Global Entrepreneurship Monitor

United Kingdom
2018 Monitoring Report

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Global Entrepreneurship Monitor 2018 UK Report

Foreword by Paul Thwaite, MD, Head of Sales, Specialist Businesses & Business Banking, NatWest

Entrepreneurship is an area that clearly defines NatWest. As the UK's biggest bank for business, we understand that SMEs are the lifeblood of the economy and are committed to supporting entrepreneurs achieve their ambitions. With micro (0-9 employees) and small (10-49) businesses making up over 99% of the UK's 5.7 million businesses in 2018, it is vital for the sustainable growth of the UK economy that we create the right environment for entrepreneurs to start, scale and succeed.

NatWest is honoured to once again sponsor the annual Global Entrepreneurship Monitor, the most authoritative research into entrepreneurial activity and trends in the United Kingdom. This insight helps us ensure that our Entrepreneur Accelerator programme, a diverse set of entrepreneur support propositions, is tailored to reflect the needs of entrepreneurs at every stage, whether they are an early stage start up, established SME or a high growth business looking to scale. This has enabled us to provide bespoke support to more than 11,000 entrepreneurs over the past year.

This year's report highlights that the UK's entrepreneurial spirit is still strong with 20% of working age individuals engaged in some type of entrepreneurial activity or intending to start a business within the next three years. However, it also highlights some areas where more attention is required, including that women are still less likely to start their own business than men.

This was also evidenced earlier in the year with the launch of the UK Government's Rose Review into Female Entrepreneurship, spearheaded by NatWest's Deputy Chief Executive and CEO of Commercial & Private Banking Alison Rose.

The Rose Review found that women receive less than 1% of venture capital and have an average starting capital 50% below men. In addition, only 1 in 3 UK entrepreneurs are female, a gender gap equivalent to approximately 1.1m missing businesses, which also equates to a £250bn opportunity for the UK economy.

While these are stark findings, I am pleased to say we are working with other financial institutions and key stakeholders, including Her Majesty's Treasury, to address the situation. The government has shown its commitment to the scale of the opportunity by setting a target of increasing female entrepreneurs by 50% to create another 600,000 female entrepreneurs by 2030.

We also know that tailored support and access to advice and help at the right time can have a significant impact on helping businesses grow.

At the heart of NatWest's support for entrepreneurs is our Entrepreneur Accelerator programme, a fully funded proposition of bespoke coaching, mentoring, insight and access to the bank's supply chain, partners and network. It is specifically designed to meet the needs of entrepreneurs who want to grow and scale their business. Furthermore, with 47% of the businesses we've supported between 2018 and 2019 through our Accelerator programmes being female-led, our commitment to advancing female entrepreneurship is clear.

Based in our UK-wide network of 12 hubs, our core Accelerator is a 6 to 18 month programme that is capable of supporting 1,000 entrepreneurs simultaneously. Every one of these entrepreneurs benefits from full wrap-around care, connectivity and know-how, all crucial for their success and a strong national economy.

Over the past year these businesses have created more than 1,000 jobs, secured £224 million in investment and generated millions of pounds for their local economies.

There is a real sense of pride in playing such an integral role in so many entrepreneurs' journeys. Our aim is to support their ambitions and ultimately help drive their growth and that of the economy. We know that if these businesses do well, the bank does well, the economy benefits and our communities flourish.

Paul

Paul Thwaite
MD, Head of Sales,
Specialist Businesses
& Business Banking

Acknowledgements

We are pleased to have NatWest sponsor the 2018 Global Entrepreneurship Monitor UK Report. As the UK's biggest supporter of small businesses, they understand the important role that start-ups, scale-ups and high growth businesses play in a strong and prosperous UK economy.

Participation in the GEM Global project in 2018 by the UK consortium was made possible by funding from the Department for Business, Energy and Industrial Strategy (BEIS) Business Innovation Directorate, Hunter Centre for Entrepreneurship at the University of Strathclyde, the Welsh Government, Department for the Economy (NI) and NatWest.

The vendor for the Adult Population Survey (APS) was BMG Research Ltd and we would like to thank Steve Lomax for his role in the timely execution of the survey and the creation of the UK dataset.

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Executive Summary

Executive Summary

Background

The Global Entrepreneurship Monitor (GEM) research consortium tracks rates of entrepreneurship across multiple phases in 49 economies, making it the world's most authoritative comparative study of entrepreneurial activity in the general adult population. In the UK in 2018, 9,002 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, France, Germany and the United States. It also compares the results across 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 2018 was 7.9%.

The 2018 UK TEA rate was lower but not significantly different to 2017 (8.7%) but exceeded the previous long-run rate of around 6% which prevailed until 2010. It is important to note, however, that this increase is largely in low job expectation entrepreneurial activity, with the relative prevalence of high expectation activity dropping by around one quarter since the early 2000s.

The TEA rate of 7.9% in the UK compares favourably to France (6.1%) and Germany (5.0%) but is lower than that of the US (15.6%); the gap with the US is due largely to differences in the nascent entrepreneurship rate rather than the new business owner rate.

TEA rates in 2018 were similar across the home nations of Wales (6.9%), Scotland (6.3%) and Northern Ireland (6.5%). The rate in England was 8.1% but this was not significantly different to the other home nations.

More than four-fifths of those involved in early-stage entrepreneurial activity in the UK were opportunity-motivated. At 6.6% the opportunity TEA rate was not significantly different from 2017. The necessity rate was identical to 2017 at 1.1%.

Employees can also be engaged in entrepreneurial activity on behalf of their employers; this is measured through the Entrepreneurial Employee Activity (EEA) Rate. In 2018 the UK's rate was 5.7%, which was significantly different to 2017 (6.8%). Considering both TEA and EEA together provides a more comprehensive picture of entrepreneurial activity in a nation.

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.

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 similar to 2017 and, again, higher than the historical trend.

8.5% of working age adults expected to start a business within the next 3 years compared to 7.6% in Germany; both rates were lower than those in France (20.4%) and the US (18.5%).

4.0% of the adult population in the UK were actively trying to start a business (*nascent entrepreneurs*), compared with 2.7% in Germany, 3.9% in France and 10.5% in the US.

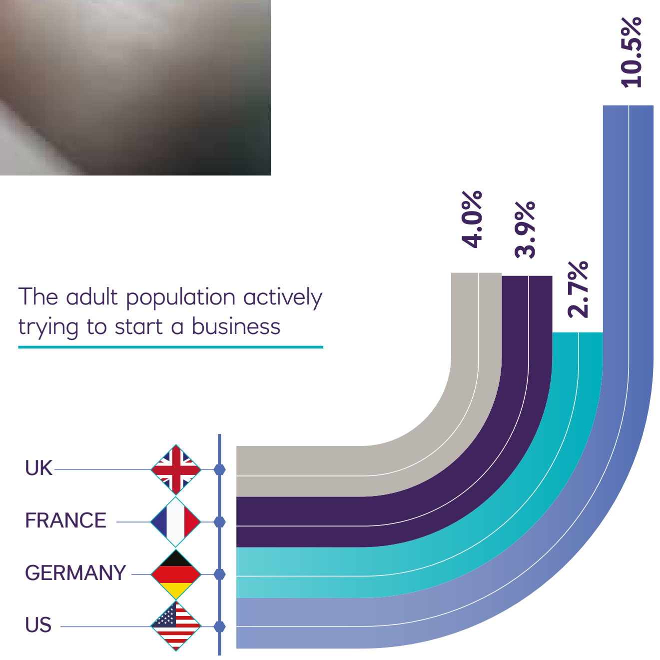
4.0% of the working age adult population were owner-managers of a business that was 4 to 42 months old (*new business owner-managers*). This compares favourably to the US rate of 5.3%, the German rate of 2.4% and the French rate of 2.3%.

6.6% of the UK adult population owned and managed a business older than 42 months (*established business owner-managers*). This was unchanged from 2017, and lay between the rates for France (2.5%) and the German (7.5%) and US rates (7.9%).

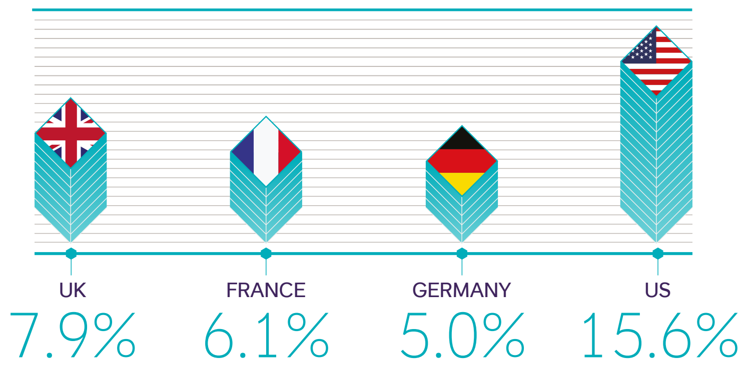
1.7% of working age people in the UK discontinued a business (either through closure or sale) in the past 12 months. Discontinuations of businesses in the US (2.8%), France (1.9%) and Germany (1.1%) were also similar.

All the entrepreneurial activity measures in the UK remained unchanged from 2017.

The adult population actively trying to start a business



All the entrepreneurial activity measures in the UK remained unchanged from 2017.



Demographics

In 2018 the male TEA rate stood at 10.5% and the female rate 5.2%; there were no significant changes in either rate since 2017. The ratio of female to male early-stage entrepreneurship varies across the UK regions so care needs to be taken using the often repeated statement that 'women are half as likely as men to be starting their own business in the UK.'

Those aged 25-34 in the UK are significantly more likely to be involved in early stage activity than 45-54 year olds and 55-64 year olds.

Unlike in previous years in 2018 immigrants have similar levels of entrepreneurial activity as the UK resident population. In particular, it is the TEA rate for ethnic minority immigrants which is significantly lower than in 2017 and is perhaps an early indication of the 'chilling' effect of Brexit on the decision-making of these individuals. They no longer see the UK in 2018 as a place to start their new business venture by either choosing other countries or delaying their decision to start-up in the UK. The TEA rate for immigrants was 7.2% compared to a rate of 8.0% for the life-long resident population. Notably, at 12.2%, the highest TEA rates were for UK-residents who had lived abroad at some stage; their experience of different cultures and environments likely to have enhanced their capabilities for entrepreneurial opportunities.

Similar to life-long residents, and those that have lived abroad, immigrants are primarily driven into entrepreneurship by opportunity motivations.

Attitudes and aspirations

Attitudes of non-entrepreneurial individuals to entrepreneurship remained relatively upbeat in 2018. Similar shares to those observed in 2017 felt they had the skills, knowledge and experience to start a business (40%) and the start-up opportunity perception also remained unchanged (40%).

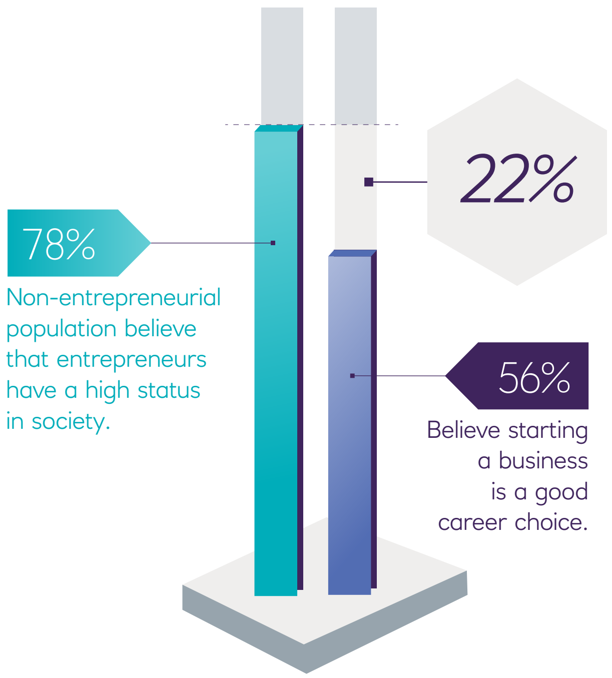
Around 80% of the non-entrepreneurial population believe that entrepreneurs have a high status in society, however, there remains a 20 percentage point gap between that share and those that believe starting a business is a good career choice.

Around 1 in 6 UK early-stage entrepreneurs have high job expectations, a lower share than the US and European comparators where it is 1 in 4.
The rate of established business owners with high job expectations is lower across all countries; just 5% in the UK; 3% in France, 4% in Germany and 6% in the US.

Male and Female Total Entrepreneurial activity across the UK (ratio varies across the regions)

Life-long residents and immigrants are primarily driven into entrepreneurship by opportunity motivations.

Entrepreneurial Attitudes



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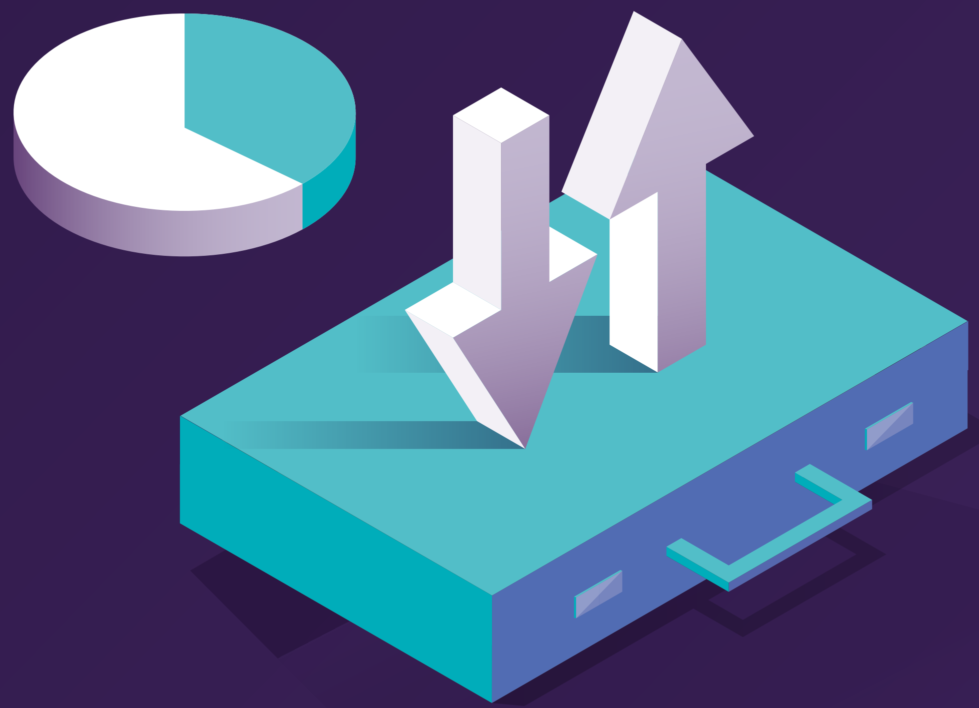
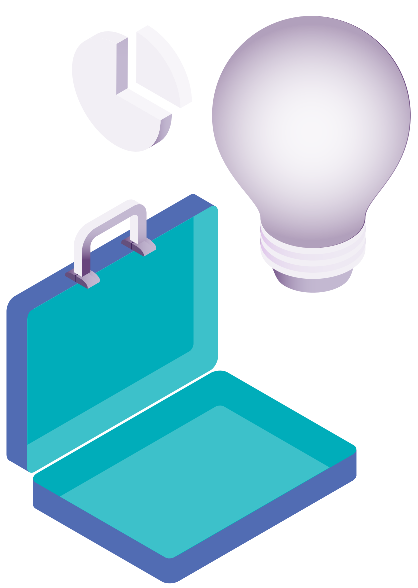
GEM UK 2018 Monitoring Report Introduction



1 Introduction

1.1 Scope of report

This report documents Global Entrepreneurship Monitor (GEM) measures of entrepreneurial attitudes, activity and aspiration in the United Kingdom (UK) and compares the rates to those in France, Germany and the United States (US). It also summarizes entrepreneurial attitudes, activity and aspiration across the four nations of the UK and reports on business start-up funding expectations.



1.2 GEM: History, purpose and measures

The Global Entrepreneurship Monitor (GEM) research consortium has been measuring the entrepreneurial activity of working age adults across a wide range of countries in a comparable way since 1998. In 2018 the study conducted surveys in 49 sovereign nations and represents 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:

The 2018 GEM global study was based on an analysis of adult population survey (APS) results from 49 economies which cover around two-thirds of the world's population.

[1] Bosma, N., and Kelley, D. (2019) Global Entrepreneurship Monitor 2018/19 Global Report. London: Global Entrepreneurship Research Association.

The core of the APS is identical in each country and asks respondents about their *attitudes* towards entrepreneurship, whether they are involved in some form of entrepreneurial activity and, if so, their aspirations for their business. The global GEM Executive 2018 Report was published in January 2019[1] and can be downloaded from **www.gemconsortium.org**.

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

1

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.

2

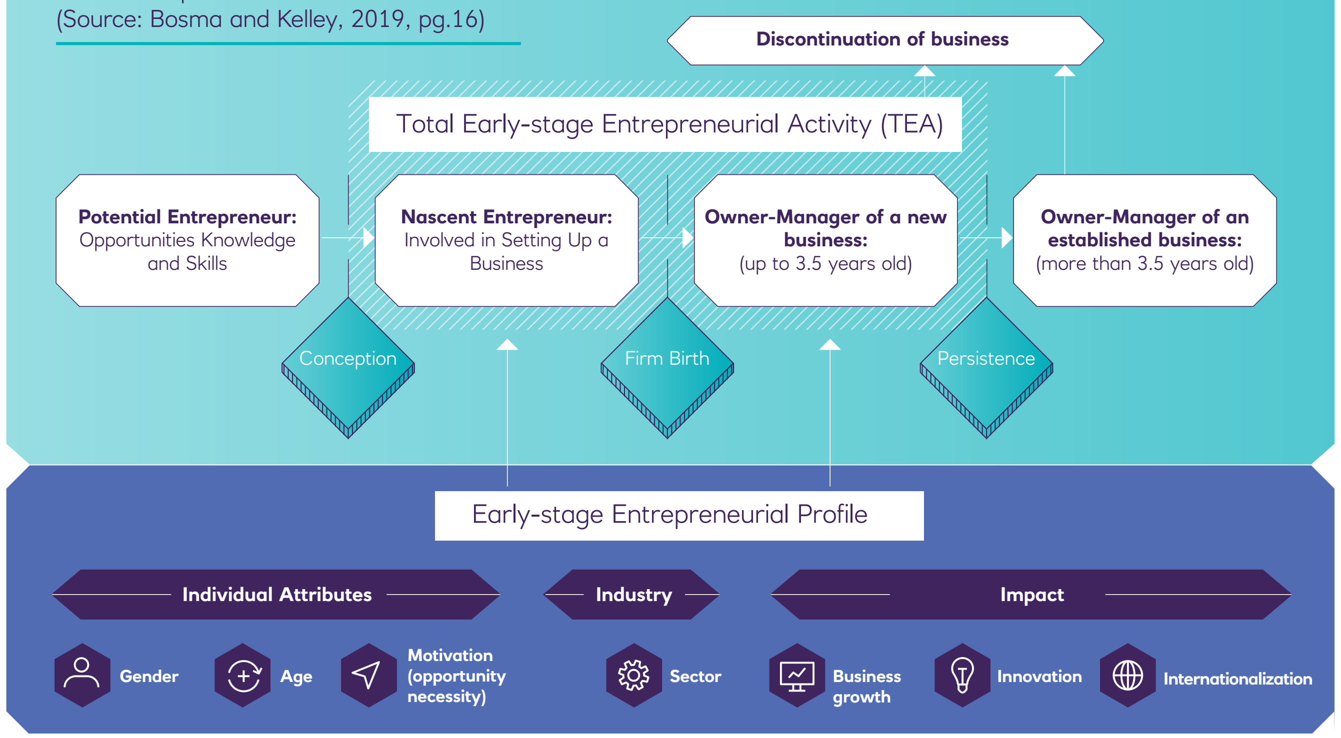
New business owner-managers (NBO): Those whose business has been paying income, such as salaries or drawings, for more than three, but not more than forty-two, months.

3

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 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[2], which is represented in Figure 1.1 below.

Figure 1.1: The Entrepreneurial Process and GEM Operational Definitions (Source: Bosma and Kelley, 2019, pg.16)



[2] 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.

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 2018 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. The proportion of mobile-only households in the survey (19%) matched OfCom estimates of the proportion of adults in mobile-only households in Q1 2017 for the UK (18%)[3], to account for the higher mobile phone use of some hard to reach individuals, such as young men. Once again in 2018 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.

