



Global
Entrepreneurship
Monitor

Global Entrepreneurship Monitor

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MONITORING REPORT

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Disclaimer

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

Foreword

by Andrew Harrison, NatWest Managing Director of Business Banking

It is a privilege for NatWest to sponsor once again the UK version of the Global Entrepreneurship Monitor (GEM), the most authoritative annual research into entrepreneurial activity and trends.

While the global business landscape has changed since 2020, the report and the data within is full of insight as we consider the state of entrepreneurship following the enduring effects of the pandemic.

It's no surprise that the report shows total entrepreneurial activity in the UK dropped to below 2018 levels, from 9.9% in 2019 to 7.5%. This was undoubtedly due to the pandemic, but the good news is that more people expressed the intention of starting a business in 2020 than in previous years, from 11% in 2019 to 16.2%. Which shows great faith in our economic ecosystems.

The share of those agreeing that starting a business would be a good career choice in 2020 also jumped significantly from 58% to 75% of those surveyed. 17.6% of people who quit their business indicated that the pandemic was the most important reason for doing so.

After a turbulent start to 2021, it is really encouraging to see that small businesses across the UK have emerged from national lockdowns and achieved swift turnarounds in their order books. However, we need to continue to build back better and ensure that the small businesses forming the backbone of the UK economy receive the support they need to handle challenges such as cost pressures and staff shortages.

At NatWest our purpose is to champion the potential of people, families and businesses. As the UK's biggest bank for business one of our key aims is to remove barriers to UK enterprise growth through learning, networks, expertise and funding with the aim to support 35k businesses through our enterprise programmes like Accelerator, Business Builder and our Women in Business proposition.

We'll continue to work with experts like Aston University, Queens University Belfast and Strathclyde University to take the best data on entrepreneurship trends to the market and ensure we use that information at NatWest to help more businesses start, scale and succeed.

Executive Summary

Background

- The Global Entrepreneurship Monitor (GEM) research consortium measured rates of entrepreneurship across multiple phases in 43 economies in 2020, making it the world's most authoritative comparative study of entrepreneurial activity in the general adult population. In the UK in 2020, 9,453 adults aged 18 to 80 participated in the GEM survey. This report mainly focuses on the working-age adults sub-sample (18 to 64 year olds), comprising 7,587 participants.
- This monitoring report for the UK compares GEM measures of entrepreneurial attitudes, activity and aspirations in the UK, Germany and the United States. It also compares the results across the four home nations of the UK.
- As a result of the COVID-19 pandemic and the obvious disruptive impact on the lives of all of us and the huge impact on the economy it was decided that the GEM UK survey, in line with all GEM Global participating countries, should be pushed back until Q4 of 2020 rather than June through August. The UK team felt that this was preferable to not undertaking the survey at all as the pandemic raised many important questions about the ability of entrepreneurs, and indeed the wider population, to navigate their way through the crisis as the economy was effectively closed down and household incomes were under great stress for the majority of the population.
- The results from the GEM UK Adult Population Survey (APS) and National Expert Survey (NES) for 2020 provide a unique opportunity to lift the lid on a range of issues which lie at the heart of the entrepreneurial process in the midst of the crisis. As it turned out Q4 in the UK witnessed another second and third waves of the COVID-19 virus which led to two further lockdowns. The specific COVID-19 questions in the surveys need to be understood against that context.

Impact of COVID-19

- The coronavirus pandemic is highly associated with entrepreneurial intention and the perception of entrepreneurial opportunities. In 2020, about 63% of working-age adults looking to set up a business within three years, indicated that their intentions were influenced by the coronavirus pandemic.
- Around 1 in 2 of those involved in TEA agree that there are new opportunities because of the pandemic (29.6% somewhat agree and 22.1% strongly agree). This is higher than among established business owner-managers: only 1 in 3 would agree with this statement.
- Around 2 in 3 (60.5%) of those engaged in start-up activity think that the coronavirus pandemic has led to a delay in getting the business operational. Nearly 3 in 4 (76.8%) think that entrepreneurial intention was somewhat impacted by the pandemic.
- More than half of employees engaged in entrepreneurial activity on behalf of their employers (56.5%) feel that the pandemic has caused the business they work for to stop some of its core activities. Over 60% of owner-managers also indicated a similar response.
- Nearly 1 in 5 (17.6%) indicated that the pandemic was the most important reason for quitting their business.
- Around half the nascent entrepreneurs (50.1%), owner-managers (50.1%), and employee entrepreneurs (44.9%) conveyed that the UK government had so far dealt effectively with economic consequences of the pandemic.

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 2020 was 7.5%.
- The 2020 UK TEA rate of 7.5% was statistically significantly lower than the rate in 2019 (9.9%) and dropped back to the level of 2018 (7.9%).
- The TEA rate of 7.5% in the UK is statistically significantly higher than that of Germany (4.8%) and lower than that of the US (15.4%).
- The UK nascent entrepreneurship rate was also significantly lower in 2020 (4.2%) than in 2019 (6.5%), while the new business owner-manager rate in 2020 (3.5%) was not statistically significantly different to the rate in 2019 (3.6%).
- TEA rates in 2020 were not significantly different across the home nations: England (7.7%), Wales (6.5%), Scotland (7.3%) and Northern Ireland (5.4%). The rate in England in 2020 (7.7%) was statistically significantly lower than the rate in 2019 (10.5%). Changes in TEA rates from 2019 to 2020 in other home nations were not statistically significant.
- Employees can also be engaged in entrepreneurial activity on behalf of their employers; this is measured through the Entrepreneurial Employee Activity (EEA) Rate. In 2020, the UK's rate was 3.2%, which was statistically significantly lower than 2019 rate (5.6%). Considering both TEA and EEA together provides a more comprehensive picture of entrepreneurial activity in a nation.

Entrepreneurial Activity Types

- In total, around 1 in 4 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 2018 and, again, higher than the historical trend.
- 16.2% of working age adults expected to start a business within the next 3 years in the UK, which is higher than in Germany (12.7%) but lower than in the US (18.6%).
- 4.2% of the working age adult population in the UK were actively trying to start a business (*nascent entrepreneurs*), compared with 3.1% in Germany and 10.7% in the US.
- 3.5% of the working age adult population were owner-managers of a business that was 4 to 42 months old (*new business owner-managers*). This is lower than the US rate of 4.9% and higher than the German rate of 1.8%.
- 7.6% of the UK working age adult population owned and managed a business older than 42 months (*established business owner-managers*). This decreased from 8.0% in 2019 and lay between the rates for Germany (6.2%) and US (9.9%).
- 3.6% of working age people in the UK discontinued a business (either through closure or sale) in the past 12 months. Discontinuation rates of businesses were similar in the US (4.4%) but higher than in Germany (1.4%).
- Among all entrepreneurial activity measures in the UK, only new business owner-manager and established business owner-managers rates remained significantly unchanged from 2019, although the pattern was slightly different between the home nations.
- Intention to start a business statistically significantly increased in 2020 (16.2%) compared to 2019 (11%) while nascent entrepreneurship and TEA rates statistically significantly decreased. Business closure rate was statistically significantly higher in 2020 (3.6%) than in 2019 (2.1%).

Demographics

- In 2020 the male TEA rate stood at 9.0% and the female rate 6.1%; the male rate is statistically lower than the 2019 rate of 12.1%. 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.’
- The UK female to male TEA ratio of 68% in 2020 is higher than in previous years but was due to the collapse in male early-stage entrepreneurial activity underlining the resilience of female early-stage entrepreneurial activity in the midst of the most severe economic crisis in 300 years.
- Those aged 25-34 in 2020 in the UK were more likely to be involved in early-stage entrepreneurial activity than all other age groups but this was not significantly different to those aged 18-24 and 35-34. Only 3.2% of 55-64 year olds in the UK were involved in early-stage entrepreneurial activity while in the US it was two and a half times higher at 8.2%.
- Similar to previous years, immigrant TEA levels were significantly above that of UK born life-long residents in 2020: the TEA rate for immigrants was 10.8% compared to 6.1% for life-long residents. The TEA rate for immigrants was 10.2% in 2017-19 compared to a rate of 10.5% in 2016-2018. The rate for the life-long resident population in 2017-19 was 8.5% and the UK-born regional migrant rate is 8.9%.
- Those ethnic-minority communities that have borne the brunt of the pandemic in terms of infection, hospitalisation and sadly deaths demonstrated their resilience by maintaining their previous levels of early-stage entrepreneurial activity (TEA rate) which were significantly higher than for the non-ethnic minority population. Following previous trends, the TEA rate of the white ethnic population in the UK in 2020 was significantly lower than that of the non-white population, at 6.6% compared to 14.1% respectively. The TEA rate for the white ethnic group was significantly lower than the rate in 2019.
- Clearly, the pandemic has had no damaging impact on the level of entrepreneurial activity by immigrants and ethnic-minorities although it has depressed it for life-long residents and the non-ethnic population.

