002-2015)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	% change 2002-14	% change 2012-14
England	26.4	31.5	33.4	36.5	34.1	36.3	26.8	23.5	27.7	28.5	31.8	34.6	37.5	38.6	46.4	21.5
Wales	21.1	29.7	30.7	31.8	28.6	30.4	19.6	20.4	21.8	25.3	22.6	25.1	29.5	29.6	40.3	31.0
Scotland	23.3	34.1	33.4	28.6	33.6	36.1	33.1	21.2	25.4	28.2	26.6	29.1	38.1	34.6	48.7	30.2
N. Ireland	24.8	29.0	32.2	32.8	32.9	39.0	21.8	16.5	15.9	24.1	19.7	20.2	25.2	31.1	25.3	57.8
UK Average	**25.8**	**31.6**	**33.2**	**35.4**	**33.8**	**36.1**	**26.9**	**23.0**	**26.8**	**28.2**	**30.5**	**33.2**	**36.8**	**33.7**	**30.5**	**10.4**

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Opportunity Perception	Male	29.2	34.6	36.8	40.2	37.6	40.8	30.9	25.0	29.3	29.7	34.6	37.6	40.4	42.4
	Female	22.8	29.0	29.7	31.0	30.1	31.6	23.0	20.9	24.7	26.4	26.8	29.0	33.4	33.2
Fear of Failure	Male	34.4	34.6	34.9	34.0	34.1	36.4	35.9	32.3	34.9	38.7	40.5	40.1	38.5	36.8
	Female	40.1	35.0	37.5	38.6	41.2	39.6	41.4	38.8	37.2	44.0	46.4	43.0	48.0	42.6

Figure 3: Male and female attitudes towards Good Opportunities and Fear of Failure (% non-entrepreneurially-active respondents aged 18-64 expressing an opinion and agreeing with the statements "There are good start-up opportunities where I live in the next 6 months"; "Fear of failure would prevent me from starting a business")

(Source: GEM UK APS 2002-2015)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Established business owner/manager	5.6	5.7	4.7	5.1	5.3	5.0	6.0	5.8	6.2	6.5	7.0	6.5	5.9	5.2
New business owner/manager	3.1	3.2	2.8	3.0	2.8	2.7	2.8	3.2	3.3	3.4	4.4	3.5	3.8	3.0
Nascent entrepreneur	2.1	3.0	2.9	2.7	2.7	2.7	2.6	2.5	2.9	4.1	5.3	3.5	4.6	3.8
Intend to start (within three years)	3.9	4.9	5.9	5.7	4.9	4.9	4.5	3.8	4.6	6.8	7.7	6.5	5.8	7.3
No activity or intention	85.3	83.2	83.7	83.4	84.3	84.7	84.1	84.7	83.0	79.2	75.7	80.0	79.9	80.7

Figure 4: Participation in Entrepreneurship in the UK by most established stage of entrepreneurial activity, 2002 to 2015

(Source: GEM UK APS 2002-2015)

Figure 4b: Participation in entrepreneurship in the UK by stage of entrepreneurial activity (percentage of working age population), 2002 to 2015

(Source: GEM UK APS 2002-2015 Note: individuals can be in more than one stage at a time; hence annual percentages do not total to 100)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Established business owner/manager	5.6	5.7	4.7	5.1	5.3	5.0	6.0	5.8	6.2	6.5	7.0	6.5	5.9	5.2
New business owner/manager	3.1	3.2	2.9	3.1	2.8	2.7	2.9	3.2	3.4	3.4	4.4	3.6	3.8	3.1
Nascent entrepreneur	2.5	3.5	3.2	3.2	3.2	3.0	2.8	2.7	3.2	4.2	5.7	3.8	4.9	4.0
Intend to start (within three years)	6.5	7.9	8.6	8.7	7.8	7.4	6.8	6.1	7.2	9.8	11.3	8.1	8.5	9.7
No activity or intention	85.3	83.2	83.7	83.4	84.3	84.7	84.1	84.7	83.0	79.2	75.7	80.0	79.9	80.7