[3] https://www.ofcom.org.uk/about-ofcom/latest/media/facts accessed 16/06/18

2

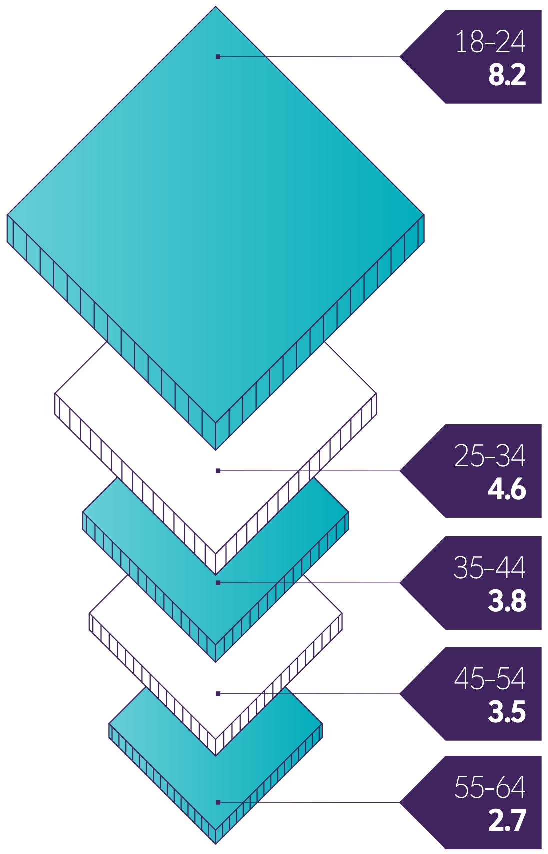
The GIG Economy

2 The Gig Economy

The recent rise in the gig economy, which typically include internet platform-based service jobs (such as Uber and Deliveroo), has provided opportunities for people to take on part-time or short-term work to supplement their income. People may be employed elsewhere whilst working in the gig economy, similarly they may be nascent entrepreneurs using these jobs to provide an income while they start-up their own business. In 2018 GEM included questions about the gig and sharing economy in the survey for the first time.

In the UK in 2018 4.3% of the population participate in the gig economy. Twice as many males as females are gig workers (6.0% and 2.7% respectively). Figure 2.1 shows that younger people aged 18-24 are also significantly more likely to work in the gig economy than those in all other age groups.

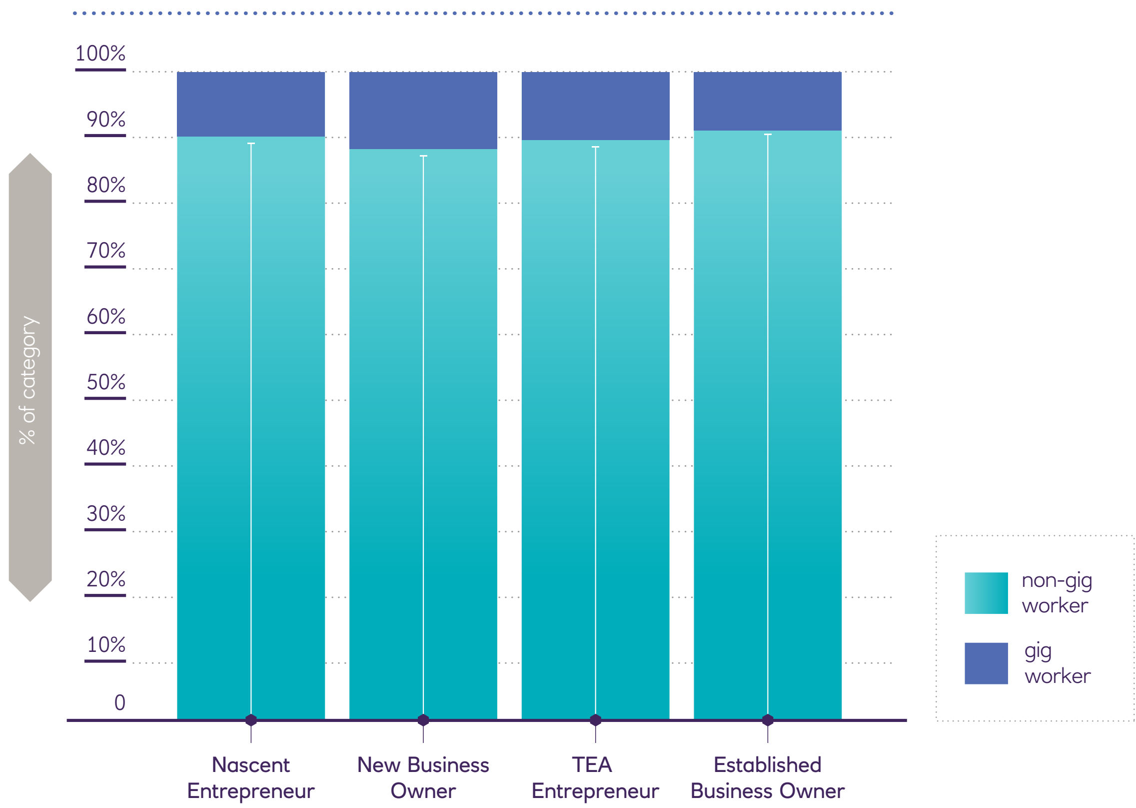
Figure 2.1. Participation in the Gig Economy by Age Group in 2018 (Source: GEM UK APS 2018)



In the UK in 2018 7.9% of the population are early-stage entrepreneurs and 6.6% are established business owners. Figure 2.2 shows the composition of both in terms of gig versus non-gig economy workers, along with the nascent and new business ownership composition. There is little difference across the categories with around one in ten of each type of entrepreneur being a gig economy worker.

Viewing the prevalence of entrepreneurial activity amongst gig economy workers is perhaps a more useful indicator of how individuals engage with this type of work whilst setting up a business. Figure 2.3 shows the rates of participation in the gig economy in the UK, Germany and the US amongst nascent entrepreneurs and those intending to start a business. Participation in the gig economy is more prevalent amongst those intending to start

Figure 2.2. Composition of Entrepreneurial Activity Category by Gig Economy Worker (Source: GEM UK APS 2018)



a business than those in the early start-up stages. In the UK around one in five of those working in the gig economy intend to start a business and one in ten are nascent entrepreneurs. In the US around twice as many gig workers are future and nascent entrepreneurs.

Examining the rates of participation in the gig economy in the UK by those who are new or established business owners shows some perhaps surprising results, particularly when compared to early-stage entrepreneurs or those intending to start (Figure 2.3). However, the reasoning becomes clear when examining how gig economy workers view themselves (Table 2.1). As discussed above around 1 in 5 of those working in the gig economy intend to start a business in the next 3 years however 15% of gig economy workers in the UK are established business owners and 11% are new business owners (Figure 2.4). It may be expected that the latter two categories would comprise a smaller share of gig economy workers than those who are not already business owners however Table 2.1 shows that the nature of the gig work differs depending on the category of activity.

Two-fifths of those intending to start a business view themselves solely as gig workers and around half as independent contractors (Table 2.1). In contrast, the majority of each of the business owner categories view themselves only as independent contractors. This suggests that the nature of gig work differs considerably between those intending to start a business and those actively engaged in business ownership. Consequently, it is likely that they type of firm they work for in the gig economy also differs.

Figure 2.3. Participation in the Gig Economy in 2018 by Future and Nascent Entrepreneurs in the UK, Germany and US (Source: GEM Global APS 2018)

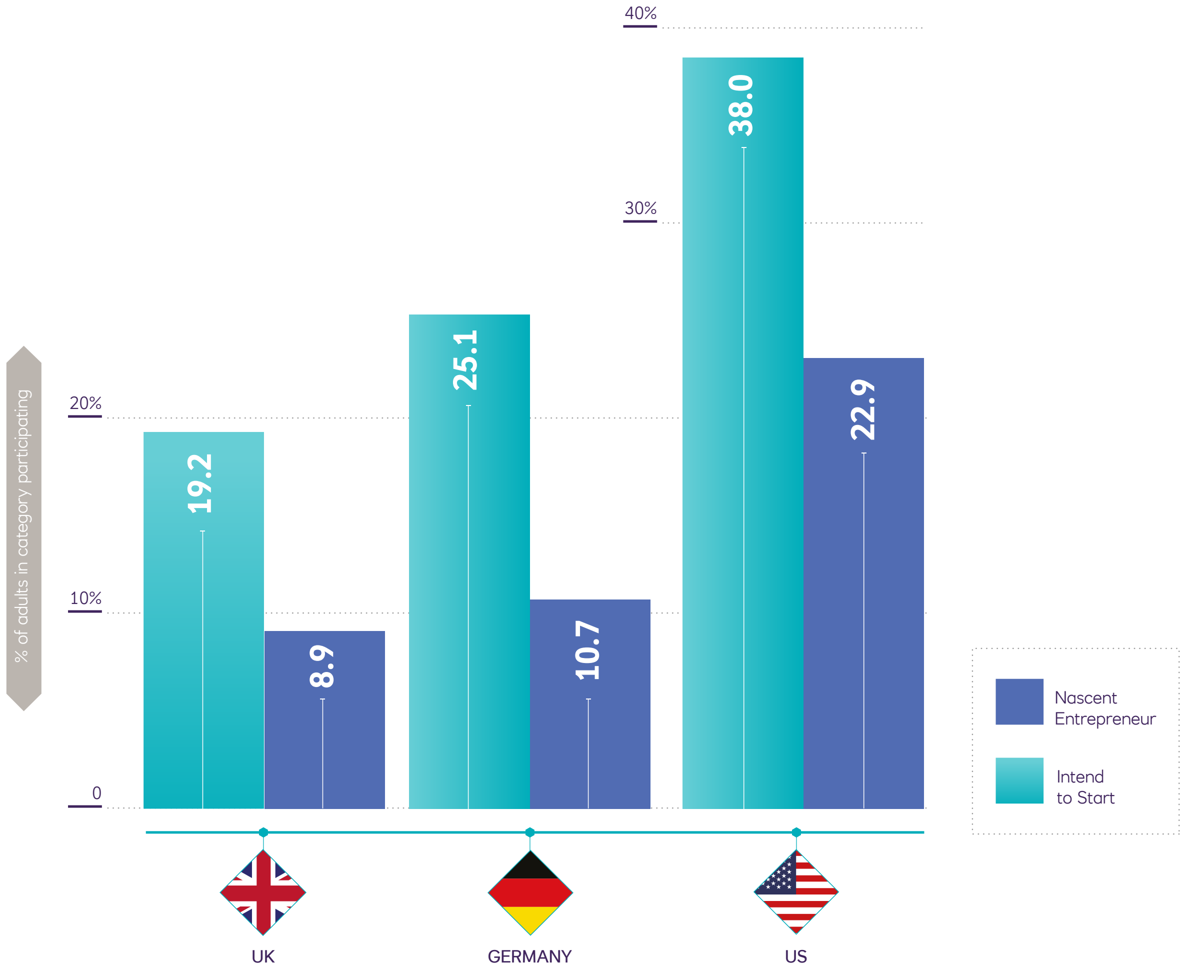


Figure 2.4. Participation in the Gig Economy in 2018 by Entrepreneurial Activity Level in the UK (Source: GEM UK APS 2018)

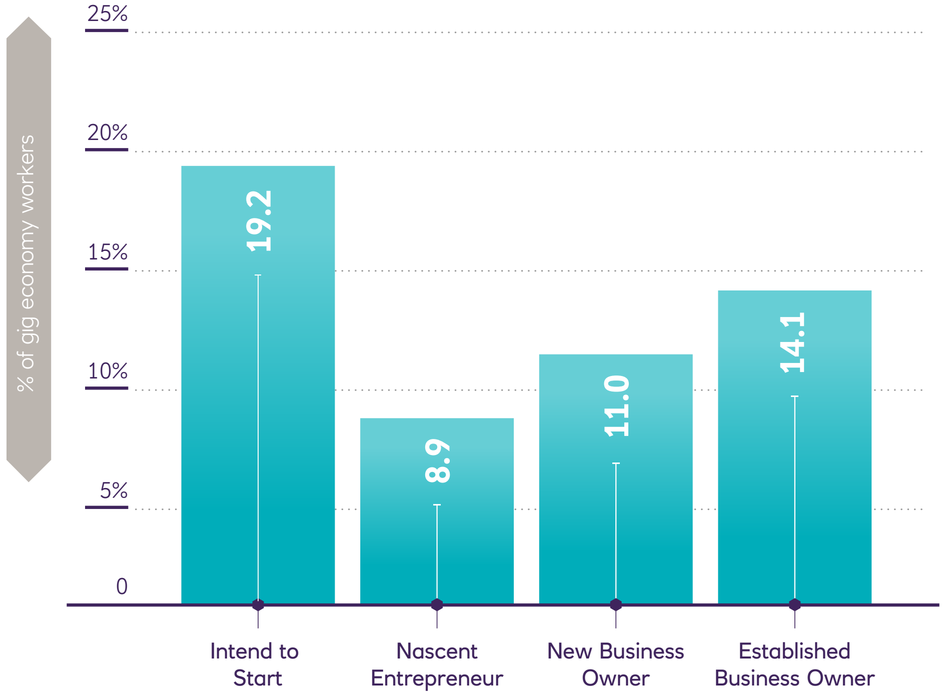


Table 2.1. Type of Gig Economy Worker by Entrepreneurial Activity 2018 (Source: GEM UK APS 2018)

	Intend to Start	Nascent Entrepreneur	New Business Owner	Established Business Owner
Gig Worker only	42.2	28.9	24.9	14.3
Independent contractor only	52.1	71.1	75.1	75.1
Gig Worker and independent contractor	5.8	0.0	0.0	10.7

Participation in the gig economy is more prevalent amongst those intending to start a business than those in the early start-up stages.

3

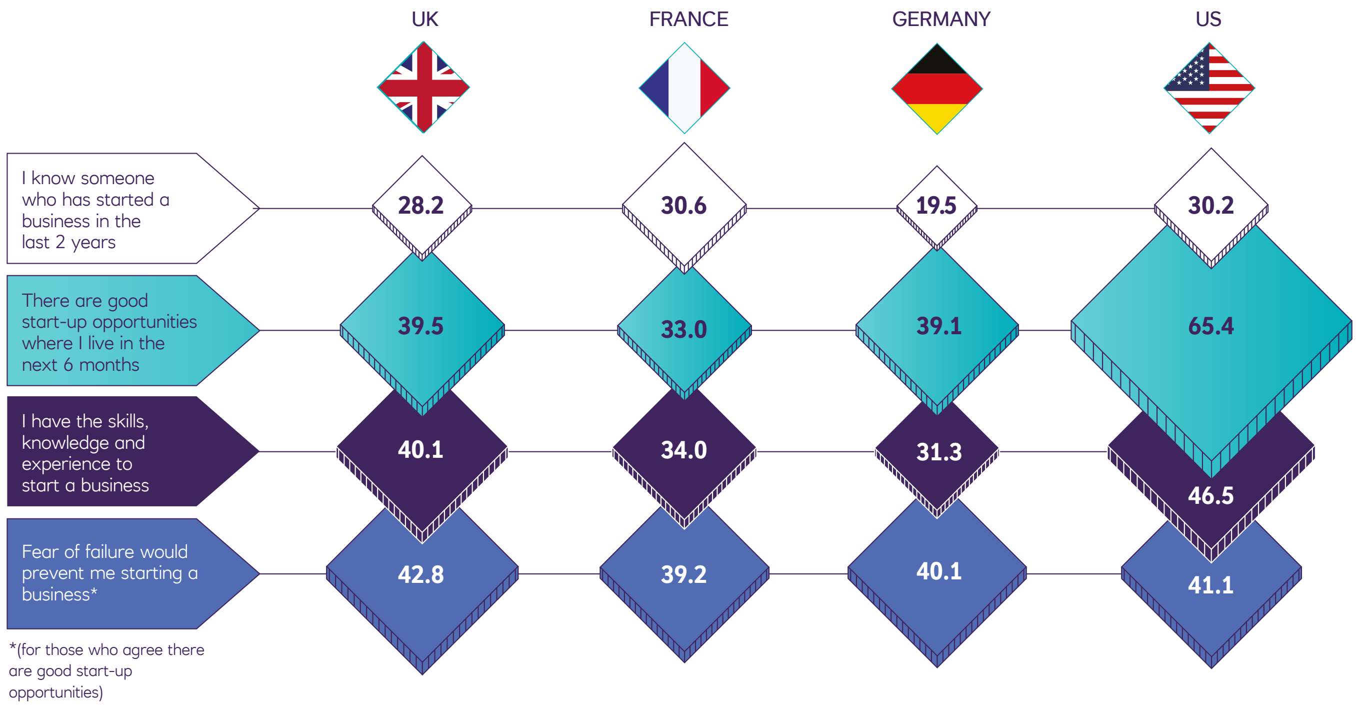
Entrepreneurial Attitudes

3 Entrepreneurial Attitudes

3.1 Entrepreneurial attitudes in the UK and benchmark countries in 2018

At least some of the difference in entrepreneurial activity rates between countries may be explained by differences in attitudes of the population towards entrepreneurship. As individuals who are already entrepreneurs may feel compelled to provide positive answers in the survey Figure 3.1 compares attitudes for that portion of the working age (18-64) population who are *not* already nascent entrepreneurs *or* business owner/ managers in the UK, France, Germany and the US.

Figure 3.1: Attitudes towards entrepreneurship in the UK, France, Germany and US in 2018 - 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 Global and UK APS 2018)



Points of note include the following:

- More than one quarter of the non-entrepreneurial population of the UK know of a recent start-up entrepreneur. In France and the US the share is closer to one-third.
- Three-fifths of the non-entrepreneurial working age population in the US perceive that there are good start-up opportunities in their area in the next 6 months. The rates in the European comparator countries are substantially lower. In the UK and Germany the respective share is two-fifths while in France just one-third of the non-entrepreneurial population perceive good start-up opportunities

In the UK two-fifths of the non-entrepreneurial population perceive that they have the skills, knowledge and experience to start a business;

the rates in France and Germany are closer to one-third while in the US the respective share is 47%. These have remained unchanged since 2017.

- Fear of failure among those who perceive start-up opportunities is similar in the four comparator countries with around two-fifths of respondents agreeing that fear of failure would prevent them from starting a business.

3.2 Entrepreneurial attitudes in the UK in 2016-2018

Estimates of attitudes towards entrepreneurship by gender are shown in Figure 3.2. There were no significant changes in the attitudinal measures between 2017 and 2018.

As in previous years, there are some differences between males and females with respect to attitudes. In 2018 just one-third of non-entrepreneurial females felt they had the skills, knowledge and experience to start a business compared to almost half of males. One quarter of females indicated that they personally knew an entrepreneur which was significantly lower than the 31% of males who did so. Likewise, just over one-third of females believed there to be good start-up opportunities where they live which was also significantly lower than the rate of 43% for males. Despite the incremental changes in these rates over time it remains that females continue to possess a differing set of attitudes to entrepreneurship compared to males.

In 2018 there remains a wide and significant difference between the 78% of the non-entrepreneurial population in the UK who think that successful business founders have a high status in society, and the 56% who think that most people would agree that starting a business is a good career choice. This is despite the fact that a similar share, 58% of the non-entrepreneurial working age population, say they see stories about people starting successful new businesses in the media.

The UK is not unique in this respect and a similar gap is observed in other EU countries such as Germany, Sweden, Luxembourg, Slovenia and Ireland. These countries contrast with Spain, Cyprus and Greece 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[4]. This pattern may be due to different perceived opportunity costs of starting a business versus being an employee. For example, in countries with persistently high unemployment, the option of starting a business may appear to be relatively more attractive. Cultural differences in trust between employer and employee might also affect the relative attractiveness of starting a business, as well as the perceived benefits that are associated with some employee jobs.

4 Global Entrepreneurship Monitor (GEM): 2018/2019 Global Report. www.gemconsortium.org

Figure 3.2: Entrepreneurial attitudes in the UK among households in 2016 2017 and 2018 (% non-entrepreneurially active respondents aged 18-64 expressing an opinion and agreeing with the statement)
(Source: GEM UK Adult Population Survey (APS) 2016, 2017, 2018)

	I personally know someone who has started a business in the last two years	There will be good start-up opportunities where I live in the next six months	I have the skills, knowledge and experience to start a business	Fear of failure would prevent me from starting a business (for those who agree there are good start-up opportunities)	Most people consider that starting a business is a good career choice	Those successful at starting a business have a high level of status and respect in society	You will often see stories about people starting successful new businesses in the media
2016 All	28.4	37.9	41.1	39.6	58.2	77.7	59.9
2017 All	28.1	38.6	40.6	39.7	55.4	76.7	58.5
2018 All	28.2	39.5	40.1	42.8	56.3	77.7	58.2
2016 Female	26.9	34.2	35.0	42.8	57.0	77.9	60.4
2016 Male	30.0	41.9	48.0	36.7	59.5	77.5	59.4
2017 Female	27.5	36.6	33.4	43.9	56.5	76.3	57.2
2017 Male	28.7	40.8	48.8	35.7	54.1	77.3	60.1
2018 Female	25.8	36.0	32.8	46.0	55.1	77.6	56.4
2018 Male	30.8	43.3	48.3	40.0	57.7	77.8	60.2

The trend in attitudes towards entrepreneurship is shown in Figure 3.3. Attitudes across all measures have generally become more optimistic since 2002 except for self-perception of skills to start a business. The effects of the recession can be seen clearly amongst a number of the attitudinal indicators, most notably in the perception of start-up opportunities which fell considerably between 2007 and 2009, although it has since recovered.