Attitudes and Aspirations

- Attitudes of non-entrepreneurial individuals to entrepreneurship slightly declined in 2020. The share of those who felt they had the skills, knowledge and experience to start a business (44.3%) was statistically significantly lower than the share in 2019 (47.5%). The start-up opportunity perception was also statistically significantly lower (32%) than in 2019 (39.1%). The proportion of those who felt that fear of failure would prevent them starting the business, on the contrary, was statically significantly higher (53%) than in 2019 (46%).
- Four-fifths (81%) of the non-entrepreneurial population believe that those successful at starting a business have a high status in society, however, there is a 7-percentage point gap between that share and those that believe starting a business is a good career choice. This is a narrowing of the gap since 2019 as significantly more of the non-entrepreneurial population report that starting a new business is a good career choice.
- Around 1 in 7 UK early-stage entrepreneurs have high job expectations, a statistically significant decrease from 2019 where 1 in 4 had high job expectations. This rate is lower than that of the US (22.5%) and Germany (23.9%). The rate of established business owners with high job expectations in the UK (9.2%) is similar to the US (8.6%) and higher than in Germany (5.2%). The rate of established business owners with high job expectations increased in 2020 when compared with 2019 but this was not significantly different.

Entrepreneurial Framework Conditions

- The Entrepreneurial Framework Conditions (EFC) that entrepreneurs face as they develop their businesses were examined using the GEM UK National Expert Survey (NES). Among twelve EFCs, seven have values superior to five (out of ten) meaning that, according to experts, these framework conditions may be considered as sufficient although subject to improvement. In contrast, five other EFCs were evaluated as insufficient. These are government policies to support entrepreneurship; government entrepreneurship programmes; entrepreneurial education at school and post-school age; and R&D transfer.
- In total, the National Entrepreneurship Context Index or NECI, which combines in one figure weighted averages of the twelve EFCs, was 5.0 (out of 10) in the UK in 2020. This increased from 4.83 in 2019.
- By contrasting the UK's NECI and EFCs with those of the other 44 countries which participated in the survey in 2020, the UK occupies 14th place (21st out of 53 in 2019). This lies between the US (5.2, rank 12/44) and Germany (4.9, rank 16/44).
- In 2020, experts were also asked to evaluate entrepreneurs' and Government response to the COVID-19 consequences. The entrepreneurial response (referring to whether entrepreneurs are introducing new ways of doing business, promoting working from home, adjusting their products or services, identifying new opportunities, or are increasing cooperation with other businesses, including on global projects) was rated highly 7.5/10 (rank 5/44).
- The government's response to the consequences of the pandemic, that is, whether governments are effectively helping businesses to adjust, are helping to avoid the loss of firms, are effectively protecting workers and customers, and whether governments are increasing digital delivery of regulations, was rated 5.2/10 (rank 20/44).

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 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 2020 the study conducted surveys in 43 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:

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

The 2020 GEM global study was based on an analysis of adult population survey (APS) results from 43 economies which cover around two-thirds of the world's population. 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 2020/21 Report was published in May 2021¹ and can be downloaded from www.gemconsortium.org

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

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

In addition, we measure general intention to start a business by asking individuals if they expect to start a business within the next three years (FUT). Finally, we ask individuals if they have sold, shut down, discontinued or quit a business, in the past year (BC). It is important to understand that the main subject of study in GEM is entrepreneurs rather than 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 TEA², which is represented in Figure 1.1 opposite.

¹ Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Guerrero, M. and Schott, T. (2021) Global Entrepreneurship Monitor 2020/21 Global Report. London: Global Entrepreneurship Research Association.

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.

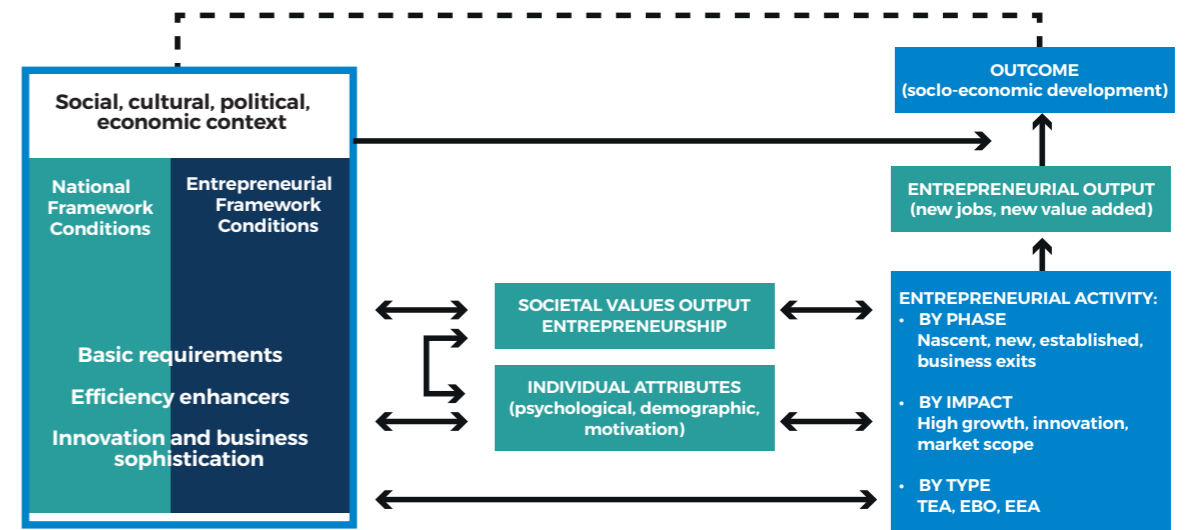


Figure 1.1: The Entrepreneurial Process and GEM Operational Definitions (Source: Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Guerrero, M. and Schott, T. (2021), pg.22)

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 2020 Adult Population Survey (APS) are explained in more detail in Appendix 1. In a major departure in 2020 we decided to introduce an online mode for respondents to complete the APS and this sat alongside the traditional mode of CATI surveys. We did this for one overriding reason and that was the vastly increased costs of undertaking CATI surveys and the need to maintain the UK sample at around 10,000 respondents to ensure we can continue to provide data for the home nations as well as other important sub-groups of the population such as immigrants, ethnic minorities and women. The first 2,000 APS interviews were conducted via CATI as usual and the results were reported in the GEM Global report published in May 2021. Accordingly, the results contained in this report may differ slightly from those already published for the UK in the GEM Global report. The detailed weighting and adjustments we made to the UK APS dataset as a result of this new mixed mode survey methodology are set out in Appendix 1.

Another 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 this survey was designed to match Ofcom estimates of the proportion of adults in mobile-only households in 2020 for the UK, to account for the higher mobile phone use (around 20%) of some hard to reach individuals, such as young men. Once again in 2020 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 as well as the CATI/Online mixed method). See Appendix 1 for further details.

2. Entrepreneurial attitudes

2.1 ENTREPRENEURIAL ATTITUDES IN THE UK AND BENCHMARK COUNTRIES IN 2020

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 Table 2.1 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, Germany and the US.

Points of note include the following:

- Nearly half of the non-entrepreneurial population of the UK know of a recent start-up entrepreneur which is similar to Germany, while the US saw three-fifths of the population.
- Just under half 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 the respective share is just under one-third while in Germany just over one-third of the non-entrepreneurial population perceive good start-up opportunities.
- In the UK over two-fifths of the non-entrepreneurial population perceive that they have the skills, knowledge and experience to start a business; the

rates in Germany are slightly higher while in the US the respective share is 64%.

- Fear of failure among those who perceive start-up opportunities is over half of the non-entrepreneurial population in the UK while the US has around half of respondents agreeing that fear of failure would prevent them from starting a business. Germany have a lower share with just under two-fifths.