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
United Kingdom	**5.4**	**6.4**	**5.8**	**6.0**	**5.8**	**5.6**	**5.5**	**5.8**	**6.5**	**7.6**	**9.8**	**7.3**	**8.6**	**7.1**
Germany	5.2	5.2	5.1	5.4	4.2		3.8	4.1	4.2	5.6	5.3	5.0	5.3	4.7
United States	10.5	11.9	11.3	12.4	10.0	9.6	10.8	8.0	7.6	12.3	12.8	12.7	13.8	11.9

Figure 5: Total early-stage Entrepreneurial Activity (TEA) in UK, Germany and US (2002-2015)
(Source: GEM Global APS 2002-2015)

Figure 6: Total early-stage Entrepreneurial Activity (TEA) in the UK, Germany and the US by Age Group (2015)
(Source: GEM Gllobal APS 2015)

	18-24	25-34	35-44	45-54	55-64
United Kingdom	**3.9**	**8.0**	**9.0**	**7.9**	**5.3**
Germany	4.6	6.3	5.0	5.4	2.0
United States	10.2	13.8	16.7	10.6	7.4

Figure 7: Total early-stage Entrepreneurial Activity (TEA) in the UK by Age Group (2013 to 2015)
(Source: GEM APS 2013, 2014, 2015)

	18-24	25-34	35-44	45-54	55-64	Total
2013	5.7	7.7	9.2	8.2	4.6	7.3
2014	6.3	10.6	11.0	7.8	6.3	8.6
2015	3.9	8.0	9.0	7.9	5.3	7.1

Table 8a: Percentage of nascent entrepreneurs expecting funding from different sources 2009 to 2014
(Source: GEM UK APS 2009 to 2014)

Type of funding expected	2009	2010	2011	2012	2013	2014
No funding needed	5.0	10.3	6.2	4.4	6.0	7.3
All funded by entrepreneur	50.7	43.8	47.0	39.0	40.6	46.0
None funded by entrepreneur	3.9	8.5	4.9	6.7	1.1	1.6
Close family member (spouse, parent, sibling)	10.1	8.6	3.5	8.9	3.0	9.1
Other relatives, kin or blood relations	6.0	1.7	2.0	8.2	2.1	6.0
Work colleagues	6.8	5.0	10.1	8.3	5.8	5.7
A stranger	3.7	0.7	1.1	5.0	2.7	1.6
Friends or neighbours	4.5	6.9	2.5	5.6	6.1	4.9
Banks or other financial institutions	20.0	18.2	18.6	22.3	10.2	8.8
Government programmes	15.1	17.7	11.1	15.9	8.9	7.2
Any other source	8.8	5.0	7.2	13.2	8.2	8.2

Figure 8: Necessity and opportunity TEA rates in the UK, Germany and the US in 2015
(Source: GEM APS 2015)

	Opportunity TEA	Necessity TEA
United Kingdom	**5.3**	**1.6**
Germany	3.8	0.8
United States	9.8	1.7

Figure 9: Necessity and opportunity nascent and new business owner-manager rates in the UK (showing means and 95% confidence intervals), 2013, 2014 and 2015
(Source: GEM UK APS 2013, 2014, 2015)

	Nascent entrepreneurship rate						New business owner-manager rate					
	Opportunity			Necessity			Opportunity			Necessity		
	2013	2014	2015	2013	2014	2015	2013	2014	2015	2013	2014	2015
High	3.51	4.46	3.62	0.65	0.85	0.92	3.13	3.37	2.39	0.91	0.83	1.12
Low	2.78	3.63	2.84	0.36	0.51	0.54	2.45	2.65	1.76	0.52	0.49	0.70
Mean	3.14	4.05	3.23	0.51	0.68	0.73	2.79	3.01	2.07	0.71	0.66	0.91