Figure 3.3: Entrepreneurial attitudes in the UK, 2002-2018: (% non-entrepreneurially-active respondents aged 18-64 expressing an opinion and agreeing with the statement)
(Source: GEM UK APS 2002-2018).

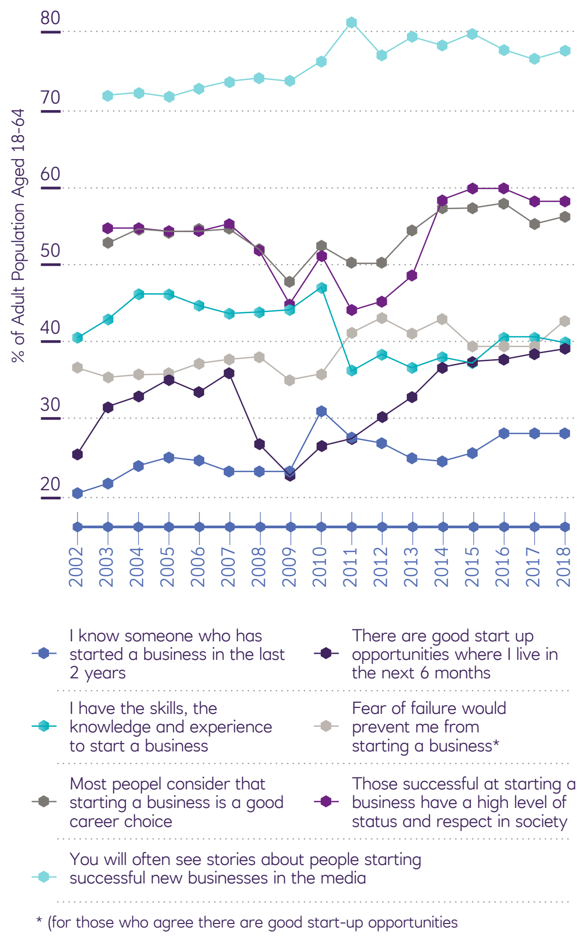
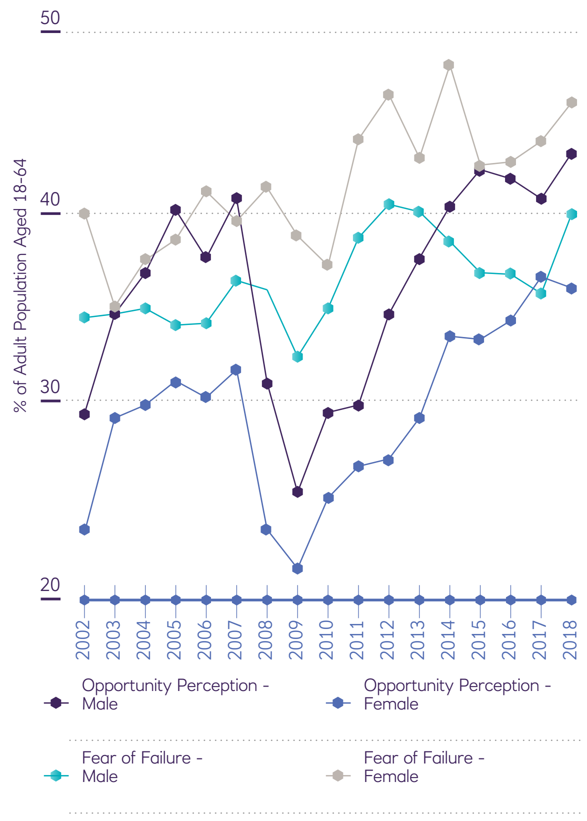


Figure 3.4 shows the trend in perceptions of good start-up opportunities in the local area in the next 6 months; males and female perceptions have followed the same trend, albeit with a consistent gap between the two. In both cases perceptions have recovered since the drop observed over the recession.

Fear of failure amongst females has been consistently higher than males across the same period however; the gap between the two has narrowed since 2017 to 6 percentage points, a fall of 2 percentage points.

Figure 3.4: 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 2002-2018)

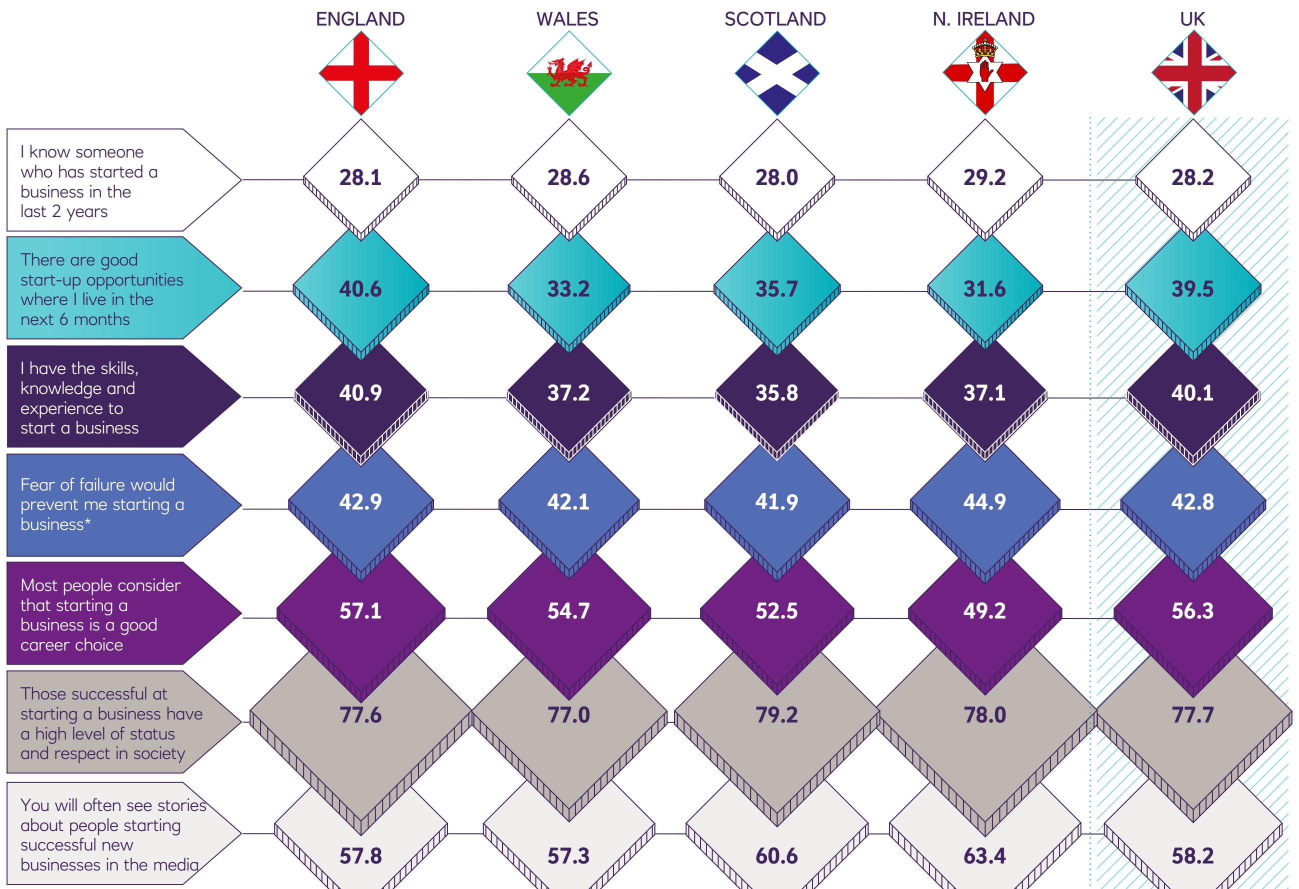


3.3 Attitudes towards entrepreneurship in the UK home nations

The self-reported attitudes of the non-entrepreneurially active working age population in the four UK home nations are presented in Figure 3.5. The key findings for 2018 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 business start-up in a nation as well as the amount of networking by individuals. In 2018 just over one quarter of the non-entrepreneurial population agreed with the statement; there were no significant differences across the four UK nations.
- Around two-fifths of the non-entrepreneurially active population in England reported that there were good start-up opportunities in their local area in the next 6 months which was significantly higher than in Wales, Scotland and Northern Ireland, where around one-third reported good opportunities.
- The proportion of non-entrepreneurially active respondents who thought they had the skills to start a business was significantly higher in England than in Scotland but there were no significant differences in the fear of failure rates.
- Most non-entrepreneurs had favourable attitudes towards those starting a business; around half of non-entrepreneurial individuals in the home nations agreed that "most people consider that starting a business is a good career choice".
- A higher share, more than three-quarters of non-entrepreneurial individuals, agreed that "those successful at starting a business have a high level of status and respect in society". This was consistent across the home nations.
- Around three-fifths of non-entrepreneurs agreed that "you will often see stories about people starting successful new businesses in the media". Again this was a consistent finding across the UK home nations.

Figure 3.5: Perceptions of entrepreneurship among non-entrepreneurially active individuals in the UK Home Nations (%), 2018 (Source: GEM UK APS 2018)



*(for those who agree there are good start-up opportunities)

4 Entrepreneurial Activity

4 Entrepreneurial Activity

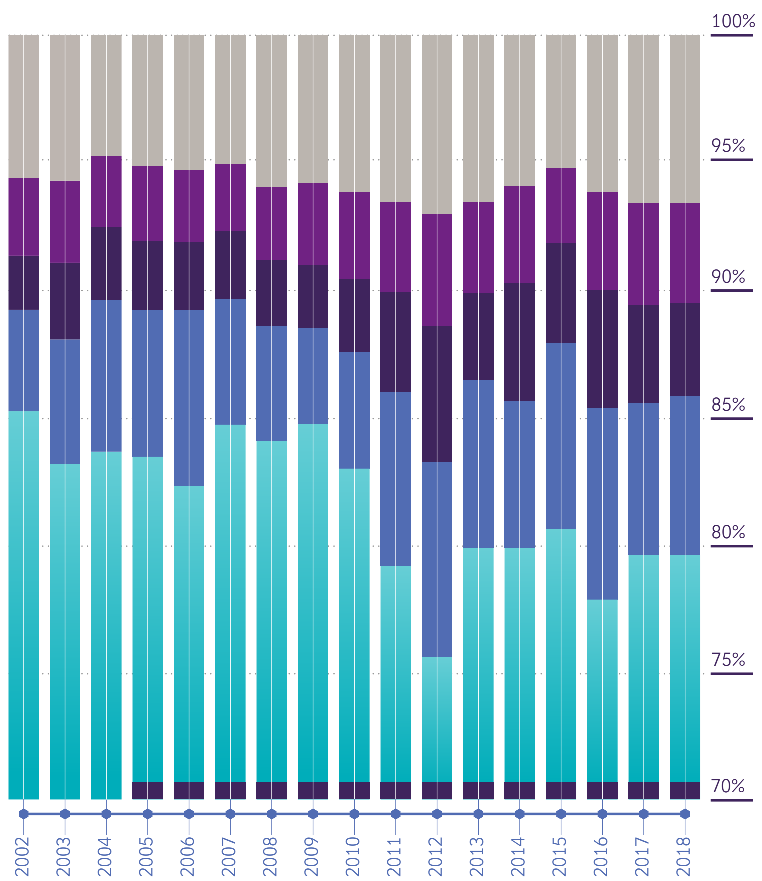
4.1 Entrepreneurial activity in the UK and benchmark countries

GEM views entrepreneurship as a process in which individuals become increasingly engaged in entrepreneurial activity. Figure 4.1 illustrates the proportion of respondents by stage of entrepreneurial activity in the UK over the period 2002 to 2018. 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 4.1b in Appendix for gross rates for each stage).

No activity or intention | Intend to start (within 3 years)
Nascent entrepenuer | New business owner/ manager
Established business owner/ manager

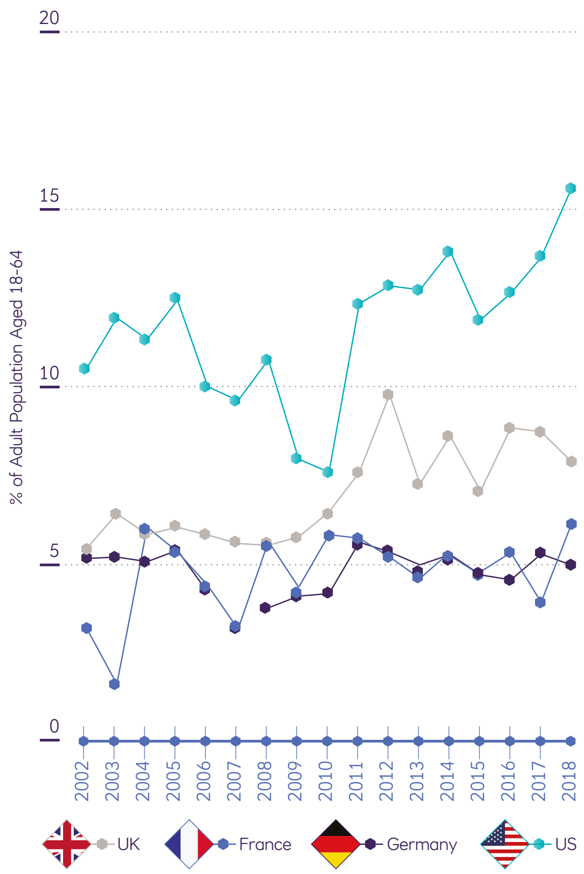
Following the trend first observed in 2011, in the UK in 2018 one-fifth of working age individuals were either engaged in entrepreneurial activity or intended to start a business within the next three years. Participation in the stages of entrepreneurship remained stable in 2018, with 7% engaged in established business ownership, 4% in new business ownership and 4% in nascent entrepreneurship. The proportion of individuals entering start-up activity remained at 6%.

Figure 4.1: Participation in Entrepreneurship in the UK by most established stage of entrepreneurial activity, 2002 to 2018 (Source: GEM UK APS 2002 to 2018)



Total early-stage Entrepreneurial Activity (TEA) is the sum of the nascent entrepreneurship rate and the new business owner/manager rate. The trends in TEA rates between 2002 and 2018 for the UK, France, Germany and the US are shown in Figure 4.2. For the UK and US there appeared to be a break in the long-run trend around 2011, with both moving to a higher average TEA rate thereafter. In 2018, the TEA rate in the US reached its highest level since the survey began while in France the rate was comparable to that last seen in 2010. The UK TEA rate has continued its decline from its peak of 10% in 2012. In contrast to the others, the German TEA rate has remained relatively consistent over time.

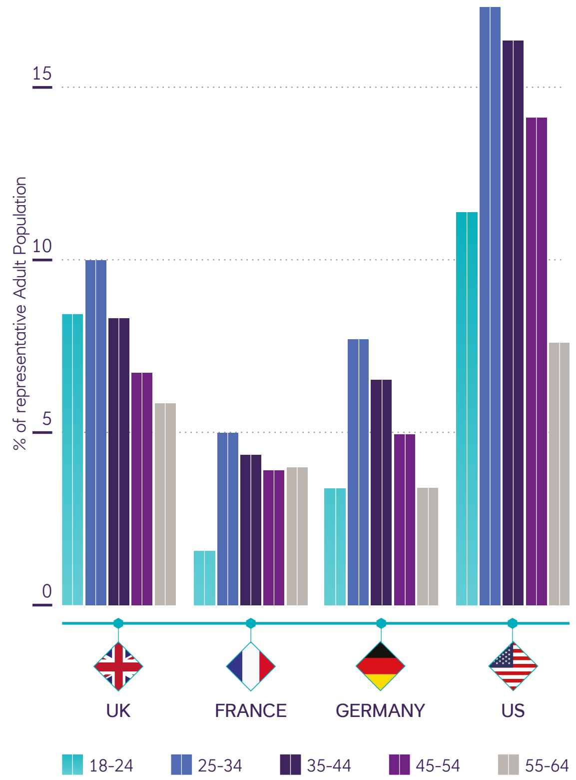
Figure 4.2: Total early-stage Entrepreneurial Activity (TEA) in UK, France, Germany and US (2002-2018) (Source: GEM Global APS 2002-2018)



TEA rates by age group for the UK, France Germany and the US are shown in Figure 4.3. In each country entrepreneurial activity is most prevalent in the 25-34 age group. In the UK TEA rates for this age group are significantly higher than those aged 45 years and over.

Young people in the UK also have much higher entrepreneurial activity rates than their French and German counterparts with the TEA rate in the UK amongst 18-24 year olds more than double that in France and Germany.

Figure 4.3: Total early-stage Entrepreneurial Activity (TEA) in the UK, France, Germany and the US by Age Group 2018 (Source: GEM Global APS 2018)

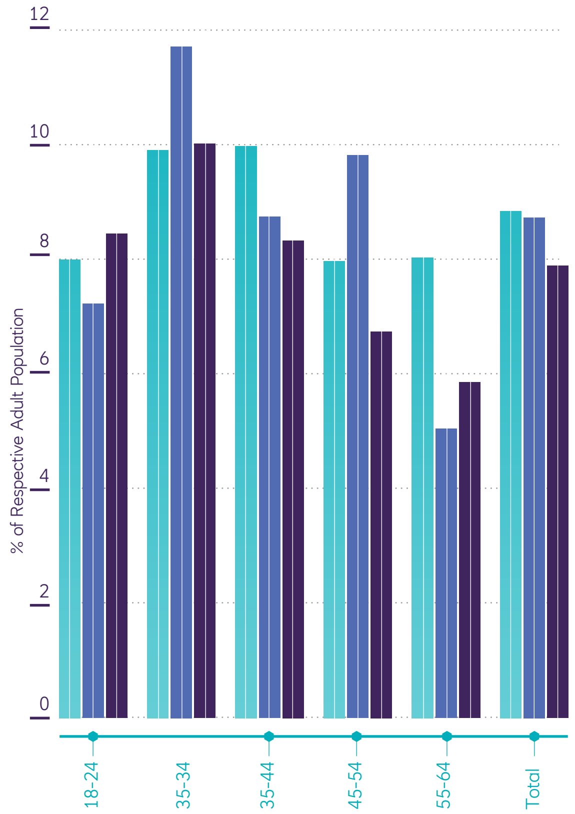


The trend in UK TEA rates by age group for the most recent three years is shown in Figure 4.4. The most significant changes have been experienced within those age groups aged 45 and over. The TEA rate for 45-54 year olds is down from 9.8% in 2017 to 6.7% in 2018, while between 2016 and 2018 the rate for 55-64 year olds has fallen from 8.0% to 5.9%[5].

In 2016 the TEA rate amongst 55-64 year olds matched that of 18-24 year olds however a gap of 2 percentage points has since opened up. Despite this, the TEA rate for this 55-64 age group remains higher in the UK than in France and Germany, as shown in Figure 4.3.

[5] More detailed data on the long-term TEA rates by broad age-band (18-29, 30-49, 50-64) are provided in Appendix Table 10, along with the male and female rates for 50-64 year olds (Appendix Table 4.4b) and opportunity and necessity rates for 50-64 year olds (Appendix Table 4.4c).

Figure 4.4: Total early-stage Entrepreneurial Activity (TEA) in the UK by Age Group (2016 to 2018) (Source: GEM UK APS 2016, 2017, 2018)



In addition to TEA and its components of nascent and new business owners, GEM also 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, in the last 12 months, closed down a business which 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 and can be interpreted as a proxy survival measure. The ratio of closure to business ownership (new plus established) gives a proxy of entrepreneurial dynamism or "churn". The 2018 data for these metrics for the UK, France, Germany and the US are given in Figure 4.5.

The business churn rate is similar for all countries at between 0.1 and 0.4 %. The proxy early-stage survival rate for the UK is just under 1%, higher than that of the US and France. The rate in Germany at 1.5% is around three times that of the US and France.

The German rate is explained by a higher rate of established business ownership than early-stage business ownership, contrary to the other countries.

In comparison to 2017, there were no significant differences in the UK with regards to the various measures of entrepreneurial activity.

In general, the UK measures of entrepreneurial activity typically lie between those observed in its European counterparts and the US. The one measure in which France typically stands out is in the intention to start a business rate, which at 20.4% is higher than the US.