2.2 ENTREPRENEURIAL ATTITUDES IN THE UK: 2018-2020

Estimates of attitudes towards entrepreneurship by gender are shown in Table 2.2. In 2019, GEM changed most attitude questions from yes/no questions to five-point Likert scale items. These have been converted to agree/other responses to harmonise with prior years. There was a substantial change in the way the item asking respondents if they know someone who has started a business in the last 2 years was measured in 2019, where for the first time the number of people known was asked. This could account for the significant rise between 2018 and 2019 in the proportion of people who report knowing someone who has started a business in the last 2 years for both males and females. Those stating they had the skills to start a business significantly increased from 44.3% in 2019 to 47.4% in 2020, while fear of failure decreased from 53% in 2019 to 46% in 2020. There was also a significant increase in females and the overall UK population stating they felt there are good opportunities to start a business, which went from 27.1% in 2019 to 37.5%

	I know someone who has started a business in the last 2 years	There are good start-up opportunities where I live in the next 6 months	I have the skills, knowledge and experience to start a business	Fear of failure would prevent me starting a business (for those who agree there are good start-up opportunities)
UK	47.0	32.0	44.3	53.0
Germany	44.4	36.0	47.6	38.4
US	60.9	48.6	64.0	50.5

Table 2.1: Attitudes towards entrepreneurship in the UK, Germany and US in 2020 - 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 2020)

	2018	2019	2020	2018	2018	2019	2019	2020	2020
	All	All	All	Male	Female	Male	Female	Male	Female
I personally know someone who has started a business in the last two years	28.2	46.1	47.0	30.8	25.8	47.2	45.2	47.1	47.0
There will be good start-up opportunities where I live in the next six months	39.5	39.1	32.0	43.3	36.0	40.8	37.5	37.2	27.1
I have the skills, knowledge and experience to start a business	40.1	47.5	44.3	48.3	32.8	56.6	39.6	51.0	38.4
Fear of failure would prevent me from starting a business (for those who agree there are good start-up opportunities)	42.8	46.0	53.0	40.0	46.0	43.3	48.8	49.9	57.0
Most people consider that starting a business is a good career choice	56.3	57.6	73.5	57.7	55.1	58.8	56.6	72.2	74.6
Those successful at starting a business have a high level of status and respect in society	77.7	76.6	80.8	77.8	77.6	77.5	75.9	81.8	79.8
You will often see stories about people starting successful new businesses in the media	58.2	72.5	74.6	60.2	56.4	72.6	72.5	75.8	73.5

Table 2.2: Entrepreneurial attitudes in the UK in 2018, 2019 and 2020 (% non-entrepreneurially active respondents aged 18-64 expressing an opinion and agreeing with the statement)
(Source: GEM UK APS 2018, 2019, 2020)

in 2020 for females and 32% in 2019 to 39.1% in 2020 for the UK. Here too, it is possible that the change in measurement has affected the result.

The most significant differences are seen when looking at individuals who think starting a business is a good career choice and those who are successful at starting a business have a high level of status and respect in society. There was a significant increase, 57.6% in 2019 to 73.5% in 2020 with similar increases for both males and females for the former. The latter saw a slight increase from 76.7% in 2019 to 80.8% in 2020.

On comparing males and females, there were significant differences on attitudes towards opportunities available to start a business. 37.2% of males stated that there are good opportunities, while only 27.1% of females agreed in 2020. There were also significant differences seen in respondent's belief that they have the skills to start a business, where 51% of males agreed while only 38.4% of females agreed.

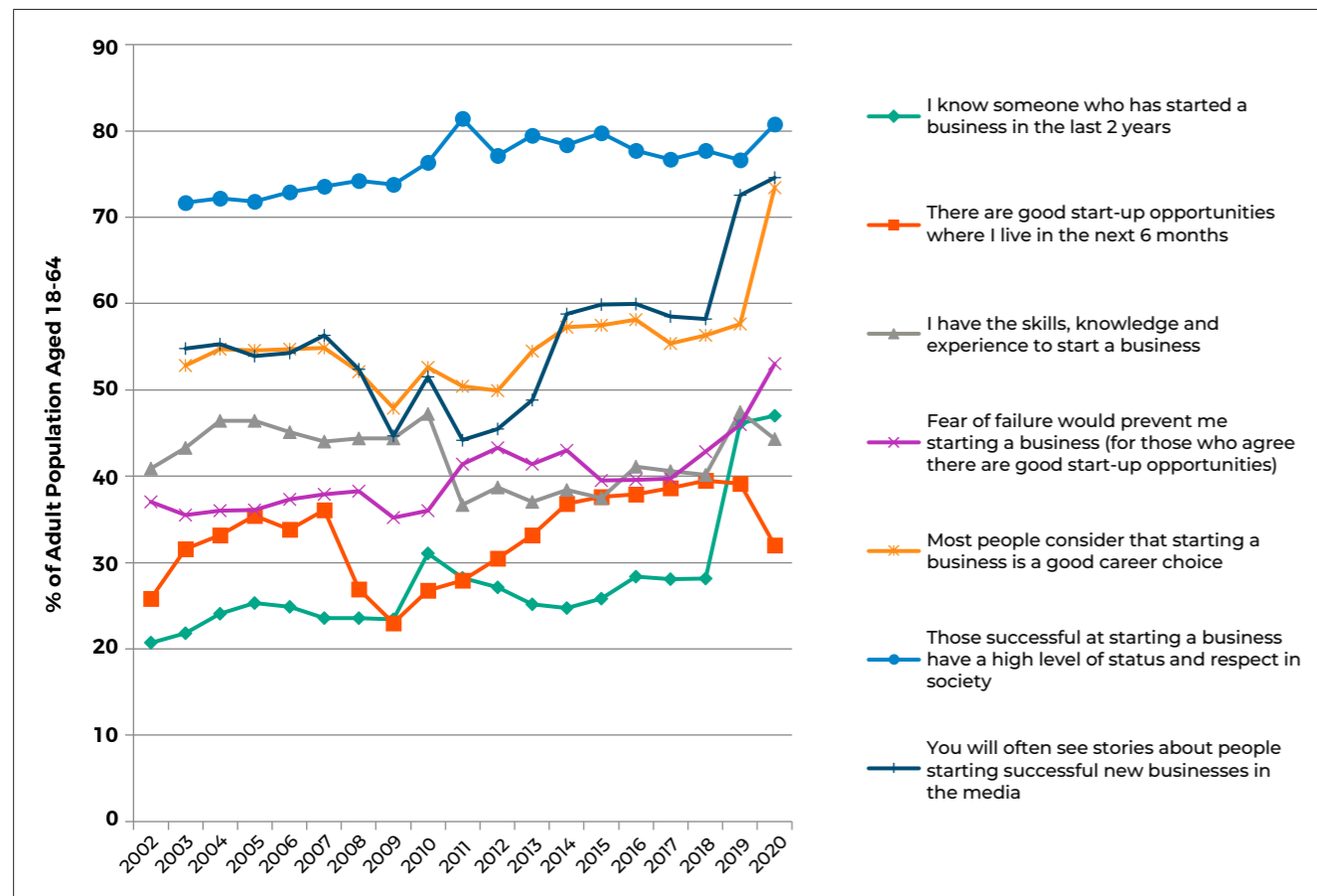


Figure 2.1: Entrepreneurial attitudes in the UK, 2002-2020: (% non-entrepreneurially-active respondents aged 18-64 expressing an opinion and agreeing with the statement) (Source: GEM UK APS 2002-2020).

The trend in attitudes towards entrepreneurship is shown in Figure 2.1. Attitudes across nearly all measures have generally become more optimistic since 2002. The share of those agreeing that starting a business is a good career choice has also increased over time but in 2020 it jumped to 75% which was significantly different from 2019 (58%). This increase in the middle of the pandemic is slightly counterintuitive given the huge impact on the economy and the very public discussion about the adequacy of COVID-19 emergency support for all business owners and their businesses. Interestingly, the status and respect in society of those successful entrepreneurs rose in 2020 to a similar level just after the Great Financial Crisis (GFC) which indicates that in the midst of economic crisis these individuals gain more respect as they are seen as battling against the odds. Similarly, in 2020, after a steep increase in 2019, there was a further slight increase in the proportion of the non-entrepreneurial population stating that they often see stories in the media about people starting a business.