Figure 10: Total early-stage entrepreneurial activity by gender in the UK, Germany and the US in 2015
(Source: GEM APS 2015)

	Male TEA	Female TEA
United Kingdom	**9.5**	**4.7**
Germany	6.1	3.3
United States	14.6	9.2

Figure 11: Established business ownership by gender in the UK, Germany and the US, 2015
(Source: GEM APS 2015)

	Male EBO	Female EBO
United Kingdom	**6.5**	**3.8**
Germany	6.0	3.7
United States	9.1	5.6

Figure 12: Female early-stage Entrepreneurial Activity in the UK, Germany and the US, 2002-2015
(Source: GEM APS 2002-2015)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
United Kingdom	**3.2**	**3.9**	**3.8**	**3.7**	**3.7**	**3.6**	**3.6**	**3.7**	**4.0**	**5.0**	**7.1**	**5.8**	**5.7**	**4.7**
Germany	3.4	3.3	3.1	3.8	2.6		3.4	3.7	2.9	4.5	3.5	3.9	4.0	3.3
United States	8.2	8.2	10.7	9.7	7.4	7.3	8.8	5.8	7.0	10.4	10.5	10.4	11.2	9.2

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
England	5.6	6.4	6.0	6.2	6.1	5.7	5.7	6.0	6.7	7.7	10.3	7.5	9.1	7.2
Wales	4.2	6.6	5.2	5.2	5.5	5.3	5.3	6.0	5.8	8.1	7.0	5.4	7.1	6.8
Scotland	5.0	5.5	5.0	5.7	4.1	4.6	4.5	3.6	4.2	6.2	6.9	6.8	5.4	6.7
N. Ireland	3.7	5.2	5.3	4.8	3.7	4.9	4.8	5.2	6.4	7.1	7.1	5.1	6.7	5.4

Figure 13: Total early-stage Entrepreneurial Activity in the UK Home Nations, 2002-2015
(Source: GEM UK APS 2002-2015)

	England	Wales	Scotland	N. Ireland
1st Quintile	5.7	5.0	7.7	6.3
2nd Quintile	8.0	6.9	6.7	7.5
3rd Quintile	8.3	8.4	8.2	4.0
4th Quintile	8.0	6.7	6.0	6.1
5th Quintile	5.4	6.9	4.9	3.8

Figure 14: Total early-stage Entrepreneurial Activity in the UK Home Nations by Index of Multiple Deprivation 2015
(Source: GEM UK APS 2015)

	Male	Female	Ratio Female to Male TEA
England	9.8	4.6	47%
Wales	9.0	4.6	52%
Scotland	7.5	5.8	77%
N. Ireland	7.4	3.4	46%
United Kingdom	**9.5**	**4.7**	**49%**

Figure 15: Male and Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2015
(Source: GEM UK APS 2015)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
England	3.2	4.0	3.8	3.8	3.9	3.8	3.8	3.8	4.1	5.0	7.7	6.1	6.0	4.6
Wales	3.0	4.1	4.2	3.6	3.7	3.4	4.0	4.4	3.6	6.1	4.0	4.2	4.9	4.6
Scotland	3.6	3.0	3.7	3.7	2.6	2.7	2.5	2.5	3.3	4.3	5.0	5.2	3.9	5.8
N. Ireland	1.7	3.5	2.4	2.6	2.4	2.2	2.3	2.4	3.3	3.9	3.6	2.2	4.4	3.4

Figure 16: Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2002-2015

(Source: GEM UK APS 2002-2015)

Figure 17: Total early-stage Entrepreneurial Activity in the UK Home Nations by Age Group, 2015

(Source: GEM UK APS 2015)

	18-24	25-34	35-44	45-54	55-64
England	3.6	8.0	9.0	8.3	5.6
Wales	5.9	10.0	6.5	6.0	5.5
Scotland	5.5	7.2	10.6	6.5	3.2
N. Ireland	3.7	7.4	7.1	4.4	3.6
United Kingdom	**3.9**	**8.0**	**9.0**	**7.9**	**5.3**