Figure 4.5: Measures of entrepreneurial activity in the UK, France, Germany and the US, 2018 (Source: GEM Global APS 2018)

	UK	FRANCE	GERMANY	US
I expect to start a business in the next 3 years (FUT)	8.5	20.4	7.6	18.5
Nascent Entrepreneurial Activity rate (paying wages for 3 months or less) (NEA)	4.0	3.9	2.7	10.5
New Business Owner-manager rate (4-42 months) (NBO)	4.0	2.3	2.4	5.3
Nascent + New business owner-manager rate (TEA)	7.9	6.1	5.0	15.6
Established Business Owners (>42 months) (EBO)	6.6	2.5	7.5	7.9
Business closure rate (Business closed in the last 12 mths that has not cont.) (BC)	1.7	1.9	1.1	2.8
Proxy early-stage business survival rate (EBO/TEA)	0.8	0.4	1.5	0.5
Proxy business churn rate BC/(NBO+EBO)	0.2	0.4	0.1	0.2

4.2 Male and female entrepreneurial activity compared

In the UK the female TEA rate in 2018 was 5.2%, the male rate was 10.5%. These were not significantly different to 2017. TEA rates by gender for the UK, France, Germany and the US are shown in Figure 4.6. In most high income countries, males are around twice as likely to be early-stage entrepreneurs as females, and this was the case for the UK and Germany in 2018. In France and the US the female TEA rate was around three-quarters of the male rate, although the former at much lower levels than the latter.

Comparing rates by gender across countries, the UK female early-stage entrepreneurial activity rate is similar to its European counterparts, but is around two-fifths the US rate. The UK male TEA rate is higher than that in France and Germany but there remains a gap with the US male rate, with the UK rate three-fifths of that in the US.

Figure 4.6: Total early-stage entrepreneurial activity by gender in the UK, France, Germany and the US in 2018 (Source: GEM Global APS 2018)

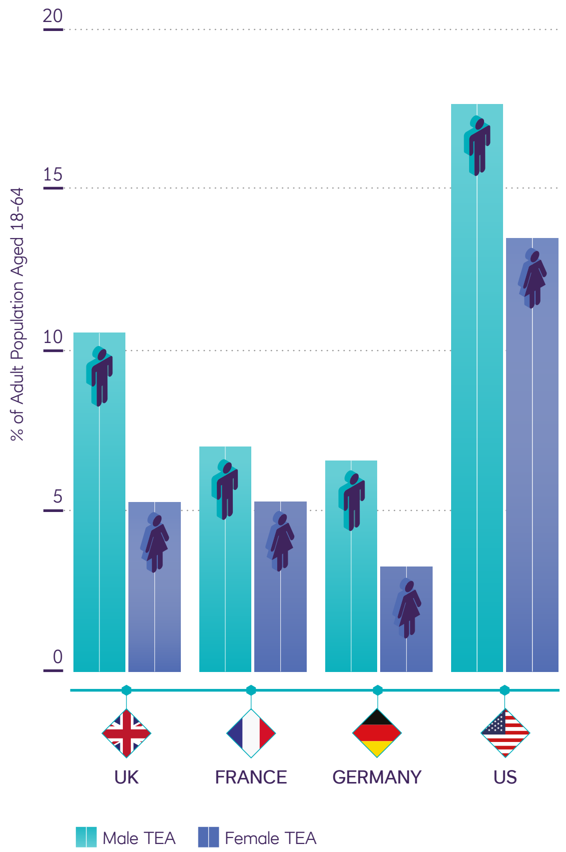
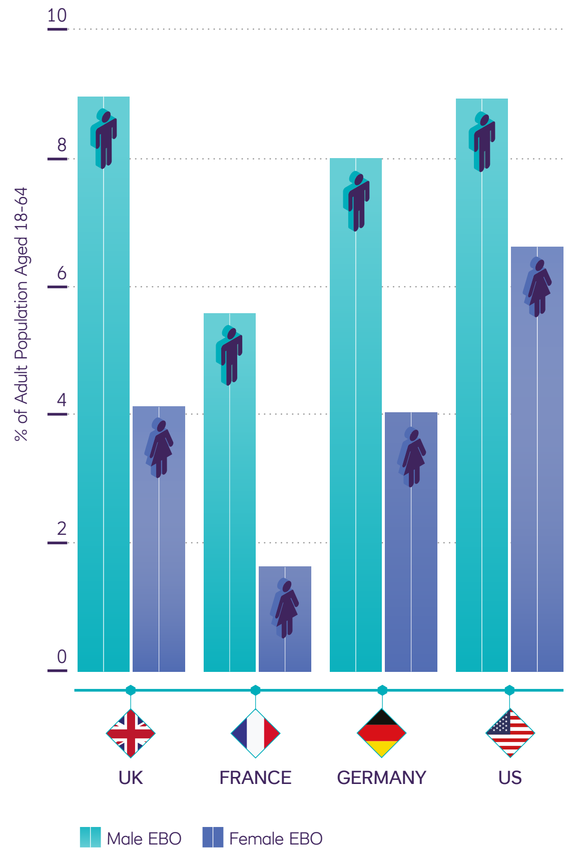


Figure 4.7 presents the established business ownership rates by gender. Comparing it to Figure 4.6 shows that the gap in participation rates between males and females in the UK is broadly the same for established business owner-managers (EBO) as it is for early-stage entrepreneurs (TEA) at just under 50%.

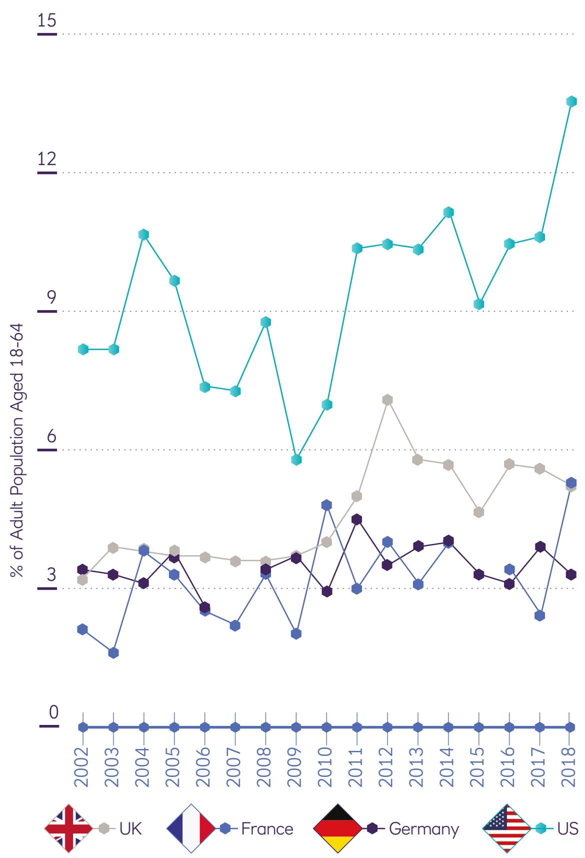
The female to male established business ownership ratio is also 50% in Germany. The ratio in France is just 29% due largely to the low female established business ownership rate. In contrast the female ratio in the US is almost three-quarters of the male rate, similar to that observed in 2017.

Figure 4.7: Established business ownership by gender in the UK, France, Germany and the US, 2018 (Source: GEM Global APS 2018)



The trend in female TEA rates in each of the nations is shown in Figure 4.8. For the UK and Germany the rates in 2018 were unchanged on the previous year. The rate in the US in 2018 was the highest recorded since the survey began in 2002 while the rate in France more than doubled over the year. This latter increase may be a reflection of a recent policy change in France in which the rights of entrepreneurs, in terms of maternity leave, unemployment allocations and pension contributions, became aligned with the rights of wage workers.

Figure 4.8: Female early-stage Entrepreneurial Activity in the UK, France, Germany and the US, 2002-2018 (Source: GEM Global APS 2002-2018)



4.3 Entrepreneurial activity in the UK home nations

Figure 4.9 displays different measures of entrepreneurial activity in the four home nations of the UK for 2018. Together, these measures allow us to assess the degree of entrepreneurial dynamism and stability across the UK's constituent parts.

There were no significant differences in the TEA rates or business ownership rates in the UK and home nations between 2017 and 2018. Likewise TEA rates are not significantly different across the home nations in 2018 however, Scotland's rate of intention to start a business is significantly lower in 2018 than in England and the UK.

Figure 4.9: Measures of Entrepreneurial Activity in the UK Home Nations, 2018 (Source: GEM UK APS 2018)

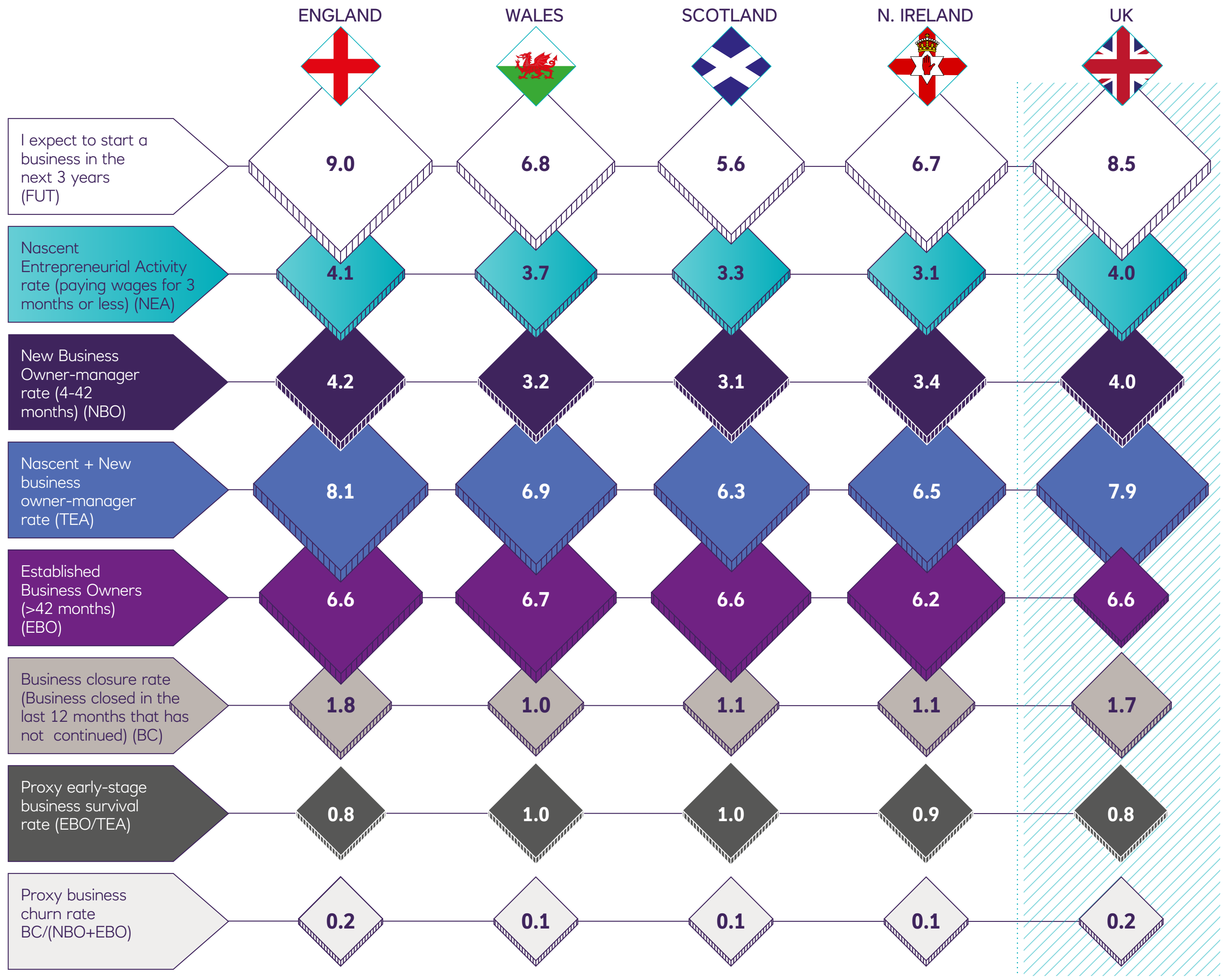


Figure 4.10 displays the trend in TEA rates in the home nations since 2002. The rates were relatively stable during the mid to late 2000s with a break in the long-run trend observed from 2011 after which the rates became more volatile. In 2018 the rates were all above their previous long-run average, with those in Wales, Scotland and Northern Ireland converging at around 6.5%. The gap between England and the other home nations has narrowed and, in 2018, is not significantly different to the other home nations.

TEA rates may be expected to vary based on the extent of deprivation in an area and the differing start-up opportunities available. Figure 4.11 displays TEA rates by Index of Multiple Deprivation quintiles, where the first quintile refers to the most deprived area, and the fifth quintile the least deprived. The highest TEA rate was observed in the most deprived quintile in England, here the rate of 12.6% was significantly higher than the equivalent quintiles in Wales and Scotland. It was also significantly higher than the TEA rates observed in the least deprived fifth quintile in England, perhaps reflecting the lack of employment opportunities for those from deprived areas.

The female early-stage entrepreneurial activity rate in the UK in 2018 was 5.2% compared to 10.5% for males. The female rate was significantly lower than the male rate in the UK, this was also the case for all home nations, as Figure 4.12 shows[6].

There were no significant differences in the rates of male early-stage entrepreneurship across the home nations in 2018, nor in the female rates.

Figure 4.10: Total early-stage Entrepreneurial Activity in the UK Home Nations, 2002-2018 (Source: GEM UK APS 2002-2018).

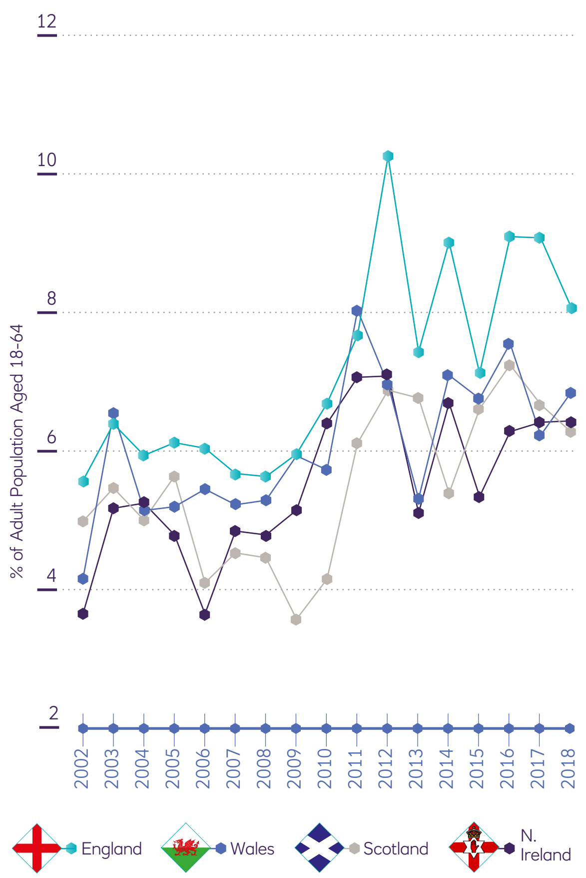
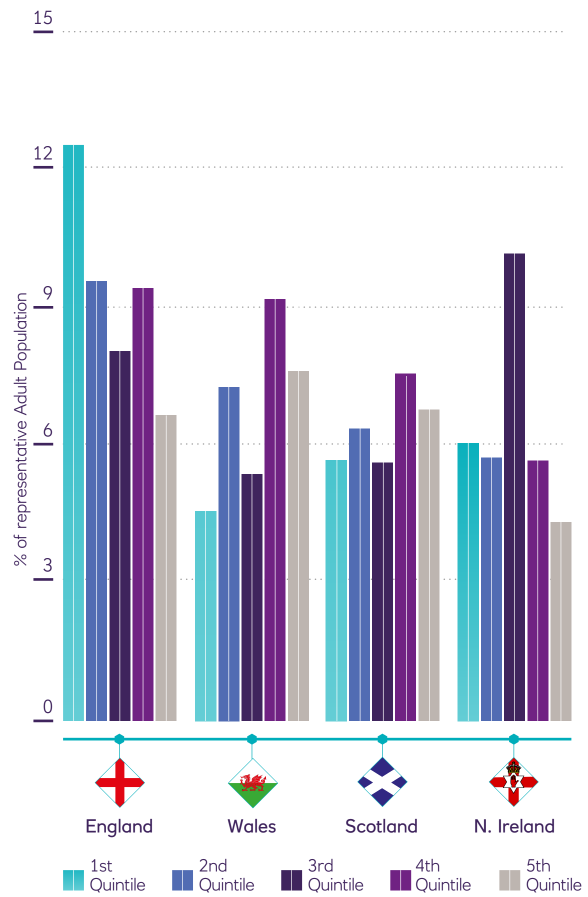


Figure 4.11: Total Entrepreneurial Activity in the UK Home Nations by Index of Multiple Deprivation 2018 (Source: GEM UK APS 2018)



[6] 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 7.2% for females and 12.8% for males.

The UK female to male TEA ratio of 50% in 2018 is in line with previous years. The ratios in Scotland, England and Wales are similar to the UK ranging between 47% and 51%. Northern Ireland has the lowest ratio at 32%, due primarily to the relatively low female TEA rate. Combining data from the 2015-18 GEM UK annual surveys to analyse the female to male TEA rates in all the UK regions[7] reveals variation in the ratios (Figure 4.13). The Eastern region of England has the highest ratio with 78 female entrepreneurs per 100 male entrepreneurs which is driven primarily by a higher than average female rate. In contrast, the high ratio in Scotland is driven by the lower than UK average male rate, with the female rate close to the UK average. In the North East, where they are just 26 female entrepreneurs per 100 male entrepreneurs, there is a particularly low female TEA Rate, although the male rate is also lower than the UK average.

In this pooled regional analysis the female TEA rate in the Eastern region (8.1%) is significantly higher than the rates in the North East (1.8%), North West (4.1%), Wales (4.6%) and Northern Ireland (4.0%). In contrast, the female TEA rate in the North East is significantly lower than most of the other regions.

Since 2002 there has been a general upward trend in female entrepreneurship activity in the UK home nations (Figure 4.12). Despite the volatility observed since 2011, the rates have remained at around half of the male rate with the exception of Northern Ireland. In 2018, there were no significant differences in female early-stage activity compared to 2017.

Figure 4.12: Male and Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2018 (Source: GEM UK APS 2018).