Again, with increasing economic uncertainty in 2019 and an economic shutdown in 2020 the UK media has been instrumental in seeking out positive stories to provide some ‘good news’ stories in the midst of the worst economic downturn in 300 years.

There was a sharp fall in 2020 in the share of the population who reported that there were good start-up opportunities in their local area. It is now at a level last observed in 2011 at the end of the GFC (2008-2011) which clearly reflects the collapse of the economy in the 3-4 months from March 2020 and its inability to return to February 2020 levels of growth by the end of the year when the GEM UK survey was undertaken. Unsurprisingly, fear of failure³ rose sharply in 2020, as it had in 2019 due to Brexit uncertainty, which reflected the huge economic downturn in the UK since March 2020 with many sectors of the economy completely closed for many months.

³ However, it is important to note that the wording of the fear of failure item was changed in 2019 to “I would not start a business for fear it might fail”.

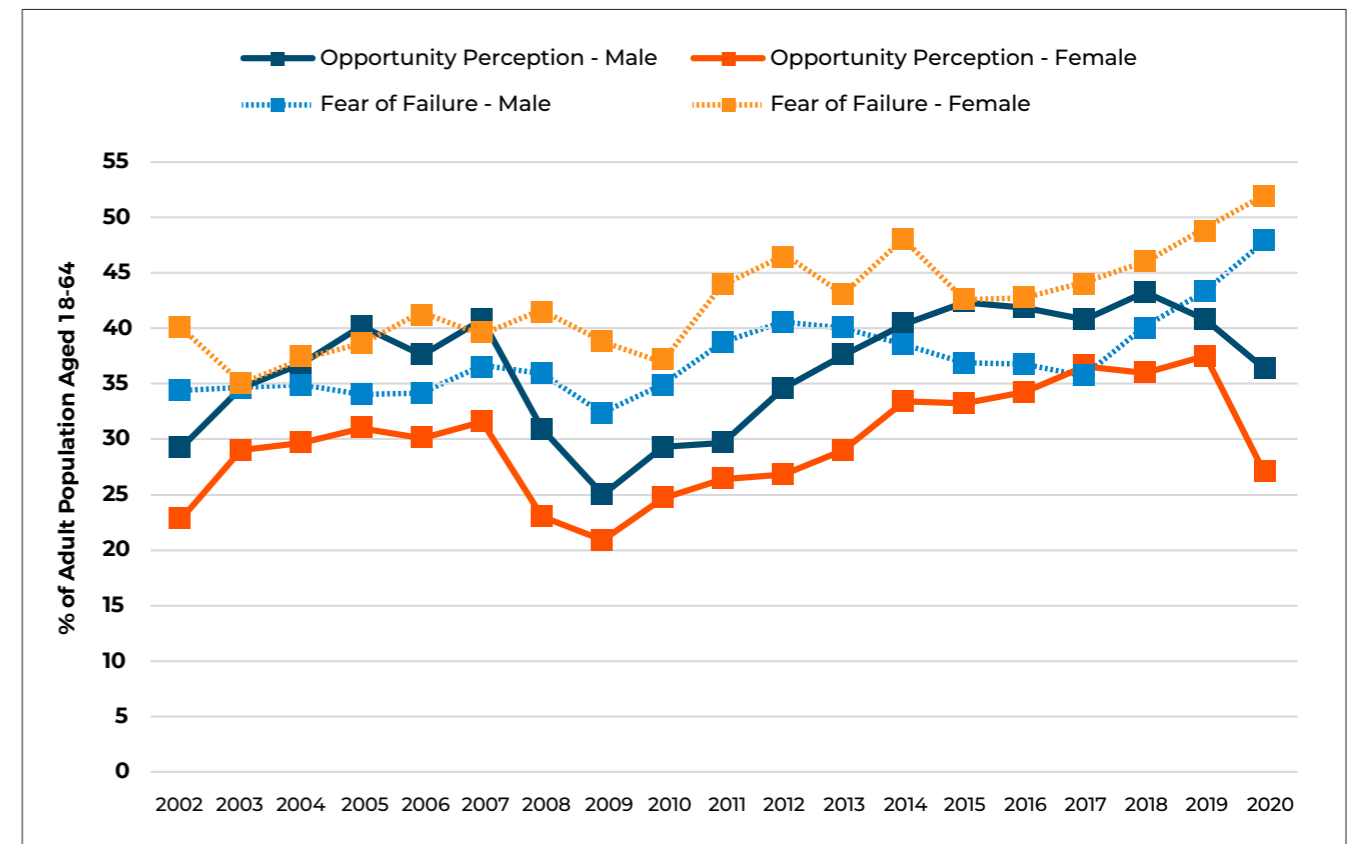


Figure 2.2: Male and female attitudes towards Good Opportunities and Fear of Failure (% non-entrepreneurially-active respondents aged 18-64 expressing an opinion and agreeing with the statements “There are good start-up opportunities where I live in the next 6 months”; “Fear of failure would prevent me from starting a business”) (Source: GEM UK APS 2002-2020) See footnote for change in wording of fear of failure item in 2019.

Figure 2.2 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 2020, both male and female perceptions decreased, however these were statistically different only for female and perception of opportunity is still lower among females than males. In both cases, perceptions had recovered since the drop observed over the Global Financial Crisis (GFC) recession but with the onset of the pandemic in early 2020 and the obvious economic consequences they dipped with female perception declining more markedly. While female levels are back to where they were in the GFC period male perceptions have not yet declined to those recorded at that time over 10 years ago.

Fear of failure amongst females has been consistently higher than males across the same period and has been increasing since 2015. In 2020, there was a 7-percentage point gap between male and females, however this is not statistically different. Interestingly, the last time the male fear of failure rate exceeded the male opportunity perception rate was in 2008 and the following years in the aftermath of the GFC. This happened again in 2019 and now again in 2020: perhaps a harbinger of worse to come as the uncertainty over Brexit and the pandemic continued throughout the survey period in late 2020?

2.3 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 Table 2.3. The key findings for 2020 are as follows:

- The proportion of non-entrepreneurially active individuals who 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 2020 this was just over two-fifths of the non-entrepreneurial population; there were no significant differences across the four UK nations.
- Just under two-fifths (37%) of the non-entrepreneurially active population in England agreed that there were good start-up opportunities in their local area in the next 6 months which was higher than in Wales and Northern Ireland, where only 29-32% reported good opportunities, however these were not statistically significantly different.
- The proportion of non-entrepreneurially active respondents who thought they had the skills to start a business were similar across the home nations: 48%-52% and was broadly similar to that reported in 2019.

- The proportion who feared failure in the UK (58.3%) had increased by 5 percentage points since 2019 but was slightly higher in Wales, Scotland and especially Northern Ireland at just over 60%.
- Most non-entrepreneurs had even more favourable attitudes towards those starting a business in 2020; around three-quarters of non-entrepreneurial individuals in the home nations agreed with the statement that “most people consider that starting a business is a good career choice”. This compared to around half in 2019 and as noted above this increase in the middle of the pandemic is slightly counterintuitive given the huge impact on the economy.
- A higher share, more than four-fifths 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 with Northern Ireland recording the highest share at 83%.
- Three-quarters (75.6%) 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 but again Northern Ireland was slightly higher at 80%.

	England	Wales	Scotland	Northern Ireland	United Kingdom
I know someone who has started a business in the last 2 years	52.0	49.3	50.1	50.7	51.6
There are good start-up opportunities where I live in the next 6 months	37.3	29.4	32.0	32.6	36.3
I have the skills, knowledge and experience to start a business	51.9	48.0	48.3	51.9	51.4
Fear of failure would prevent me from starting a business (for those who agree there are good start-up opportunities)	57.8	60.5	60.1	62.1	58.3
Most people consider that starting a business is a good career choice	74.7	74.8	71.6	74.2	74.4
Those successful at starting a business have a high level of status and respect in society	80.8	81.9	80.1	83.4	80.8
You will often see stories about people starting successful new businesses in the media	75.5	73.9	76.1	79.9	75.6

Table 2.3: Perceptions of entrepreneurship among non-entrepreneurially active individuals in the UK Home Nations (%), 2020 (Source: GEM UK APS 2020)

3. Entrepreneurial activity

3.1 ENTREPRENEURIAL ACTIVITY IN THE UK AND BENCHMARK COUNTRIES

The lack of systematic, representative descriptions of the firm creation process has hindered the development of effective, efficient approaches to facilitative business creation. GEM views entrepreneurship as a process in which individuals become increasingly engaged in entrepreneurial activity. Figure 3.1 illustrates the proportion of respondents by stage of entrepreneurial activity in the UK over the period 2002 to 2020. 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 3.1b in Appendix 2 for gross rates for each stage).