Figure 18: Trend in Total early-stage Entrepreneurial Activity in the UK Home Nations for 18 to 29 year olds, 2002 to 2015

(Source: GEM UK APS 2002-2015)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
England	4.4	5.9	4.7	5.7	5.0	5.5	5.0	5.3	4.7	7.4	10.0	6.4	7.6	5.8
Wales	3.4	4.9	4.0	4.0	4.8	4.6	7.8	6.0	7.2	9.7	8.6	4.9	8.4	7.4
Scotland	2.8	5.6	6.0	4.6	3.3	4.8	4.0	1.6	5.1	7.0	5.1	7.1	4.3	7.2
N. Ireland	4.1	6.1	4.7	5.0	3.6	4.1	3.9	5.7	4.2	7.2	5.7	4.9	6.7	4.8

	TEA rate			
	White		Non-White	
	2014	2015	2014	2015
High	8.59	6.91	15.91	14.64
Low	7.41	5.79	9.77	8.80
Mean	8.00	6.35	12.84	11.72

Figure 19: Total early-stage Entrepreneurial Activity Rate by White and Non-White Ethnic Status 2014-2015 (showing means and 95% confidence intervals)
(Source: GEM UK APS 2014, 2015)

	TEA rate					
	UK-born life-long resident		UK-born regional migrant		Immigrant	
	2014	2015	2014	2015	2014	2015
High	8.26	5.93	11.61	8.48	14.90	18.40
Low	6.89	4.69	9.00	6.29	9.26	12.40
Mean	7.57	5.31	10.31	7.38	12.08	15.40

Figure 20: Total early-stage Entrepreneurial Activity Rate by Migrant Status 2014-2015 (showing means and 95% confidence intervals)
(Source: GEM UK APS 2014, 2015)

Figure 21: Total early-stage Entrepreneurial Activity Rate by Migrant and Resident Status 2015
(Source: GEM UK APS 2015)

	UK-born life-long residents	UK-born regional in-migrants has never lived abroad	UK-born but has lived abroad	Immigrants
High	5.99	7.31	13.01	17.82
Low	4.69	4.97	8.06	12.98
Mean	5.34	6.14	10.54	15.40

Figure 22: Necessity and Opportunity TEA by Migrant and Resident Status 2015
(Source: GEM UK APS 2015)

	Necessity TEA	Opportunity TEA
UK-born life-long residents	1.5	3.8
UK-born regional in-migrants has never lived abroad	1.8	4.3
UK-born but has lived abroad	2.7	7.9
Immigrants	1.7	13.4

Figure 23: Entrepreneurial Employee Activity (EEA) in the UK, Germany and the US 2014-2015
(Source: GEM APS 2014, 2015)

	2014	2015
United Kingdom	**2.1**	**3.3**
Germany	3.5	3.3
United States	5.0	5.4

Figure 24: Total early-Stage Entrepreneurial Activity (TEA) and Entrepreneurial Employee Activity (EEA) in the UK 2014-2015
(Source: GEM APS 2014-2015)

	2014	2015
TEA only	8.5	7.1
EEA & TEA	0.1	0.0
EEA only	2.0	3.3

	2003-05	2004-06	2005-07	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14	2013-15
United Kingdom	**23.8**	**21.9**	**21.6**	**17.6**	**16.8**	**15.7**	**16.4**	**16.3**	**16.8**	**16.9**	**16.3**
Germany	16.5	16.8	16.5	13.7	13.2	13.3	14.5	16.7	17.6	17.4	15.3
United States	19.2	20.4	23.1	24.9	23.8	24.2	22.8	23.1	23.1	24.2	25.3

Figure 25: Relative frequency of high job expectation early-stage entrepreneurs in the UK, Germany and the US, three year rolling averages, 2003-2005 to 2013-2015

(Source: GEM Global APS 2003-2015)