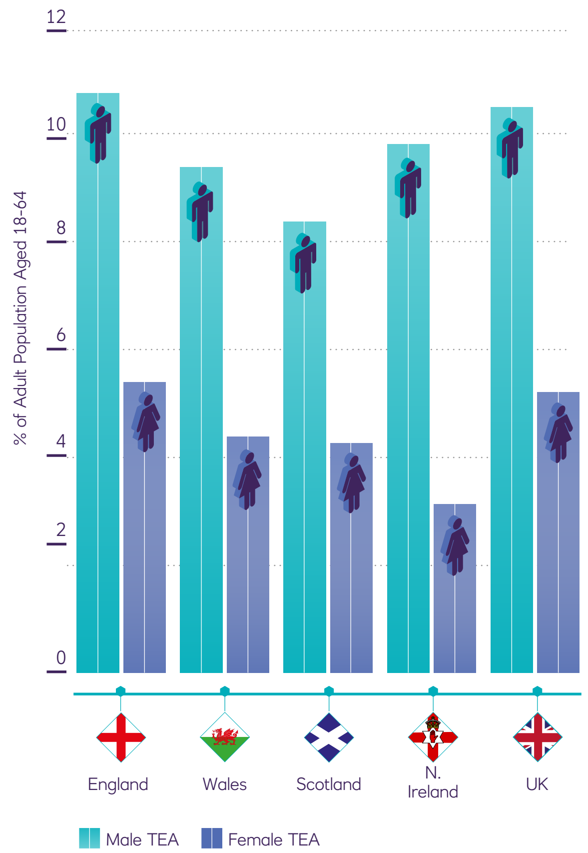
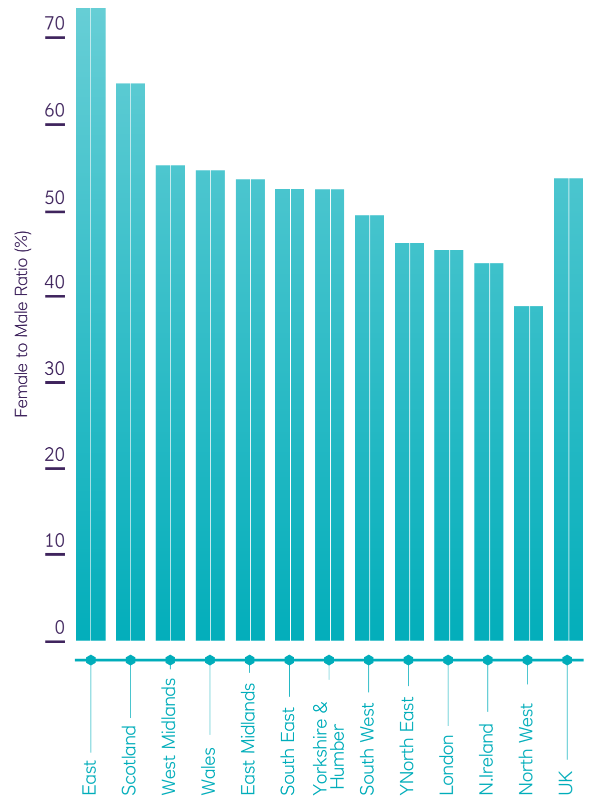
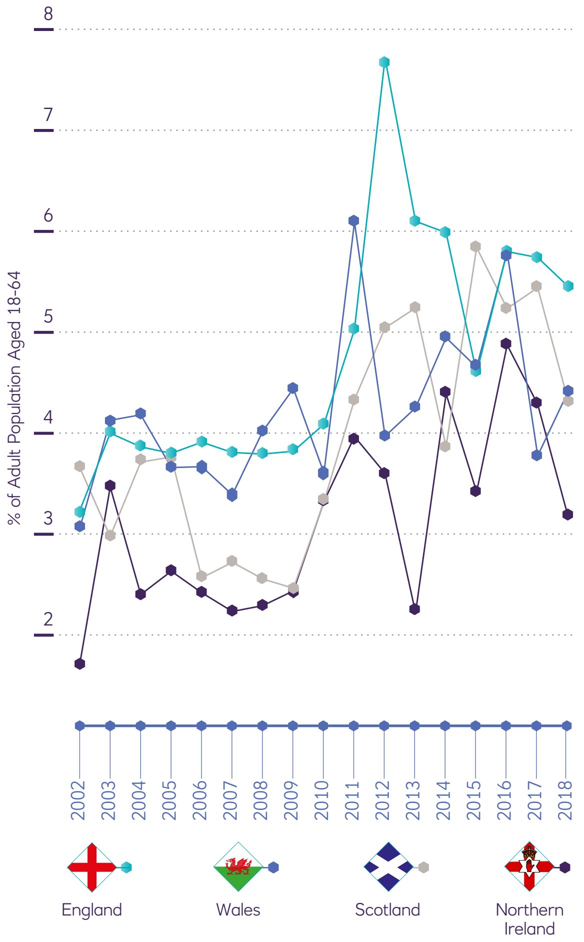


Figure 4.13: Female to Male Entrepreneurship Ratio in the UK regions (combined over 2015-18) (Source: GEM UK APS 2015-2018)



[7] Combining data over several years provides more robust samples for disaggregation by gender at the regional level than the annual level data provides.

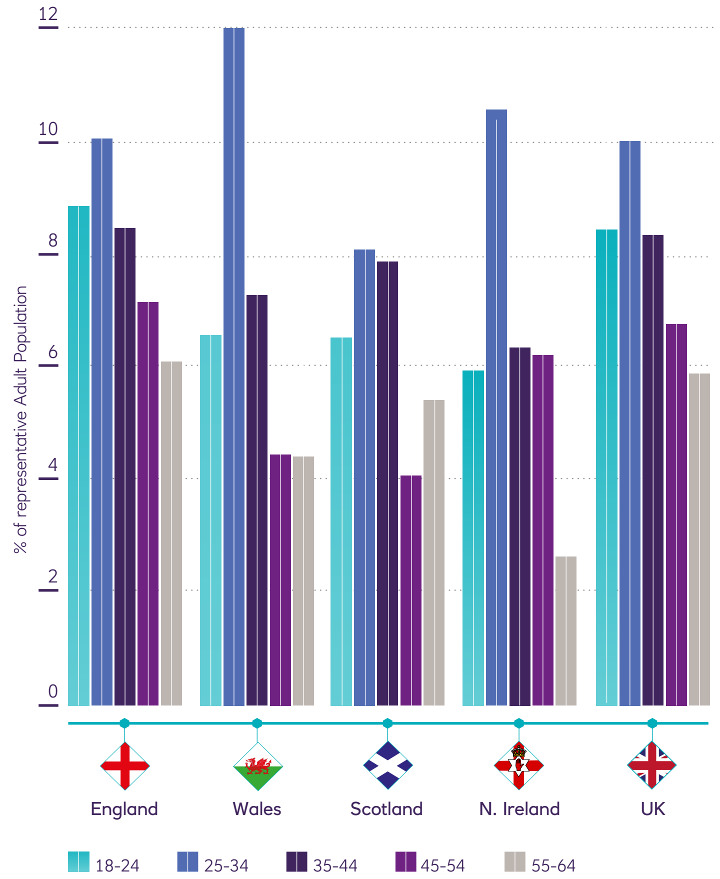
Figure 4.14: Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2002-2018 (Source: GEM UK APS 2002-2018).



The early-stage entrepreneurial activity rates of different age groups across the home nations are shown in Figure 4.15. In the UK as a whole the only significant difference in activity rates between 2017 and 2018 was for the 45-54 age group whose activity rate fell from 9.8% to 6.7%.

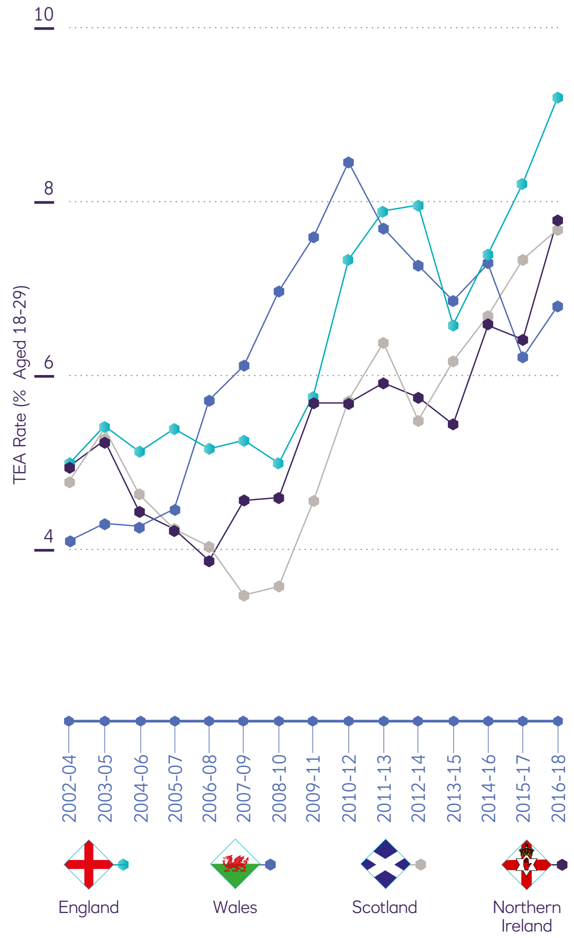
In the UK in 2018 the activity rate of this age group (45-54 years old) and those aged 55-64 years old were significantly lower than those with the highest activity rate, those aged 25-34 years old. This pattern was also the same in Wales. In England, Scotland and Northern Ireland there were no significant differences in entrepreneurial activity between the age groups.

Figure 4.15: Total early-stage Entrepreneurial Activity in the UK Home Nations by Age Group, 2018 (Source: GEM UK APS 2018).



Grouping 18 to 29 year olds together, Figure 4.16 shows the trend in their TEA rates, via rolling averages over 2002-04 to 2016-18. The chart highlights the increase in entrepreneurial activity amongst this age group since 2002 and shows that activity continued to rise even during the recession. Rates in England in particular have grown strongly since 2013 although entrepreneurial activity has increased in all home nations over 2016-18.

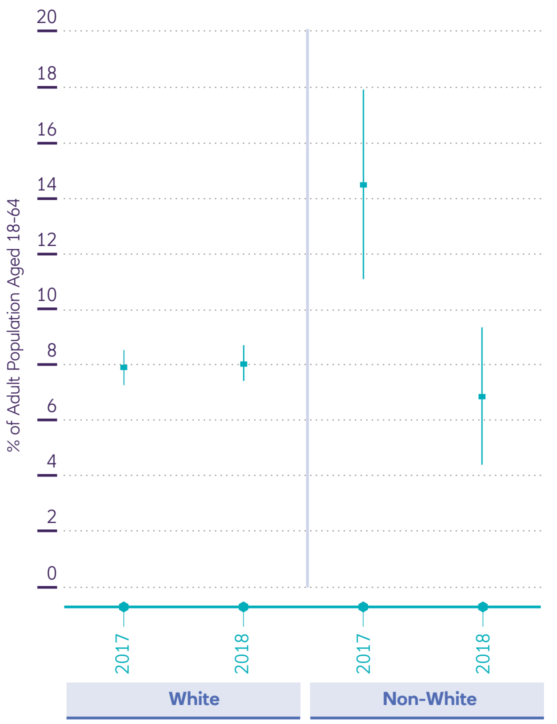
Figure 4.16: Trend in Total early-stage Entrepreneurial Activity in the UK Home Nations for 18 to 29 year olds, 3-year rolling averages 2002-04 to 2016-18 (Source: GEM UK APS 2002-2018)



4.4 Entrepreneurial activity by ethnicity and resident status

In contrast to recent trends, the TEA rate of the white ethnic population in the UK in 2018 was not significantly different than that of the non-white population, at 8.1% compared to 6.9% respectively (Figure 4.16). For the non-white population, the TEA rate is significantly lower than in 2017, falling from 14.5%.

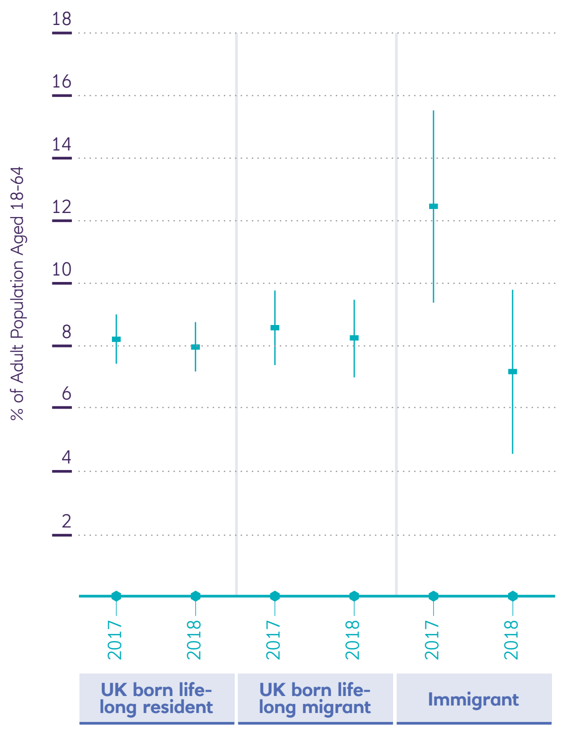
Figure 4.16: Total early-stage Entrepreneurial Activity Rate by White and Non-White Ethnic Status 2017 – 2018 (Source: GEM UK APS 2017, 2018)



Examining entrepreneurial activity by migrant status (Figure 4.17) also shows significant changes over the year. In 2018 the immigrant rate, of 7.2%, is not significantly different to the rate for UK born life-long residents at 8.0%. This contrasts with previous years in which the TEA rate for immigrants was significantly higher than the resident population.

In 2018 the activity rate for the regional in-migrant[8] population is also similar to that for life-long residents at 8.3%. Combining migrant status and ethnicity it is the TEA rate for ethnic minority immigrants in 2018 (4.9%) which is significantly lower than in 2017 (17.5%). Although for only one year this does contrast dramatically with consistently high levels of ethnic immigrant early-stage entrepreneurial activity for the previous five years and is perhaps an early indication of a 'chilling' effect of Brexit on the decision-making of these individuals. They no longer see the UK in 2018 as a place to start their new business venture by either choosing other countries or delaying their decision to start-up in the UK.

Figure 4.17: Total early-stage Entrepreneurial Activity Rate by Migrant Status 2017 – 2018 (Source: GEM UK APS 2017, 2018)



Since 2015 UK-born respondents have also been asked if they had ever lived outside the UK. In 2018 the TEA rate for those who had lived outside the UK was significantly higher, at 12.2%, than the rate of 8.0% for life-long residents. It was also significantly higher than the rate of 6.9% for regional in-migrants (Figure 4.18). There was no significant difference between the TEA rates of immigrants and those who had lived outside of the UK.

[8] 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.

Examining the motivations for entrepreneurship for these groups, using the simple opportunity versus necessity motivations (Figure 4.19) shows that all are driven primarily by business start-up opportunities rather than necessity reasons.

Figure 4.18: Total early-stage Entrepreneurial Activity Rate by Migrant and Resident Status 2018 (Source: GEM UK APS 2018)

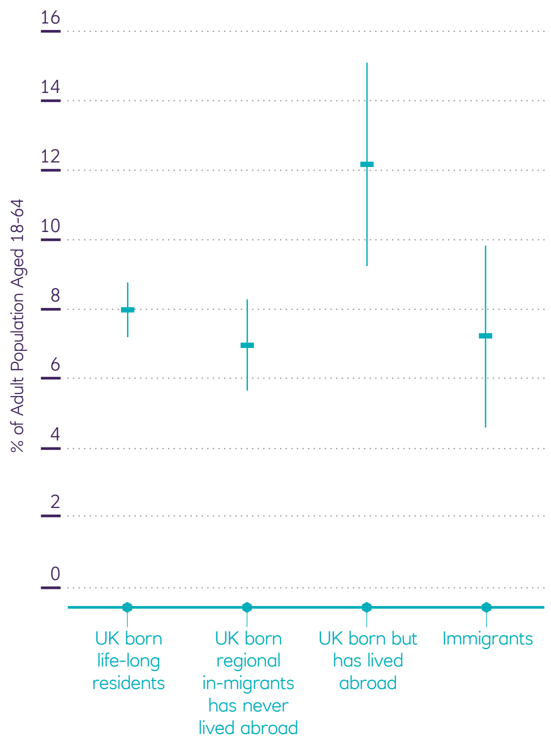
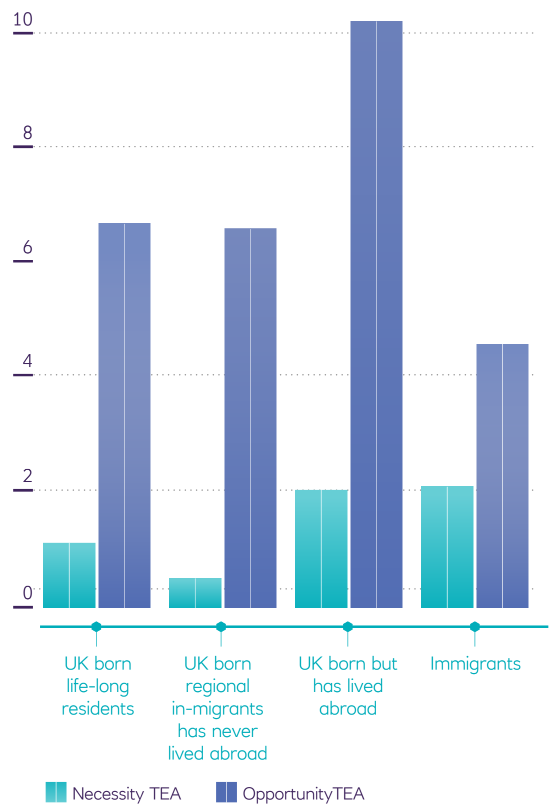
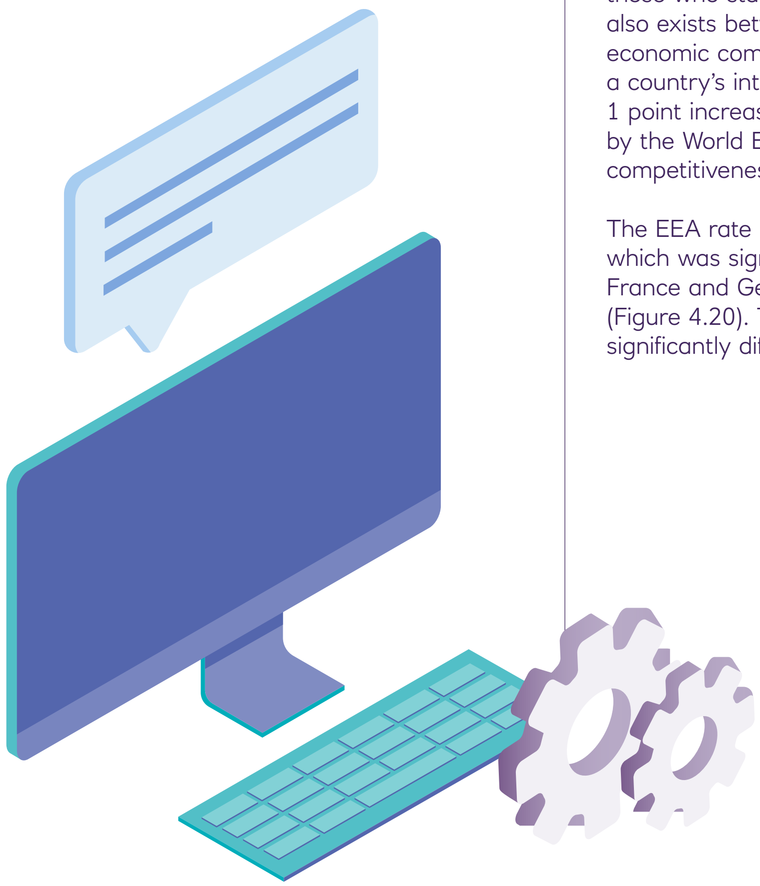


Figure 4.19: Necessity and Opportunity TEA by Migrant and Resident Status 2018 (Source: GEM UK APS 2018)



4.5 Entrepreneurial employee activity

The TEA rate measures the extent to which the general population is engaged in the entrepreneurial process, however it says nothing about the activities of employees on behalf of their employers. 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 organization in which they work, specifically those involved in developing or launching new goods or services or setting up a new business unit, a new establishment or subsidiary. Autonomy is a strong driver for all entrepreneurs to start their business and if this is increasingly provided in the workplace as the employee environment improves then higher levels of EEA should ensue[9].



A recent[10] study from the World Economic Forum (WEF) and GEM Global found that many European economies do not lack entrepreneurial activity at all. The findings go against the widely-held belief about the dismal state of entrepreneurship in Europe. Indeed, the report finds, what Europe lacks in early-stage entrepreneurship, it makes up for in intrapreneurship. Due to the risk- and opportunity-profiles that European economies offer, entrepreneurial individuals in Europe frequently choose to start new ventures or projects for their employers as employees rather than for themselves. Where this occurs, we observe a shift into intrapreneurship, also known as entrepreneurial employee activity (EEA).

The findings are important for future potential growth in Europe, as those who innovate within organizations tend to create more jobs than those who start their own business. A correlation also exists between intrapreneurship rates and economic competitiveness: every 2.5% increase in a country's intrapreneurship rate correlates to a 1 point increase in competitiveness as measured by the World Economic Forum's global competitiveness data.

The EEA rate in the UK in 2018 was 5.7%, which was significantly higher than the rate in France and Germany, but lower than the US rate (Figure 4.20). The UK's EEA rate in 2018 was not significantly different to 2017.

[9] See Stephan, U et.al., (2015) "Understanding Motivations for Entrepreneurship", BIS Research Paper No. 212, March 2015.
[10] World Economic Forum (WEF) and GEM Global (2016) "Europe's Hidden Entrepreneurs: Entrepreneurial Employee Activity and Competitiveness in Europe". http://www3.weforum.org/docs/WEF_Entrepreneurship_in_Europe.pdf

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, as noted above are found to be positively correlated with economic competitiveness. Figure 4.21 shows the TEA and EEA rates for the UK in 2017 and 2018. In both years the TEA rate is significantly higher than the EEA rate with the gap widening in the most recent year.