In the UK in 2020, over one-quarter of working age individuals were either engaged in entrepreneurial activity or intended to start a business within the next three years which was a very marginal increase compared to 2019. Participation in the stages of entrepreneurship in 2020 revealed that 7.5% were engaged in established business ownership, 3.4% in new business ownership, 3.9% in nascent entrepreneurship and 11.0% intending to start a business within the next 3 years. The major changes, therefore, in 2020 were that nascent entrepreneurship fell from an unusually high rate of 6% in 2019 back to its long-term trend. Further, there was a sharp increase in the number of individuals stating that they intended to start a business in the next three years: an increase of 4 percentage points.

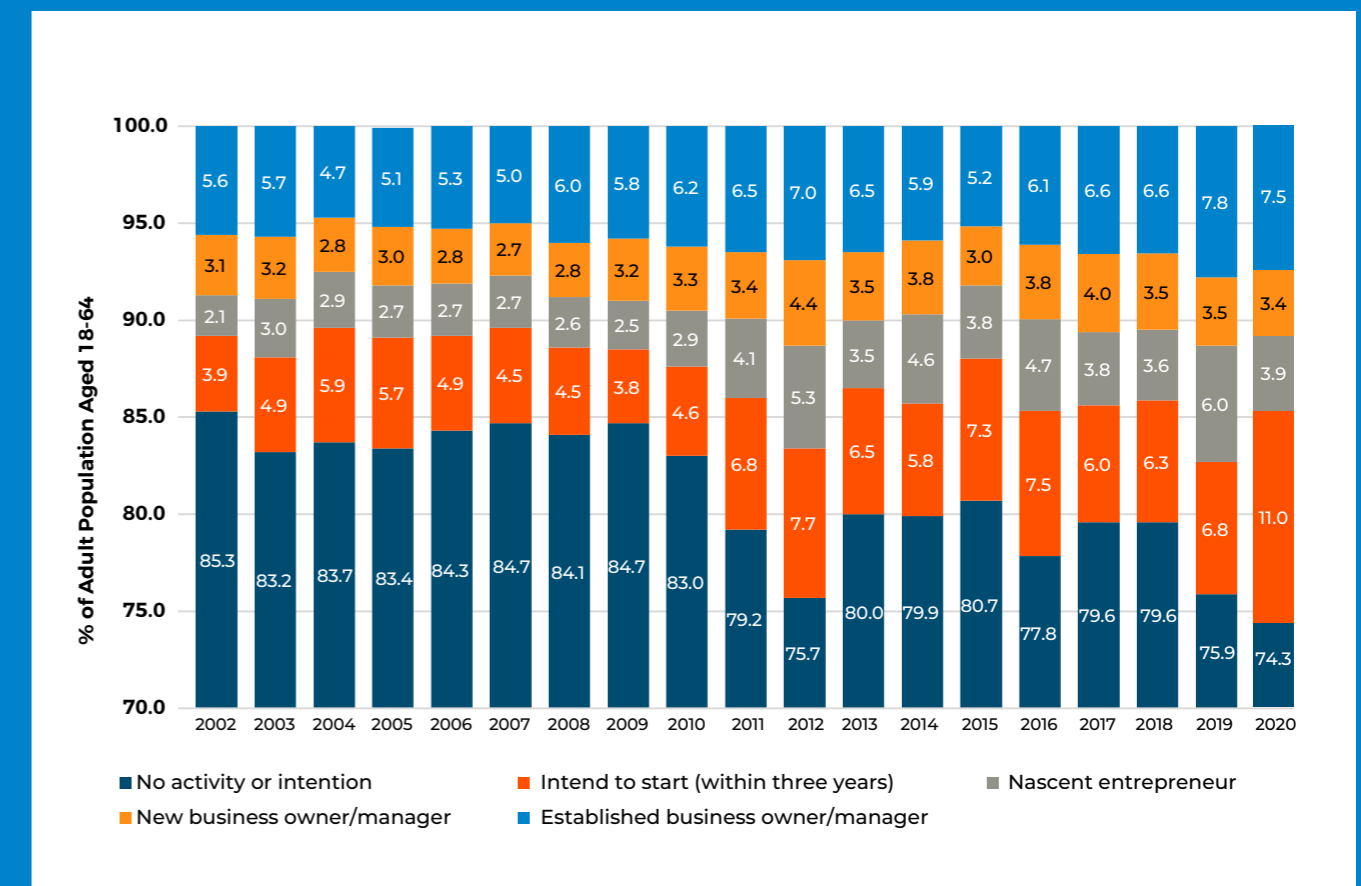


Figure 3.1: Participation in Entrepreneurship in the UK by most established stage of entrepreneurial activity (not including intrapreneurs), 2002 to 2020 (Source: GEM UK APS 2002 to 2020)

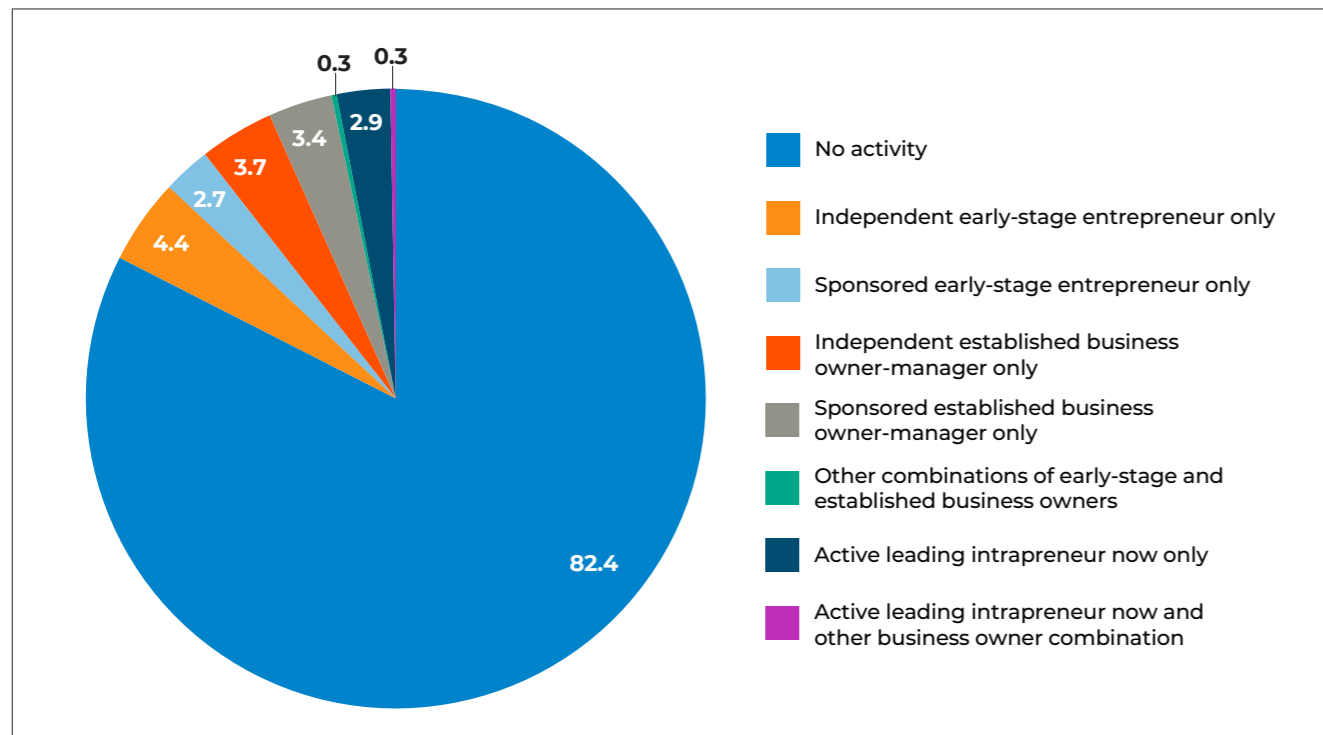


Figure 3.2: Distribution of modes of entrepreneurial activity in early-stage and established businesses (Source: GEM UK APS 2020)

Figure 3.2 shows a breakdown of entrepreneurial activity by a more refined business categorisation which includes entrepreneurial employees (intrapreneurs) and separates early-stage and established entrepreneurs into those who are independent and those whose business is sponsored by their employer⁴. The majority of active entrepreneurs fell into the “Independent early-stage entrepreneur only” category, at over 4% of the population. “Independent established business owner-manager only” and “Sponsored established business owner-manager” categories comprised over 3% each respectively.