Figure 26: Relative frequency of high job expectation among established business owner-managers in the UK, Germany and the US, three year rolling averages, 2003-2005 to 2013-2015

(Source: GEM APS 2003-2015)

	2003-05	2004-06	2005-07	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14	2013-15
United Kingdom	**5.1**	**5.9**	**5.4**	**4.9**	**4.6**	**3.5**	**3.5**	**3.4**	**4.2**	**3.8**	**4.2**
Germany	3.9	3.1	2.2	1.5	2.4	3.1	3.4	3.8	3.3	3.6	3.8
United States	5.6	5.3	6.3	7.4	6.7	4.6	3.0	3.7	3.6	3.8	4.4

	2009	2010	2011	2012	2013	2014	2015
Friends and family	27.7	23.1	16.8	27.8	13.5	11.6	10.5
Individual investors (not friends and family)	16.5	12.3	7.1	9.1	4.5	6.0	3.4
Unsecured bank loans	18.0	20.6	7.0	11.5	2.3	4.2	4.0
Bank overdraft	27.2	23.7	13.2	18.1	10.0	9.6	8.0
Non-bank unsecured loan	6.4	4.2	1.1	6.7	1.8	1.4	0.3
Mortgage or other secured loan	15.7	7.2	6.8	13.4	5.2	3.3	3.6
Equity finance or formal venture capital	5.2	3.7	0.9	3.5	2.3	1.3	4.7
Government grants	9.9	6.7	4.1	6.0	5.8	4.8	6.2
Credit cards	15.2	20.3	7.1	17.2	9.2	5.5	15.5

Figure 27: Percentage of UK nascent entrepreneurs who have reported ever using a type of funding for a business, 2009 to 2015

(Source: GEM APS 2009-2015)

Figure 28: Awareness of and Participation in Enterprise Week/Global Entrepreneurship Week in UK, 2009-2015

(Source: GEM APS 2009-15)

	2009	2010	2011	2012	2013	2014	2015
Heard of GEW	18.7	21.9	22.1	21.3	7.5	8.7	8.4
Participated in GEW	11.2	11.8	17.2	11.5	6.8	9.3	8.7

Figure 29: Awareness of and participation in GEW by stages of the entrepreneurial process, 2015

(Source: GEM UK APS 2015)

	No activity or intention	Intend to start (within 3 years)	Nascent & New business owner/manager	Established business owner/manager
Heard of GEW	7.9	10.1	12.5	8.1
Participated in GEW	8.2	4.1	13.9	14.2

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
18-29	5.9	4.8	5.5	4.8	5.4	5.0	5.0	4.9	7.4	9.4	6.4	7.3	6.0
30-49	7.8	7.2	7.6	7.3	6.8	7.0	7.1	8.8	9.2	12.9	8.1	10.8	8.3
50+	4.2	4.4	3.9	4.2	3.8	3.7	4.4	4.5	5.6	5.5	6.5	7.1	6.1

Table 11: Total early-stage Entrepreneurial Activity by Age-band 2003-2015
(Source: GEM APS 2003-2015)

	Male		Female	
	2014	2015	2014	2015
High	11.79	10.24	4.93	4.63
Low	8.47	6.98	3.00	2.56
Mean	10.13	8.61	3.96	3.60

Table 12: Total early-stage Entrepreneurial Activity amongst the 50+ Age Group 2014-15
(Source: GEM APS 2014-2015)

Table 13: Necessity and Opportunity TEA amongst the 50-64 Age Group 2014-15
(Source: GEM APS 2014-2015)

	Opportunity TEA				Necessity TEA			
	Male		Female		Male		Female	
	2014	2015	2014	2015	2014	2015	2014	2015
High	9.01	7.50	3.69	3.72	3.17	3.11	1.20	1.27
Low	6.09	4.72	2.04	1.89	1.51	1.39	0.34	0.29
Mean	7.55	6.11	2.87	2.80	2.34	2.25	0.77	0.78