Figure 4.20: Entrepreneurial Employee Activity (EEA) in the UK, France, Germany and the US 2017-2018 (Source: GEM Global APS 2017, 2018)

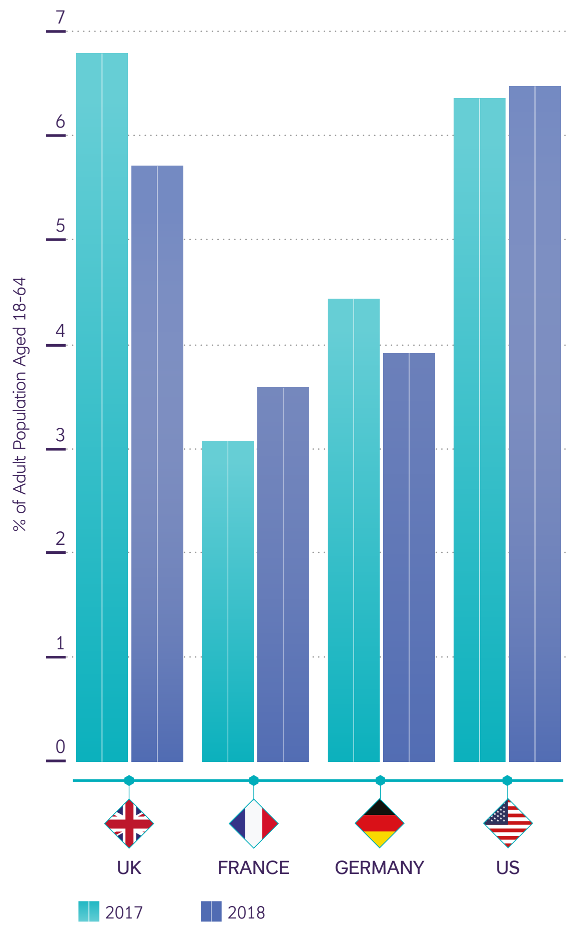
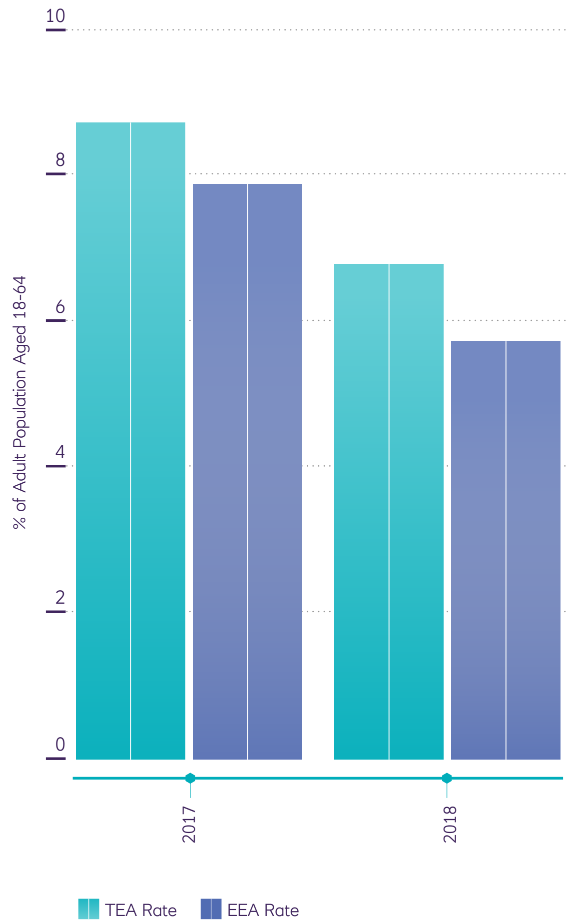


Figure 4.21: Total early-stage Entrepreneurial Activity (TEA) and Entrepreneurial Employee Activity (EEA) in the UK 2017-2018 (Source: GEM UK APS 2017, 2018)



4.6 Motivations for 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. As this is a rather simplistic classification the GEM UK team were involved in a study for BEIS in 2014 which sought to develop a more sophisticated framework which we trialled last year and as reported in the GEM UK 2017 report. This has since been refined and will be included in the GEM Global Survey for the 2019 cycle[11].

Opportunity-motivated early-stage entrepreneurship rates (Opportunity TEA) and Necessity-driven early-stage entrepreneurship rates (Necessity TEA) for the UK, France, Germany and the US are presented in Figure 4.22. In each country, levels of necessity TEA were considerably lower than levels of opportunity TEA. In fact, in each country around four-fifths of those involved in early-stage entrepreneurial activity were opportunity-motivated. In the UK 6.6% of the working age adult population were opportunity driven entrepreneurs; just 1.1% were identified as necessity-driven.

Compared to 2017, there were no significant changes in either rate in the UK. There were also no significant changes in the rates for either nascent or new business owners (Figure 4.23).

Figure 4.22: Necessity and opportunity TEA rates in the UK, France, Germany and the US in 2018 (Source: GEM Global APS 2018)

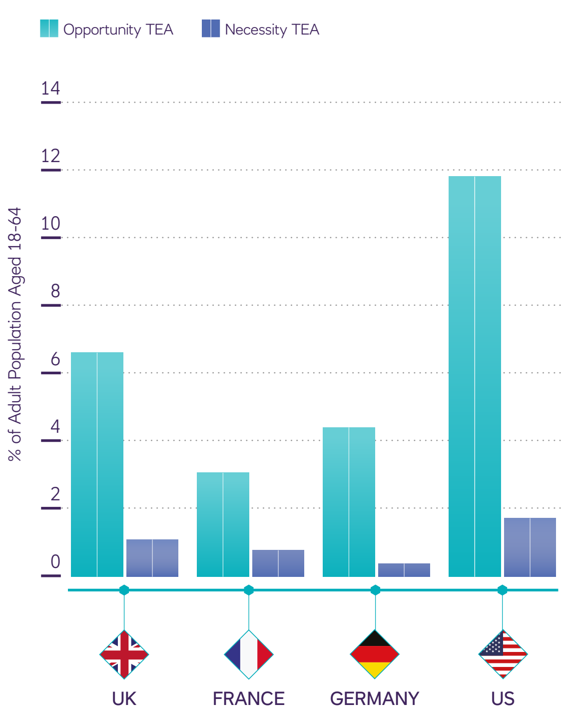
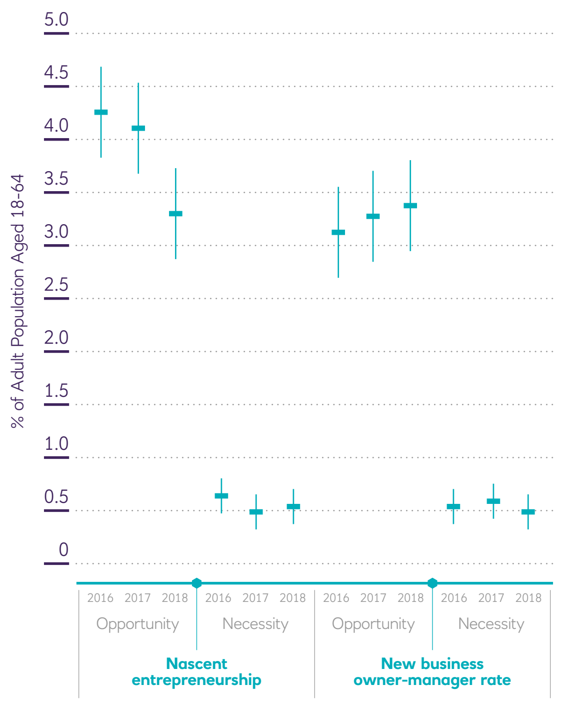


Figure 4.23: UK Necessity and opportunity nascent and new business owner-manager rates (showing 95% confidence intervals), 2016, 2017 and 2018 (Source: GEM UK APS 2016, 2017, 2018)



[11] 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

5

Entrepreneurial Aspiration

5 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[12].

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[13]. The results are illustrated in Figure 5.1 for early-stage entrepreneurs (i.e. nascent and new business owners - TEA) and established business owner-managers (EBO). The figure also shows the proportion of early-stage entrepreneurs and established business owner-managers who state they operate in new product markets[14], operate in "high" or "medium" technology sectors (according to OECD definitions), and sell more than 25% of their revenue[15] outside the country.

The potential of entrepreneurial activity to promote regeneration and growth will reflect the types of business being established.

Figure 5.1. Measures of entrepreneurial aspiration in the UK, France, Germany and the US, 2018 (Source: GEM Global APS 2018)

% 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 revenue outside the country	
	TEA	EBO	TEA	EBO	TEA	EBO	TEA	EBO
UK	**15.8**	**5.0**	**20.6**	**12.6**	**11.0**	**8.3**	**18.4**	**12.9**
FRANCE	24.3	3.3	28.1	22.1	9.9	5.2	19.9	19.6
GERMANY	25.0	3.7	30.5	9.0	9.1	7.9	18.9	6.8
US	26.2	6.4	34.0	13.0	8.7	8.1	12.7	7.0

12 See, for example, Hart, M. and Anyadike-Danes, M. (2017) "High performing firms and job creation: a longitudinal analysis (1998-2013) ERC Insight Paper"; Enterprise Research Centre Insight Report, February.

13 The OECD defines HGFs as: 'enterprises with average annualised growth in employees or turnover greater than 20 % 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.

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

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

The results show considerable variation in the entrepreneurial aspiration metrics across the selected countries, and between early stage and established business owners. Just 1 in 6 UK early-stage entrepreneurs have high job expectations which is lower than each of the other comparator countries, at 1 in 4. In each country the high expectation rates of established business owners are significantly lower than for early stage entrepreneurs and there is much less variation in the rates across the countries. As with TEA high job expectation, the US has the highest rate of high job expectation for established business owners, at 6.4%. Compared to 2017 there were no significant differences in the high job expectation rate for either UK early-stage entrepreneurs or established business owners.

Around 1 in 5 early-stage entrepreneurs in the UK are involved in new product markets; this compares to around 1 in 3 in the US and Germany, and 1 in 4 in France. The rates are lower for established business owners and closer to around 1 in 10 for the UK, Germany and the US. France bucks the trend with around one quarter of established business owners involved in new product markets.

Around 10% or less of early-stage entrepreneurs in each country have businesses in the high or medium tech sectors. This metric shows the smallest difference in the rates between early stage and established business owners.

At 18.4% the UK has a similar share of early-stage entrepreneurs involved in exporting as Germany and France. The US has the lowest share at 12.7%. In France, the rate of established business owners exporting is similar to early stage business owners; for other countries established businesses export less.

The trend in the relative frequency of high job expectation TEA entrepreneurs for the UK, France, Germany and the US, is shown in Figure 5.2. It uses 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 previous decade. In contrast, the US rate, which has been relatively stable over the recession, has continued to increase since 2011.

Germany experienced a lull in high expectation rates during the recession but has recently risen again above rates observed at the start of the decade. In contrast France experienced a large upswing in the rate during the recession and in most recent figures sits at 26%. The recent upswing is due primarily to the high rates observed during 2017 and 2018. Despite recent trends, a prevailing gap remains between high expectation in the US and the UK.

The trend in relative frequency of high job expectation among established business owner-managers is shown in Figure 5.3 using the same method as for Figure 5.2. Note that the relative frequency of high job expectation for established business owners is typically around one-third of that of early-stage entrepreneurs.

Figure 5.2. Relative frequency of high job expectation early-stage entrepreneurs in the UK, France, Germany and the US, three year rolling averages, 2003-2005 to 2016-2018 (Source: GEM Global APS 2003-2018)

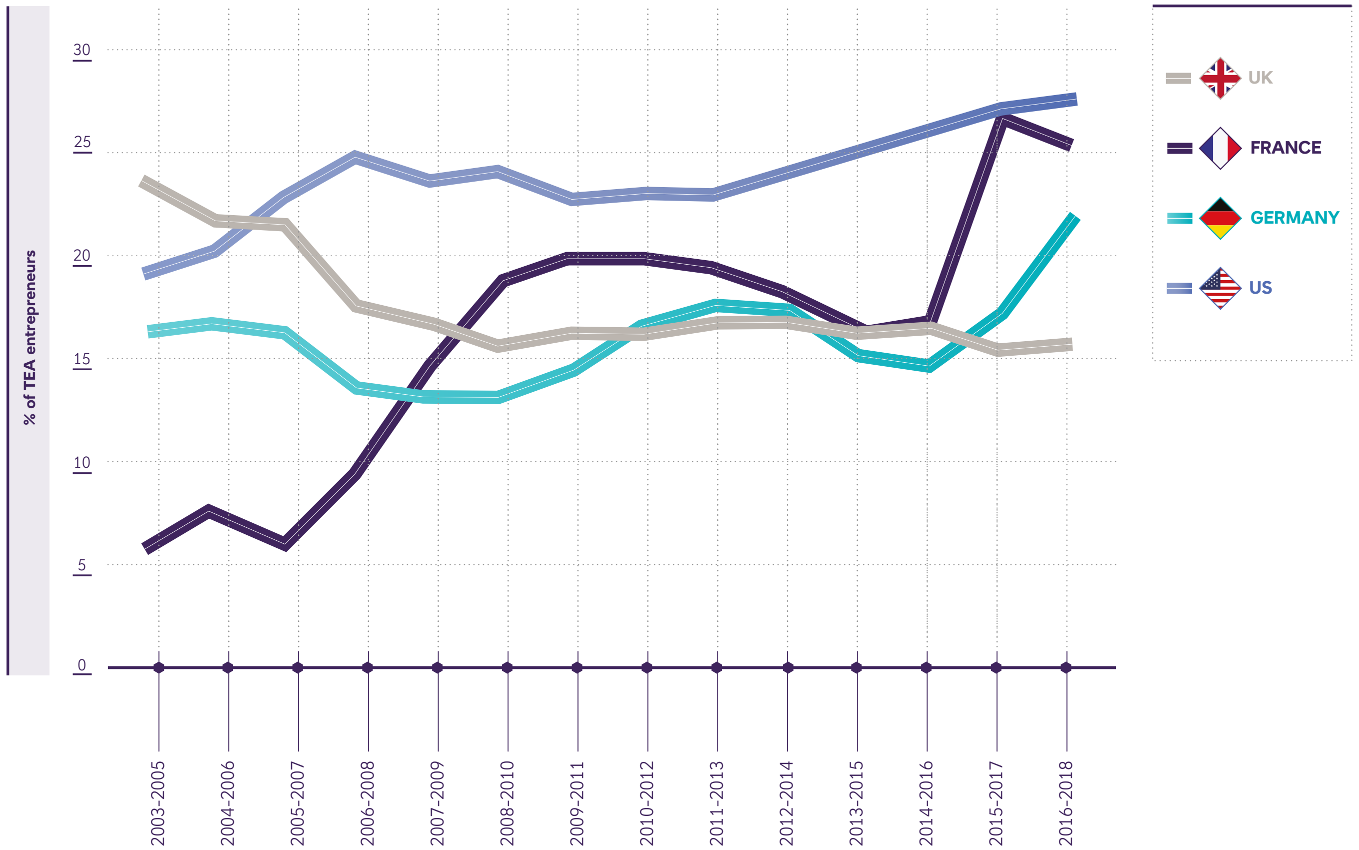
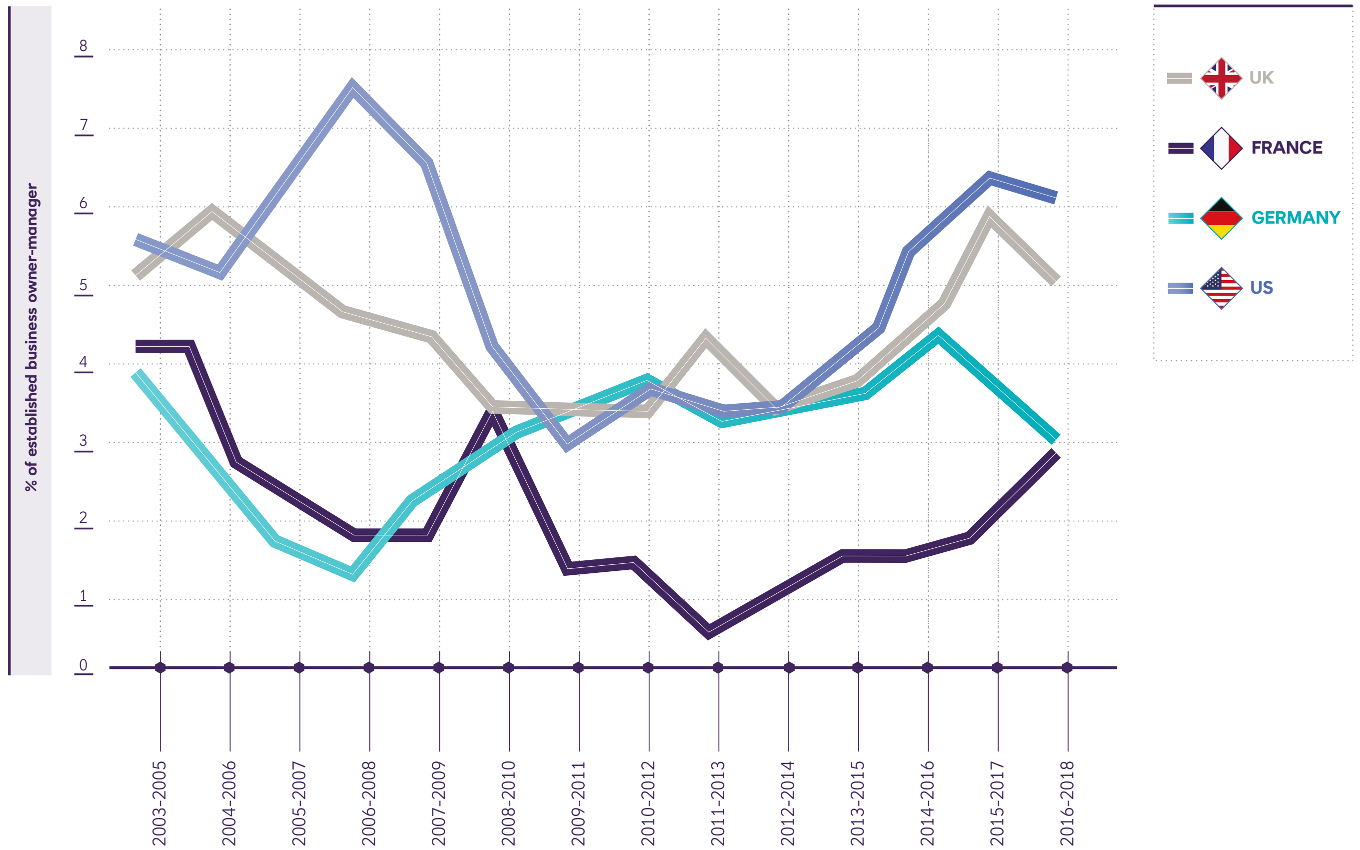
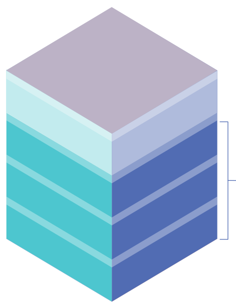


Figure 5.3. Relative frequency of high job expectation among established business owner-managers in the UK, France, Germany and the US, three year rolling averages, 2003-2005 to 2016-2018 (Source: GEM Global APS 2003-2018))





3/4

of established business owners and around half of early-stage entrepreneurs are not engaged in any high value activities.

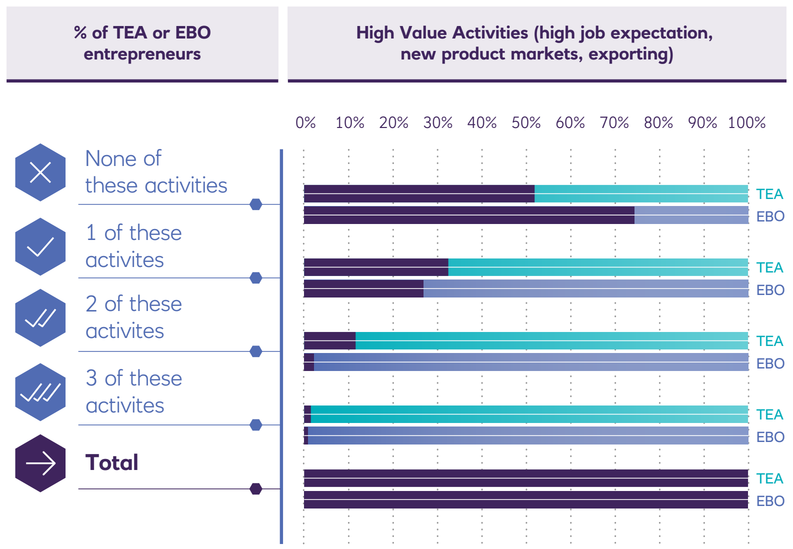
Across all countries there was a general downward trend in this measure until the recession, with a gradual increase thereafter amongst established business owners in the UK, US and Germany. The rate in France in 2016-2018 is around half that of the UK and US however their expectation rates have continued to rise since 2011. In the most recent year all countries with the exception of France experienced a decline in rates. Compared to early stage entrepreneurs, the rate of high job expectation is relatively similar in the UK and US.

Focusing specifically on 'high value activities' Figure 5.4 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).