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 2020 for the UK, Germany and the US are shown in Figure 3.3. For the UK and US a higher average TEA rate was observed after 2010. The TEA rate in the US had doubled between 2010 and 2019, dropping back to 2018 levels in 2020. The UK and German TEA rates both peaked in 2019 but also reverted to 2018 levels in 2020. The UK and German TEA rates were not statistically different in 2019 but both were statistically lower than the US.

TEA rates by age group for the UK, Germany and the US are shown in Figure 3.4. The prevalence of entrepreneurial activity varies across all three, in the UK it is most prevalent in the 25-34 age group, in Germany it declines by age with 18-24 year olds most entrepreneurial and in the US the 35-44 age group has the highest rates.

TEA rates across all age bands in the US are much higher than the UK and Germany, with rates of 15% or more for all ages up to 45-54 years old. TEA rates for those aged 55-64 in the US are lower at 8.2% but this is more than double the UK rate for that age group and 4 times the German rate.

Young people in the UK, aged 18-24, have a higher entrepreneurial rate than in Germany but this remains lower than the rate in the US. The gap in TEA rates between the UK and the US is, however, larger for the older age groups. In the US, around 19% of 35-44 year olds and 15% of 45-54 year olds are involved in early-stage entrepreneurial activity compared to 9% and 6% respectively in the UK.

⁴ Note that those intending to start a business are included in the “no activity” category to focus on those actively engaging in starting a business.

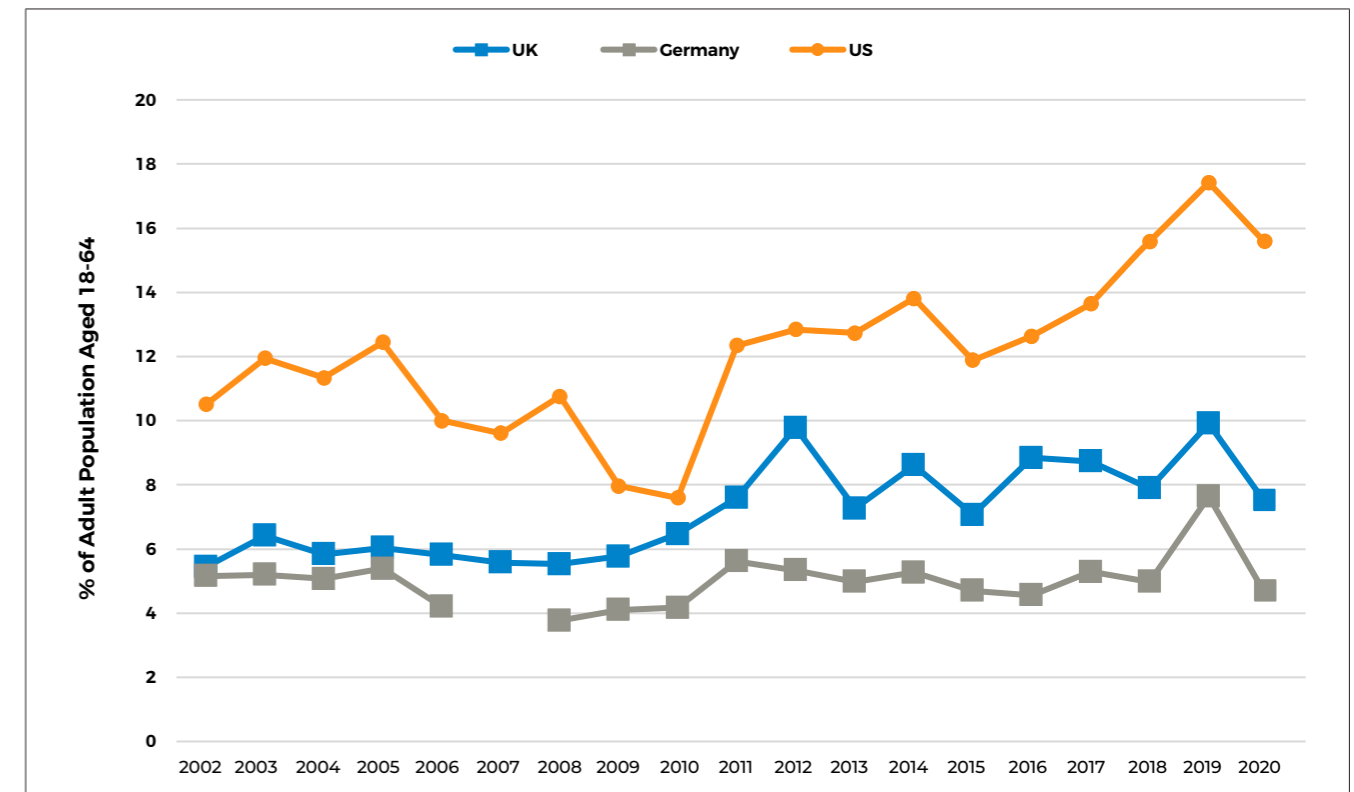


Figure 3.3: Total early-stage Entrepreneurial Activity (TEA) in UK, Germany and US (2002-2020) (Source: GEM Global APS 2002-2020)

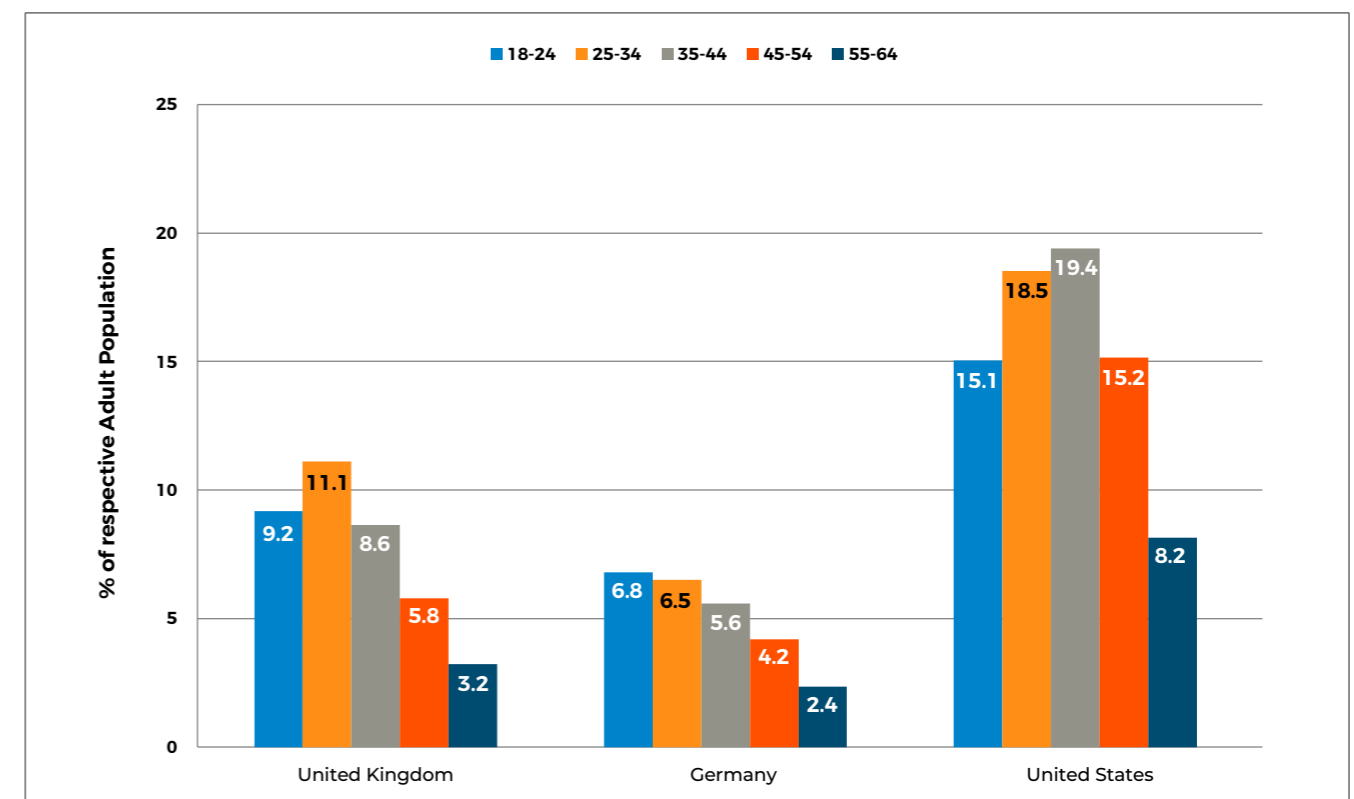


Figure 3.4: Total early-stage Entrepreneurial Activity (TEA) in the UK, Germany and the US by Age Group 2020 (Source: GEM APS 2020)