Three-quarters of established business owners and around half of early-stage entrepreneurs are not engaged in any high value activities. Of those that are, the shares are higher for early-stage business owners than established business owners. Around one-third of early-stage entrepreneurs undertake one of these activities compared to one-fifth of established business owners and at least four times the share are engaged in either two or three high value activities compared to established business owners. The results confirm the hypothesis that the owners of new, young firms are more ambitious and innovative than their incumbent counterparts.

It is noticeable that while the share (i.e. relative prevalence) of ambitious early-stage entrepreneurs has risen in the US since the early 2000's, it has declined in the UK and stayed at this lower level. This appears to be because of a growing proportion of solo self-employed in the early-stage entrepreneurial population in the UK and a decline in this group in the US[16]. By contrast, the share of ambitious established business owner-managers is similar in the UK and US, and ahead of France and Germany.

Figure 5.4. Percentage of TEA and EBO entrepreneurs engaged in high value activities (high job expectation, new product markets, exporting), three year average 2016-18 (Source: GEM UK APS 2016-2018)



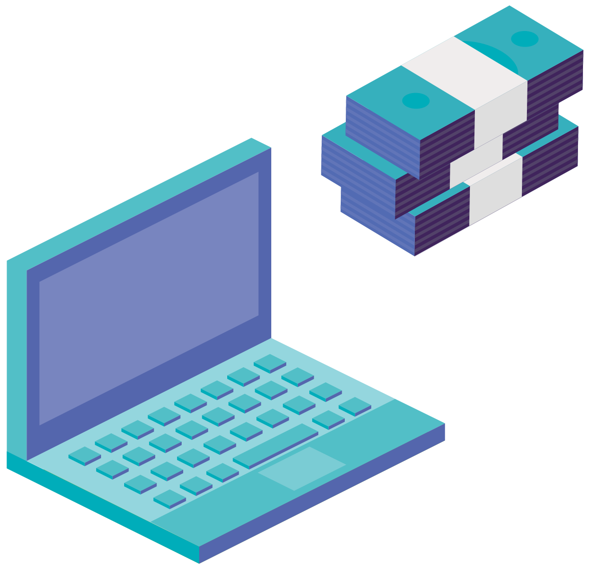
[16] See ERC Conference Video by Jonathan Levie (2015) - https://youtu.be/CJAu2fUWWnc

6 Sources of Funding for Start-ups

6 Anticipated Versus Actual Sources of Funding for Start-ups

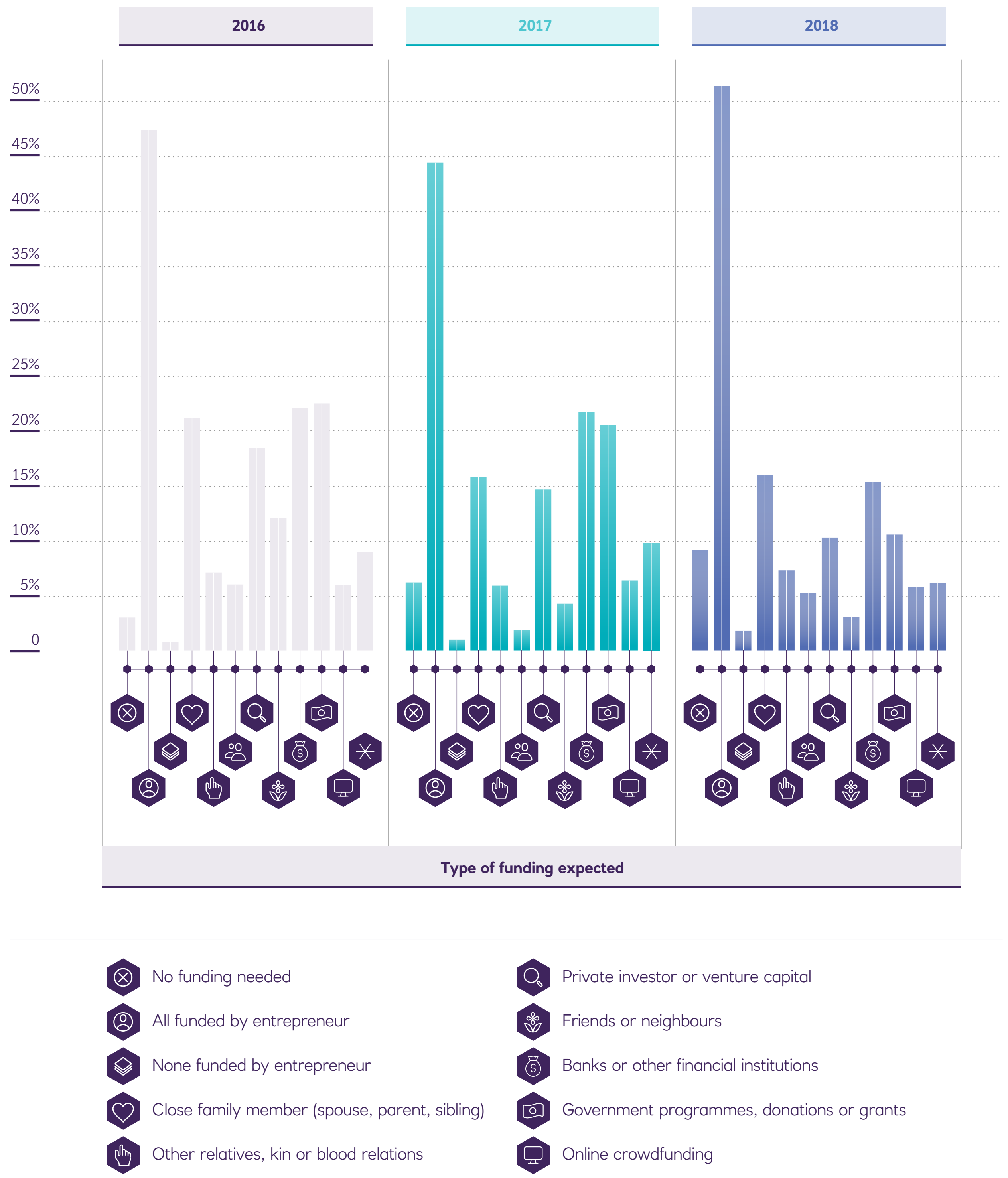
Obtaining funding remains a major issue for many start-up businesses, with just over half of nascent entrepreneurs reporting that they require external funding. Since 2006, GEM has tracked the mix of funds that nascent entrepreneurs expect to use. Table 6.1 shows these expected funding sources over 2016-2018[17]. Overall, the results suggest that just over half of all entrepreneurs expected to self-fund in 2018 whilst 8.4% report that no funding would be needed. This is broadly similar to the proportion (47%) of small businesses reporting that they do not intend to use external finance during 2018[18]. Similar to previous years, of those expecting funding from elsewhere, close family members and banks are most favoured followed by government programmes. The share expecting funding from private investors or venture capital fell from 15% to 10% over the year. Around 6% expect to raise funds from online crowdfunding, similar to previous years.

> GEM data confirms other UK data that around 50% of small businesses reporting that they do not intend to use external finance during 2018[18].



[17] Note that in 2015 there were changes to several of the categories for expectations in funding. As a result the data is not strictly comparable with previous years; Table 6.1 presents the data for 2016-18, Table 6.1a in the Appendix presents the previous data from 2009-2015.
[18] BRDC Continental - SME Finance Monitor Q4, 2018.

Figure 6.1. Percentage of nascent entrepreneurs expecting funding from different sources 2016-18 (Source: GEM UK APS 2016, 2017, 2018)



These trends in higher rates of finance expected from family, friends and neighbours 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 Figure 6.2[19]. The informal investment rate in 2018 stood at 2.8%, similar to 2017. Investment into companies owned by close family was the most common investment choice, at around 40%. The higher incidence of investing in strangers' businesses, first observed in 2014, continued in 2018 at 23%, most likely reflecting recent increases in crowdfunding activity and angel investment in the UK. Some 15% of informal investors used an online platform to make their last investment in 2018.

Figure 6.2. Percentage of individuals aged 18-64 who have invested in someone else's new business in the last 3 years, and the nature of relationships to the latest investee, 2009 to 2018 (Source: GEM UK APS 2009 to 2018)

Informal investment rate	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
% 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	3.2	2.9	2.8

Relationship of latest investee (% of latest investments)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Close family member (spouse, parent, sibling)	41	37	50.2	57.5	46.8	40.3	38	37.3	43.4	36.8
Other relatives, kin or blood relations	4.5	7.5	6.2	2.2	6.6	11.1	0.4	2.1	1.4	2.8
Work colleague	8.3	2.2	7.4	8.9	3.9	5.1	0.5	4.0	6.7	8.0
Friends or neighbours	35.5	48.5	28.4	23.4	38.7	25.5	39.2	38.4	28	29.6
A stranger with a good business idea	8.6	4.5	7.9	4.1	4.0	17.9	16.3	15.8	15.6	22.8
Other	2.1	0.4	0	3.8	0	0.1	5.7	2.4	4.9	0

[19] 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.

7 Conclusion

7 Conclusion

In 2018 the prevalence of early-stage entrepreneurial activity was broadly similar to 2017 and, whilst annual trends have fluctuated in recent times, the higher TEA rate first observed in 2011 has prevailed. Indeed, the rate of 7.9% in 2018 maintains the step-up in early-stage entrepreneurial activity observed after the great recession from the previous long run stable rate of 6%. It is important to note, however, that this increase is largely in low job expectation entrepreneurial activity, with the relative prevalence of high expectation activity dropping by around one quarter since the early 2000s.

In 2018 one-fifth of working age individuals in the UK 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 first increased to an equivalent rate of around 1 in 5 individuals in 2011 and again represents an increase on the previous long-run rate of 16%, or 1 in 6 working age individuals.

The higher prevalence of entrepreneurs both in the media and more widely in the economy may be influencing these strong attitudes in favour of entrepreneurship.

Attitudes of non-entrepreneurial individuals to entrepreneurship remained positive in 2018 with more than 1 in 4 reporting that they know someone that has started a business recently, and two fifths confident that they have the skills, knowledge and experience to start up. The higher prevalence of entrepreneurs both in the media and more widely in the economy may be influencing these strong attitudes in favour of entrepreneurship. Likewise, they may suggest that starting a business is now more desirable and achievable than it was in the previous decade resulting in the increased activity rates particularly amongst the younger generation.

With these higher long-run entrepreneurial rates in the UK, start-up funding becomes more important; and although more than half of entrepreneurs expected to self-fund, equal proportions expect funding from banks and family to be important sources of income. Indeed the continued engagement with informal investment suggests that alternative sources including friends, angel investment and crowd-funding are becoming more commonplace rather than relying solely on more formal channels.

This year, we introduced additional analysis on the gig economy which provides opportunities for people to take on part-time or short-term work to supplement their income. Around one in twenty adults in the UK work in the gig economy, with rates highest among young people and males in particular. Interestingly, the gig economy seems to be an attractive way of working for those intending to start a business or who are in the early stages, with one in five future entrepreneurs working this way and one in ten nascent entrepreneurs. Given the flexibility inherent with this type of work it would seem ideal for those individuals who wish to spend time getting their business off the ground and earn a wage at the same time. The latter point is particularly important for those early-stage entrepreneurs who may not yet have a steady monthly income arising from their business venture.

Appendix 1: GEM UK Sampling and Weighting Methodology

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 2018, 9,002 adults aged 18-80 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, and the Northern Ireland Department for the Economy chose to boost sampling in their region in order to have more detail about entrepreneurship in their area.

The raw sample of 9,002 was distributed across 12 geographic areas within which representative sub-samples of the population aged 18-80 were taken. These areas and the sample sizes are: South West: 489; South East: 279; East of England: 404; London: 449; West Midlands: 331; East Midlands: 262; Yorkshire & Humberside: 292; North East: 139; North West: 349; Wales: 2,991; Scotland: 2,015; Northern Ireland: 1,002.

According to OfCom[20], households in the UK which have access to a mobile phone but not to a fixed telephone landline increased from 14% in Q1 of 2016 to 18% in Q1 of 2017. In 2017, 19% 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 around 84% between 2010 and 2017. Eurobarometer estimates[21] suggest that in 2014, 17% 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.

[20] Source: Ofcom Facts and Figures. Available at https://www.ofcom.org.uk/about-ofcom/latest/media/facts accessed 16/06/18
[21] See Special Eurobarometer 414, available at http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_414_en.pdf

Appendix 2: Additional Tables and Data for Figures

Additional Tables and Data for Figures

Figure 2.1. Participation in the Gig Economy in 2018 by Future and Nascent Entrepreneurs in the UK, Germany and US (Source: GEM Global APS 2018)

	Intend to Start	Nascent Entrepreneur
UK	22.0	8.9
Germany	25.1	10.7
US	38.0	22.9

Table 3.1b. Attitudes towards entrepreneurship in the UK, France, Germany and the US in 2018 - 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 Global APS 2018)

	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
UK	**33.1%**	**43.8%**	**46.6%**	**40.3%**
FRANCE	33.2%	34.9%	37.5%	36.7%
GERMANY	23.7%	42.1%	38.3%	38.7%
US	38.5%	69.8%	55.6%	39.4%

Table 3.2b. Entrepreneurial attitudes in the UK in 2016, 2017 and 2018 (% respondents aged 18-64 expressing an opinion and agreeing with the statement) (Source: GEM UK APS 2016, 2017 and 2018)

	2016	2017	2018	**2016**		**2017**		**2018**	
	All	All	All	Male	Female	Male	Female	Male	Female
I personally know someone who has started a business in the last two years	33.5	33.0	33.1	36.8	30.2	35.4	30.7	37.2	28.9
There will be good start-up opportunities where I live in the next six months	42.1	43.1	43.8	47.2	36.8	46.4	39.7	48.8	38.6
I have the skills, knowledge and experience to start a business	48.0	48.0	46.6	56.7	39.3	57.6	38.5	56.0	37.2
Fear of failure would prevent me from starting a business (for those who agree there are good start-up opportunities)	36.3	37.4	40.3	31.2	40.8	30.0	41.0	35.1	43.2
Most people consider that starting a business is a good career choice	58.6	58.6	58.6	59.9	57.2	55.0	56.9	57.9	55.0
Those successful at starting a business have a high level of status and respect in society	77.4	77.4	77.4	76.8	77.9	76.1	76.0	76.3	77.0
You will often see stories about people starting successful new businesses in the media	61.3	61.3	61.3	61.6	61.0	60.9	58.0	61.4	56.7

Figure 3.2. Entrepreneurial attitudes in the UK, 2002-2018 (% non-entrepreneurially active respondents aged 18-64 expressing an opinion and agreeing with the statement) (Source: GEM UK APS 2002-2018)

	2002	2003	2004	2005	2006	2007	2008	2009
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
There are good start-up opportunities where I live in the next six months	25.8	31.6	33.2	35.4	33.8	36.1	26.9	23.0
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
Fear of failure would prevent me starting a business (for those who agree there are good start-up opportunities)	37	35.5	36.0	36.1	37.3	37.9	38.3	35.2
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
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
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

	2010	2011	2012	2013	2014	2015	2016	2017	2018
I know someone who has started a business in the last 2 years	31.1	28.2	27.1	25.2	24.7	25.8	28.4	28.1	28.2
There are good start-up opportunities where I live in the next six months	26.8	27.9	30.5	33.2	36.8	37.6	37.9	38.6	39.5
I have the skills, knowledge and experience to start a business	47.2	36.7	38.7	37.0	38.4	37.5	41.1	40.6	40.1
Fear of failure would prevent me starting a business (for those who agree there are good start-up opportunities)	36.0	41.4	43.3	41.4	43.0	39.5	39.6	39.7	42.8
Most people consider that starting a business is a good career choice	52.6	50.4	49.9	54.5	57.3	57.5	58.2	55.4	56.3
Those successful at starting a business have a high level of status and respect in society	76.3	81.4	77.1	79.5	78.4	79.8	77.7	76.7	77.7
You will often see stories about people starting successful new businesses in the media	51.5	44.2	45.5	48.8	58.8	59.9	59.9	58.5	58.2

Figure 3.2b. Entrepreneurial Attitudes in the UK, 2002- 2018 (percentage of working age population expressing an opinion and agreeing with the statement (Source: GEM UK APS 2002 -2018)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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	33.5	33.0	33.1
There are good start-up opportunities where I live in the next six 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	42.1	43.1	43.8
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	48.0	48.0	46.6
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	36.3	37.4	40.3
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	58.6	55.9	56.5
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	77.4	76.0	76.7
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	61.3	59.4	59.1

NOTE: These figures are calculated on the same basis as the GEM UK Report prior to 2008 – that is, for the 18-64 year old 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.

Table 3.3b. Entrepreneurial Attitudes in the UK regions in 2018 (percentage of working age population expressing an opinion and agreeing with the statement) (Source: GEM UK APS 2018)

	ENGLAND	WALES	SCOTLAND	NORTHERN IRELAND	UNITED KINGDOM
I know someone who has started a business in the last 2 years	33.1	32.8	32.7	32.7	**33.1**
There are good start-up opportunities where I live in the next six months	45.1	36.3	40.0	33.0	**43.8**
I have the skills, knowledge and experience to start a business	47.4	43.9	42.3	42.8	**46.6**
Fear of failure would prevent me starting a business	40.2	39.3	39.5	46.1	**40.3**
Most people consider that starting a business is a good career choice	57.3	54.5	52.0	49.2	**56.5**
Those successful at starting a business have a high level of status and respect in society	76.5	75.6	78.8	78.0	**76.7**
You will often see stories about people starting successful new businesses in the media	58.7	58.6	61.3	64.0	**59.1**

Table 3.3.c. Good Opportunities for Start-up in the local area in next 6 months - in UK from 2002 to 2018 - percentage of non-entrepreneurially active working age population expressing an opinion and agreeing with the statement (Source: GEM UK APS 2002-2018)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
ENGLAND	26.4	31.5	33.4	36.5	34.1	36.3	26.8	23.5	27.7	28.5
WALES	21.1	29.7	30.7	31.8	28.6	30.4	19.6	20.4	21.8	25.3
SCOTLAND	23.3	34.1	33.4	28.6	33.6	36.1	33.1	21.2	25.4	28.2
N. IRELAND	24.8	29.0	32.2	32.8	32.9	39.0	21.8	16.5	15.9	24.1
UK AVERAGE	**25.8**	**31.6**	**33.2**	**35.4**	**33.8**	**36.1**	**26.9**	**23**	**26.8**	**28.2**

	2012	2013	2014	2015	2016	2017	2018	% change	% change
ENGLAND	31.8	34.6	37.5	38.6	39.3	40.0	40.6	53.7	27.6
WALES	22.6	25.1	29.5	29.6	29.9	31.2	33.2	57.5	47.1
SCOTLAND	26.6	29.1	38.1	34.6	32.5	34.2	35.7	53.2	34.2
N. IRELAND	19.7	20.2	25.2	31.1	28.2	29.1	31.6	27.4	60.4
UK AVERAGE	**30.5**	**33.2**	**36.8**	**33.7**	**33.4**	**34.5**	**36.0**	**39.5**	**18.0**

ENGLAND WALES SCOTLAND N. IRELAND UK AVERAGE

Figure 3.3. Male and female attitudes towards Good Opportunities and Fear of Failure (percentage 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 2002-2018)

		2002	2003	2004	2005	2006	2007	2008	2009
Opportunity Perception	♂	29.2	34.6	36.8	40.2	37.6	40.8	30.9	25.0
	♀	22.8	29.0	29.7	31.0	30.1	31.6	23.0	20.9
Fear of Failure	♂	34.4	34.6	34.9	34.0	34.1	36.4	35.9	32.3
	♀	40.1	35	37.5	38.6	41.2	39.6	41.4	38.8

		2010	2011	2012	2013	2014	2015	2016	2017	2018
Opportunity Perception	♂	29.3	29.7	34.6	37.6	40.4	42.4	41.9	40.8	43.3
	♀	24.7	26.4	26.8	29.0	33.4	33.2	34.2	36.6	36.0
Fear of Failure	♂	34.9	38.7	40.5	40.1	38.5	36.8	36.7	35.7	40.0
	♀	37.2	44.0	46.4	43.0	48.0	42.6	42.8	43.9	46.0

Figure 4.1. Participation in entrepreneurship in the UK by most established stage of entrepreneurial activity (percentage of working age population), 2002 to 2018 (Source: GEM UK APS 2002-2018)

	2002	2003	2004	2005	2006	2007	2008	2009
Established business owner/manager	5.6	5.7	4.7	5.1	5.3	5.0	6.0	5.8
New business owner/manager	3.1	3.2	2.8	3.0	2.8	2.7	2.8	3.2
Nascent entrepreneur	2.1	3.0	2.9	2.7	2.7	2.7	2.6	2.5
Intend to start (within three years)	3.9	4.9	5.9	5.7	4.9	4.9	4.5	3.8
No activity or intention	85.3	83.2	83.7	83.4	84.3	84.7	84.1	84.7
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Established business owner/manager	6.2	6.5	7.0	6.5	5.9	5.2	6.1	6.6	6.6
New business owner/manager	3.3	3.4	4.4	3.5	3.8	3.0	3.8	4.0	3.9
Nascent entrepreneur	2.9	4.1	5.3	3.5	4.6	3.8	4.7	3.8	3.6
Intend to start (within three years)	4.6	6.8	7.7	6.5	5.8	7.3	7.5	6.0	6.3
No activity or intention	83.0	79.2	75.7	80.0	79.9	80.7	77.8	79.6	79.6
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Figure 4.1b. Participation in entrepreneurship in the UK by stage of entrepreneurial activity (percentage of working age population), 2002 to 2018 (Source: GEM UK APS 2002-2018 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
Established business owner/manager	5.6	5.7	4.7	5.1	5.3	5.0	6.0	5.8
New business owner/manager	3.1	3.2	2.9	3.1	2.8	2.7	2.9	3.2
Nascent entrepreneur	2.5	3.5	3.2	3.2	3.2	3.0	2.8	2.7
Intend to start (within three years)	6.5	7.9	8.6	8.7	7.8	7.4	6.8	6.1
No activity or intention	85.3	83.2	83.7	83.4	84.3	84.7	84.1	84.7

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Established business owner/manager	6.2	6.5	7.0	6.5	5.9	5.2	6.1	6.6	6.6
New business owner/manager	3.4	3.4	4.4	3.6	3.8	3.1	3.8	4.1	4.0
Nascent entrepreneur	3.2	4.2	5.7	3.8	4.9	4.0	5.1	4.8	4.0
Intend to start (within three years)	7.2	9.8	11.3	8.1	8.5	9.7	11.1	7.2	8.6
No activity or intention	83.0	79.2	75.7	80.0	79.9	80.7	77.8	79.6	79.6

Figure 4.2. Total early-stage Entrepreneurial Activity (TEA) in the UK, France, Germany and US (2002-2018) (Source: GEM Global APS 2002-2018)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	**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**	**8.8**	**8.7**	**7.9**
	3.2	1.6	6.0	5.4	4.4	3.2	5.6	4.4	5.8	5.7	5.2	4.6	5.3		5.3	3.9	6.1
	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	4.6	5.3	5.0
	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	12.6	13.6	15.6

Figure 4.3. Total early-stage Entrepreneurial Activity (TEA) in the UK, France, Germany and US by Age Group (2018) (Source: GEM Global APS 2018)

	18-24	25-34	35-44	45-54	55-64
	**8.4**	**10.0**	**8.3**	**6.7**	**5.9**
	1.6	5.0	4.4	3.9	4.0
	3.4	7.7	6.5	5.0	3.4
	11.4	17.4	16.4	14.1	7.6

Figure 4.4. Total early-stage Entrepreneurial Activity (TEA) in the UK by Age Group (2016-2018) (Source: GEM UK APS 2016, 2017, 2018)

	18-24	25-34	35-44	45-54	55-64	TOTAL
2016	8.0	9.9	10.0	8.0	8.0	**8.8**
2017	7.2	11.7	8.7	9.8	5.0	**8.7**
2018	8.4	10.0	8.3	6.7	5.9	**7.9**

Table 4.4b. Total early-stage Entrepreneurial Activity amongst the 50-64 Age Group 2017-18 (Source: GEM UK APS 2017-2018)

	♂		♀	
	2017	2018	2017	2018
High	11.5	9.8	4.4	5.4
Low	8.3	6.5	2.5	3.1
Mean	9.9	8.2	3.5	4.2

Table 4.4c. Necessity and Opportunity TEA amongst the 50-64 Age Group 2017-18 (Source: GEM UK APS 2017-2018)

	Opportunity TEA				Necessity TEA			
	♂		♀		♂		♀	
	2017	2018	2017	2018	2017	2018	2017	2018
High	9.39	9.10	4.09	3.92	2.66	1.09	0.55	1.88
Low	6.48	5.93	2.29	2.04	1.18	0.15	0.01	0.65
Mean	7.94	7.51	3.19	2.98	1.92	0.62	0.28	1.26

Figure 4.5. Total early-stage entrepreneurial activity by gender in the UK, France, Germany and US in 2018 (Source: GEM Global APS 2018)

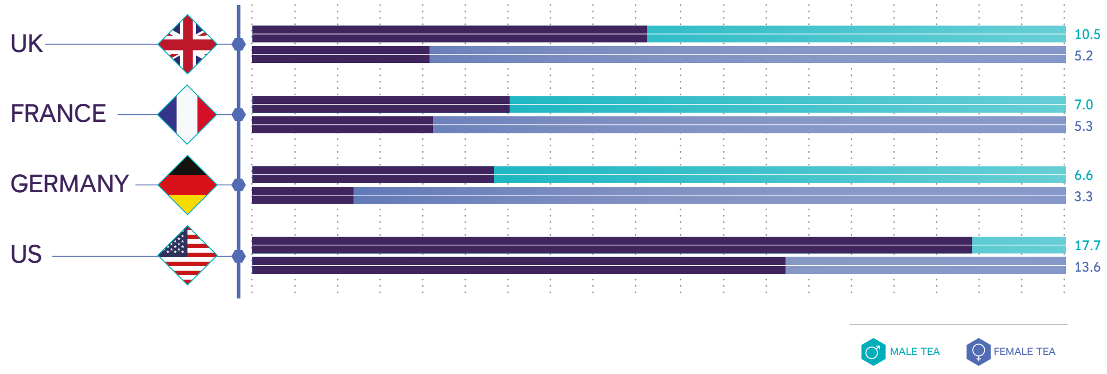


Figure 4.6. Established business ownership by gender in the UK, France, Germany and US, 2018 (Source: GEM Global APS 2018)

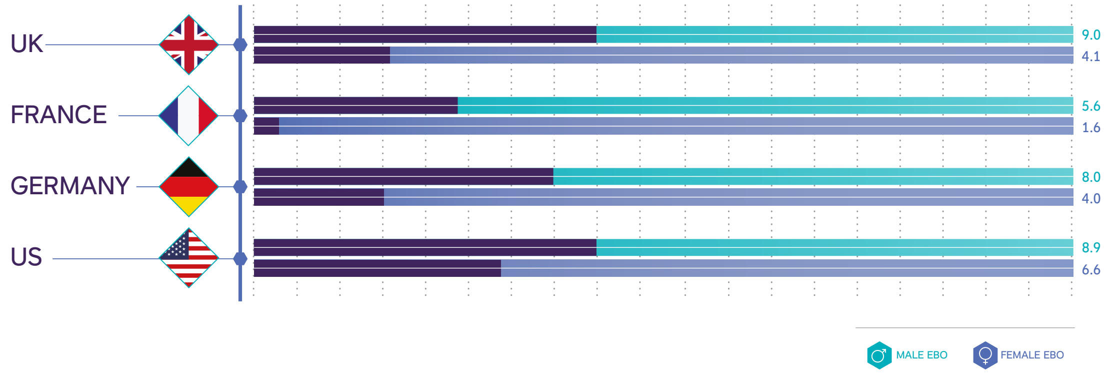


Figure 4.7. Female early-stage Entrepreneurial Activity in the UK, France, Germany and US, 2002-2018 (Source: GEM Global APS 2002-2018)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	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**	**5.7**	**5.6**	**5.2**
	2.1	1.6	3.8	3.3	2.5	2.2	3.3	2.0	4.8	3.0	4.0	3.1	4.0		3.4	2.4	5.3
	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	3.1	3.9	3.3
	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	10.5	10.7	13.6

Figure 4.8. Total early-stage Entrepreneurial Activity in the UK Home Nations, 2002-2018 (Source: GEM UK APS 2002-2018)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	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**	**9.2**	**9.1**	**8.1**
	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	7.6	6.3	6.9
	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	7.3	6.7	6.3
	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	6.3	6.5	6.5

Figure 4.9. Total early-stage Entrepreneurial Activity in the UK Home Nations by Index of Multiple Deprivation 2018 (Source: GEM UK APS 2018)

	England	Wales	Scotland	Northern Ireland
1st Quintile	12.6	4.6	5.7	6.1
2nd Quintile	9.6	7.3	6.4	5.7
3rd Quintile	8.1	5.4	5.6	10.2
4th Quintile	9.4	9.2	7.6	5.7
5th Quintile	6.7	7.6	6.8	4.3

Figure 4.10. Male and Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2018 (Source: GEM UK APS 2018)

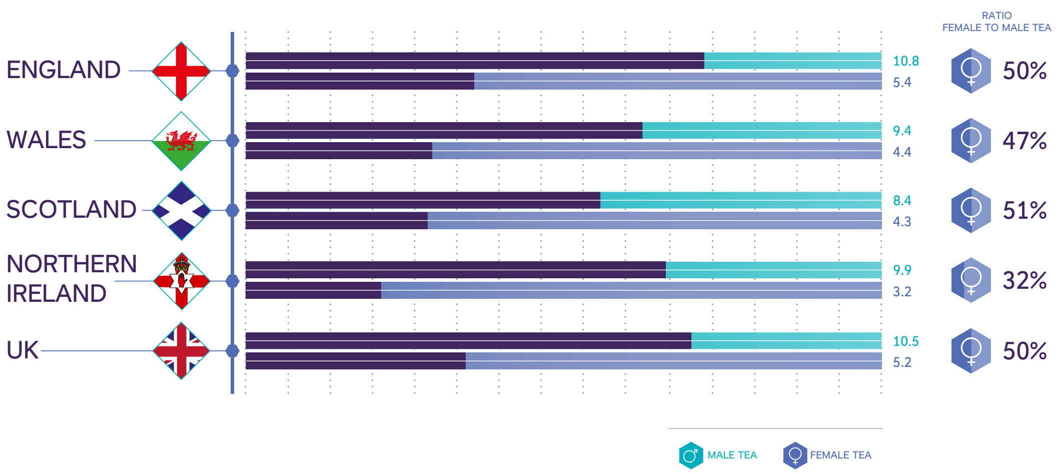


Figure 4.11. Female to Male Entrepreneurship Ratio in the UK regions (combined over 2015-18) (Source: GEM UK APS 2015-18)

	East	Scotland	Wales	Y.shire & Humber	South West	Northern Ireland	South East	West Midlands	East Midlands	London	North West	North East	UK
Female to male ratio	78%	62%	51%	49%	48%	48%	47%	46%	42%	40%	38%	26%	48%

Figure 4.12. Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2002-2018 (Source: GEM APS 2002-2018)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	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**	**5.8**	**5.7**	**5.4**
	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	5.8	3.8	4.4
	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	5.2	5.4	4.3
	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	4.9	4.3	3.2

Figure 4.13. Total early-stage Entrepreneurial Activity in the UK Home Nations by Age Group, 2018 (Source: GEM UK APS 2018)

	18-24	25-34	35-44	45-54	55-64
	8.8	10.0	8.5	7.2	6.1
	6.6	12.0	7.3	4.5	4.4
	6.5	8.1	7.9	4.1	5.4
	5.9	10.6	6.3	6.2	2.6
	8.4	**10.0**	**8.3**	**6.7**	**5.9**

Figure 4.14. Trend in Total early-stage Entrepreneurial Activity in the UK Home Nations, for 18 to 29 year olds, 3-year rolling averages 2002-04 to 2016-18 (Source: GEM UK APS 2002-2018)

	2002-04	2003-05	2004-06	2005-07	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14	2013-15	2014-16	2015-17	2016-18
	5.0	**5.4**	**5.1**	**5.4**	**5.2**	**5.3**	**5.0**	**5.8**	**7.4**	**7.9**	**8.0**	**6.6**	**7.4**	**8.3**	**9.3**
	4.1	4.3	4.3	4.5	5.7	6.1	7.0	7.6	8.5	7.7	7.3	6.9	7.3	6.2	6.8
	4.8	5.4	4.6	4.2	4.0	3.5	3.6	4.6	5.7	6.4	5.5	6.2	6.7	7.4	7.7
	5.0	5.3	4.4	4.2	3.9	4.6	4.6	5.7	5.7	5.9	5.8	5.5	6.6	6.4	7.8

Figure 4.15. Total early-stage Entrepreneurial Activity Rate by White and Non-White Ethnic Status 2017 – 2018 (showing means and 95% confidence intervals) (Source: GEM APS 2017, 2018)

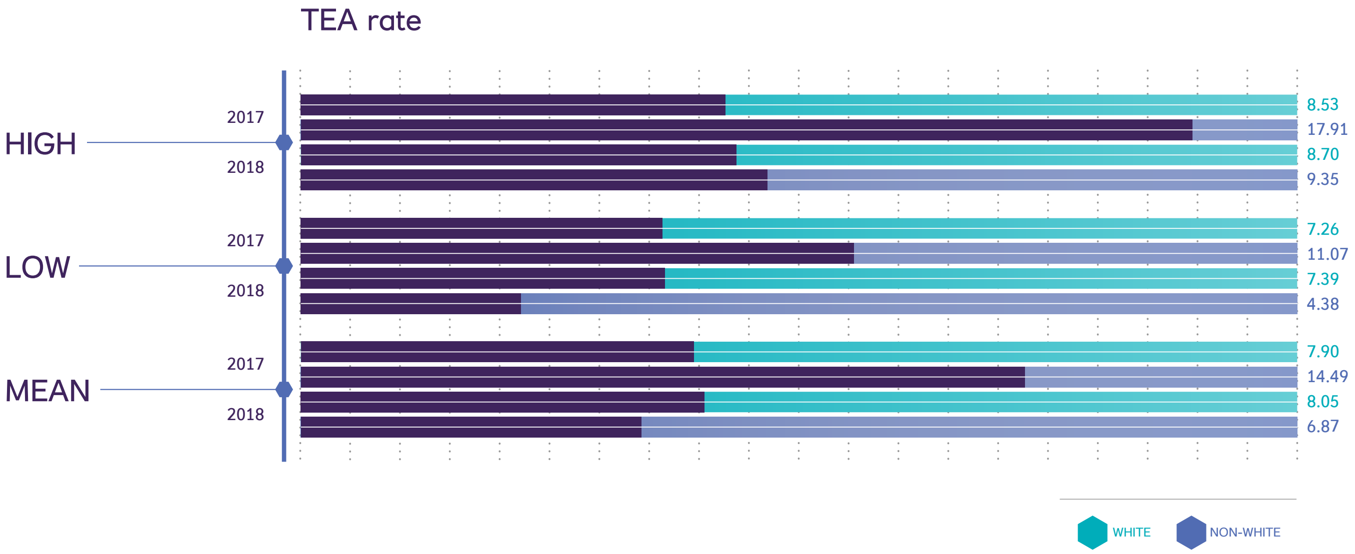


Figure 4.16. Total early-stage Entrepreneurial Activity Rate by Migrant Status 2017 – 2018 (showing means and 95% confidence intervals) (Source: GEM UK APS 2017-2018)

	TEA rate					
	UK born life-long resident		UK-born regional migrant		Immigrant	
	2017	2018	2017	2018	2017	2018
High	9.04	8.76	9.79	9.51	15.59	9.83
Low	7.44	7.18	7.40	7.01	9.38	4.55
Mean	8.24	7.97	8.60	8.26	12.49	7.19

Figure 4.17. Total early stage Entrepreneurial Activity Rate by Migrant and Resident Status 2018 (Source: GEM UK APS 2018)

	UK born life-long resident	UK-born regional migrant	UK born but has lived abroad	Immigrants
High	8.8	8.3	15.1	9.8
Low	7.2	5.6	9.2	4.6
Mean	8.0	6.9	12.2	7.2

Figure 4.18. Necessity and Opportunity TEA by Migrant and Resident Status 2018 (Source: GEM UK APS 2018)

	Necessity TEA	Opportunity TEA
UK born life-long residents	1.1	6.6
UK born regional in-migrants has never lived abroad	0.4	6.5
UK born but has lived abroad	2.0	10.2
Immigrants	2.1	4.6

Figure 4.19. Entrepreneurial Employee Activity (EEA) in the UK, France, Germany and the US 2017-2018 (Source: GEM UK APS 2017, 2018)

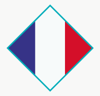
				
2017	**6.8**	3.1	4.4	6.3
2018	**5.7**	3.6	3.9	6.5

Figure 4.20. Total early-stage Entrepreneurial Activity (TEA) and Entrepreneurial Employee Activity (EEA) in the UK 2017-2018 (Source: GEM UK APS 2017, 2018)

	2017	2018
TEA rate	8.7	7.9
EEA rate	6.8	5.7

Figure 4.21. Necessity and opportunity TEA rates in the UK, France, Germany and US in 2018 (Source: GEM UK APS 2018)

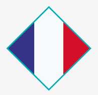
	Opportunity TEA	Necessity TEA
	**6.6**	**1.1**
	3.0	0.8
	4.2	0.6
	11.8	1.4

Figure 4.22. Necessity and opportunity nascent and new business owner-manager rates in the UK (showing means and 95% confidence intervals), 2016, 2017 and 2018 (Source: GEM UK APS 2016, 2017 and 2018)

	Nascent entrepreneurship rate						New business owner-manager rate					
	Opportunity			Necessity			Opportunity			Necessity		
	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
High	4.73	4.57	3.74	0.82	0.68	0.74	3.54	3.69	3.80	0.71	0.83	0.69
Low	3.84	3.66	2.90	0.47	0.35	0.39	2.78	2.87	2.96	0.39	0.46	0.35
Mean	4.28	4.11	3.32	0.65	0.52	0.57	3.16	3.28	3.38	0.55	0.64	0.52

Figure 5.1. Relative frequency of high job expectation early-stage entrepreneurs in the UK, France, Germany and the US, three year rolling averages, 2004-2006 to 2016-2018 (Source: GEM Global APS 2004-2018)

3 year rolling average	2004-06	2005-07	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14	2013-15	2014-16	2015-17	2016-18
	**21.9**	**21.6**	**17.6**	**16.8**	**15.7**	**16.4**	**16.3**	**16.8**	**16.9**	**16.3**	**16.5**	**15.5**	**15.8**
	7.7	6.0	9.5	14.7	18.8	19.9	20.0	19.5	18.2	16.4	16.9	26.7	25.5
	16.8	16.5	13.7	13.2	13.3	14.5	16.7	17.6	17.4	15.3	14.7	17.2	22.1
	20.4	23.1	24.9	23.8	24.2	22.8	23.1	23.1	24.2	25.3	26.3	27.2	27.7

Figure 5.2. Relative frequency of high job expectation among established business owner-managers in the UK, France, Germany and the US, three year rolling averages, 2004-2006 to 2016-2018 (Source: GEM Global APS 2004-2018)

3 year rolling average	2004-06	2005-07	2006-08	2007-09	2008-10	2009-11	2010-12	2011-13	2012-14	2013-15	2014-16	2015-17	2016-18
UK	**5.9**	**5.4**	**4.9**	**4.6**	**3.5**	**3.5**	**3.4**	**4.2**	**3.8**	**4.2**	**4.7**	**5.7**	**5.0**
France	4.3	2.8	1.9	1.9	3.5	1.6	1.7	0.6	1.1	1.6	1.6	2.2	2.8
Germany	3.1	2.2	1.5	2.4	3.1	3.4	3.8	3.3	3.6	3.8	4.3	3.7	3.0
US	5.3	6.3	7.4	6.7	4.6	3.0	3.7	3.6	3.8	4.4	5.5	6.3	6.0

Table 6.1a. Percentage of nascent entrepreneurs expecting funding from different sources 2009 to 2015 (Source: GEM UK APS 2009 to 2015)

Type of funding expected	2009	2010	2011	2012	2013	2014	2015
No funding needed	5.0	10.3	6.2	4.4	6.0	7.3	4.8
All funded by entrepreneur	50.7	43.8	47.0	39.0	40.6	46.0	52.5
None funded by entrepreneur	3.9	8.5	4.9	6.7	1.1	1.6	1.0
Close family member (spouse, parent, sibling)	10.1	8.6	3.5	8.9	3.0	9.1	18.5
Other relatives, kin or blood relations	6.0	1.7	2.0	8.2	2.1	6.0	7.1
Work colleagues	6.8	5.0	10.1	8.3	5.8	5.7	5.8
A stranger	3.7	0.7	1.1	5.0	2.7	1.6	13.9
Friends or neighbours	4.5	6.9	2.5	5.6	6.1	4.9	4.2
Banks or other financial institutions	20.0	18.2	18.6	22.3	10.2	8.8	23.3
Government programmes	15.1	17.7	11.1	15.9	8.9	7.2	22.1
Any other source	8.8	5.0	7.2	13.2	8.2	8.2	9.7