The trend in UK TEA rates by age group for the most recent three years is shown in Figure 3.5. The TEA rate for 18-24 year olds is the only one to increase over all three consecutive years: from 8.4% in 2018 to 9.2% in 2020, however, this is not a statistically significant difference. All other age groups experienced a decline in entrepreneurial activity between 2019 and 2020, with rates largely reverting back to 2018 levels. TEA rates for those aged 55-64 were the only ones to see a continual decline from 2018, dropping from 5.9% to 3.2% in 2020.

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, or survival beyond the fragile earliest years of a venture. The ratio of closure to business ownership (new plus established) gives a proxy of entrepreneurial dynamism or “churn”. The 2020 data for these metrics for the UK, Germany and the US are given in Table 3.1.

The business churn rate is similar for all countries at between 0.2% and 0.3%. The proxy early-stage survival rate for the UK is 1.0% in the UK, similar to Germany and slightly higher than the US.

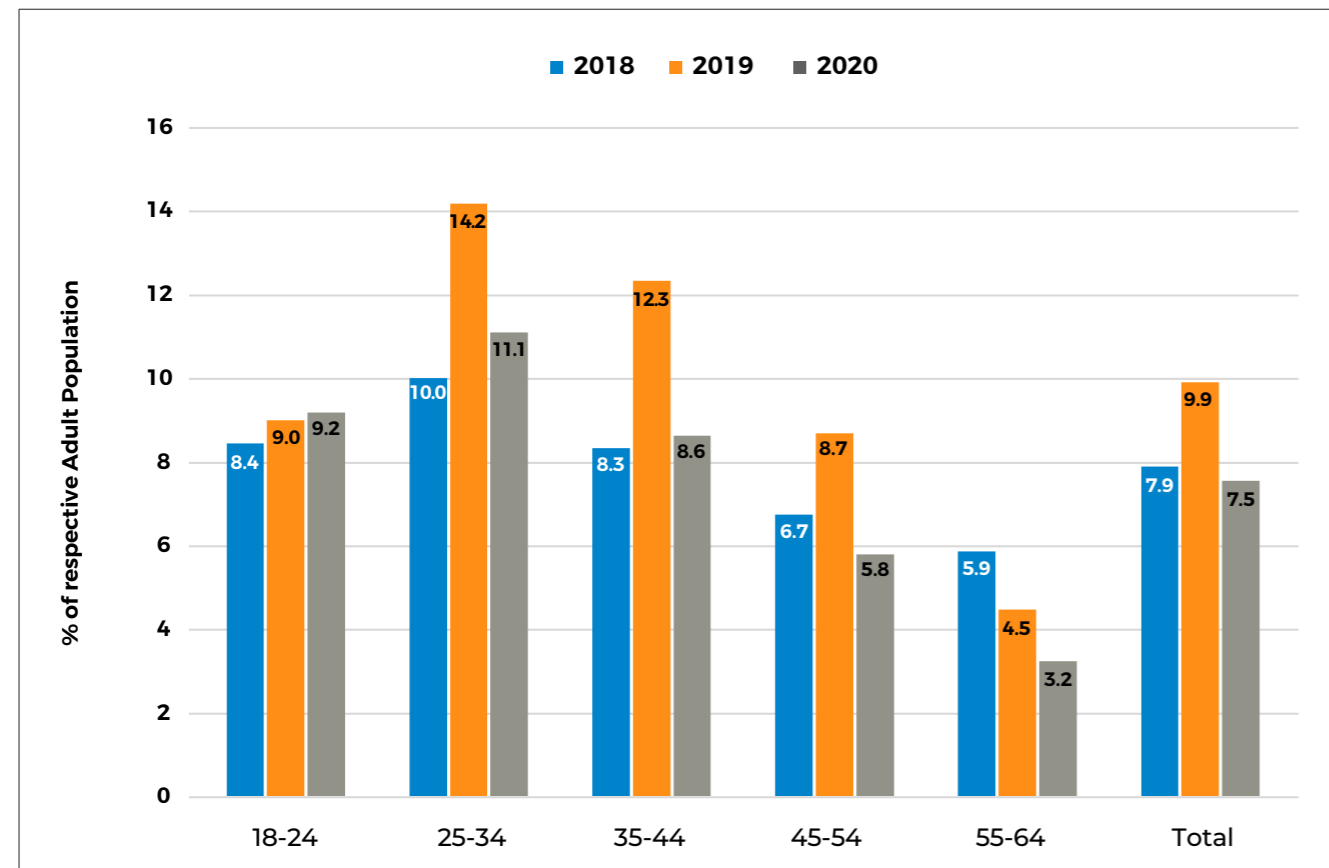


Figure 3.5: Total early-stage Entrepreneurial Activity (TEA) in the UK by Age Group (2017 to 2020)
(Source: GEM APS 2017-2020)

There was a significant decrease in the nascent entrepreneurial activity rate from 6.5% in 2019 to 4.2% in 2020 in the UK and a similar significant decrease in TEA from 9.9% in 2019 to 7.5% in 2020. There were no other significant differences over the year in the UK as a whole with regards to the other measures of entrepreneurial activity outlined in Table 3.1.

However, as discussed later in the report, different home nations had slightly different outcomes between 2019 and 2020.

In general, the UK measures of entrepreneurial activity typically lie between those observed in its European counterparts and the US. The US generally leads in all measures of activity, in particular, when looking at intention to start a business in the next three years and TEA rates. In 2020 the UK intention rate was catching the US rate but the gap between TEA rates remained.

		UK	Germany	US
I expect to start a business in the next 3 years (FUT)	(FUT)	16.2	12.7	18.6
Nascent Entrepreneurial Activity rate (paying wages for 3 months or less) (NEA)	(NEA)	4.2	3.1	10.7
New Business Owner-manager rate (4-42 months) (NBO)	(NBO)	3.5	1.8	4.9
Nascent + New business owner-manager rate (TEA)	(TEA)	7.5	4.8	15.4
Established Business Owners (>42 months) (EBO)	(EBO)	7.6	6.2	9.9
Business closure rate (Business closed in the last 12 months that has not continued) (BC)	(BC)	3.6	1.4	4.4
Proxy early-stage business survival rate (EBO/TEA)	(EBO/TEA)	1.0	1.3	0.6
Proxy business churn rate BC/(NBO+EBO)	BC/(NBO+EBO)	0.3	0.2	0.3

Table 3.1: Measures of entrepreneurial intention and activity in the UK, Germany and the US, 2020
(Source: GEM Global APS 2020)

3.2 MALE AND FEMALE ENTREPRENEURIAL ACTIVITY COMPARED

In the UK the female TEA rate in 2020 was 6.1% while the male rate was significantly higher at 9.0%. The male TEA rate was statistically significantly lower than it was in 2019 while the female rate was lower but not significantly so. TEA rates by gender for the UK, Germany and the US are shown in Figure 3.6. In most high income countries, females are around two-thirds as likely to be early-stage entrepreneurs as males, and this was the case for the UK in 2020. In contrast, in Germany the female TEA rate was only 0.7 percentage points below that of the male rate, although both were relatively low. In the US the female rate was around 80% of the male rate.

Comparing rates by gender across countries, the UK male and female early-stage entrepreneurial activity rates are both higher than that of Germany (5.1% and 4.4%, respectively). However, both male and female UK rates are well below those in the US, each at around half the equivalent in the US.

Figure 3.7 presents the established business ownership rates by gender. Comparing this with Figure 3.6 shows a wider gap in participation rates between male and female established business owners (EBO) than was the case for early-stage entrepreneurs (TEA). In the UK and Germany, there were half as many female established business owners as there were males in 2020. In the US the gap is slightly lower with females accounting for 58% of the male rate. Between 2019 and 2020, the rate of female to male established business ownership increased from 35% to almost 50% in the UK, but decreased from 58% to 51% in Germany and 78% to 58% in the US.

The trend in female TEA rates in the three nations is shown in Figure 3.8. The TEA rate fell in all three between 2019 and 2020. Previously, levels of female entrepreneurial activity had peaked in 2019, and while rates in 2020 remain above the long run averages, it remains to be seen as to whether this is a temporary Covid-related blip or longer-term reversal.

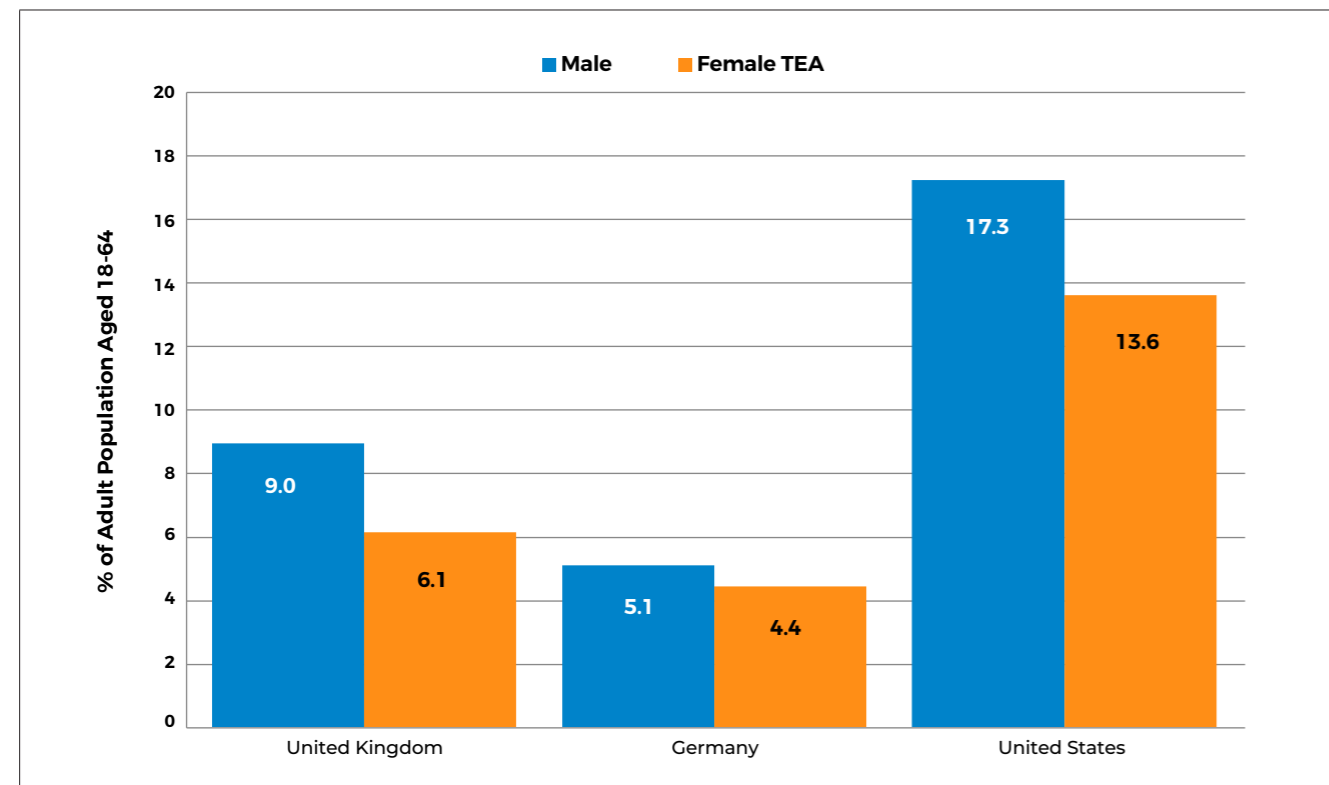


Figure 3.6: Total early-stage entrepreneurial activity by gender in the UK, Germany and the US in 2020
(Source: GEM Global APS 2020)

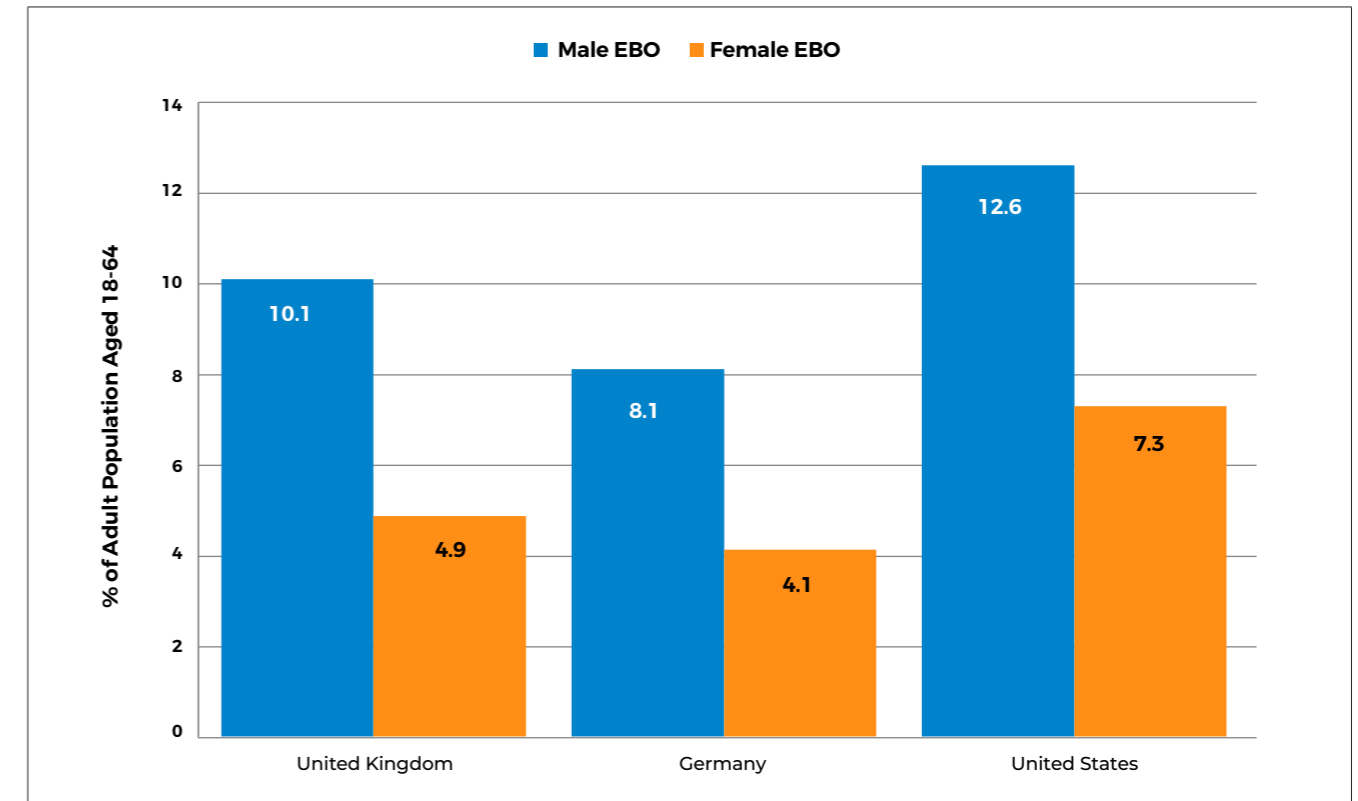


Figure 3.7: Established business ownership by gender in the UK, Germany and the US, 2020
(Source: GEM APS 2020)

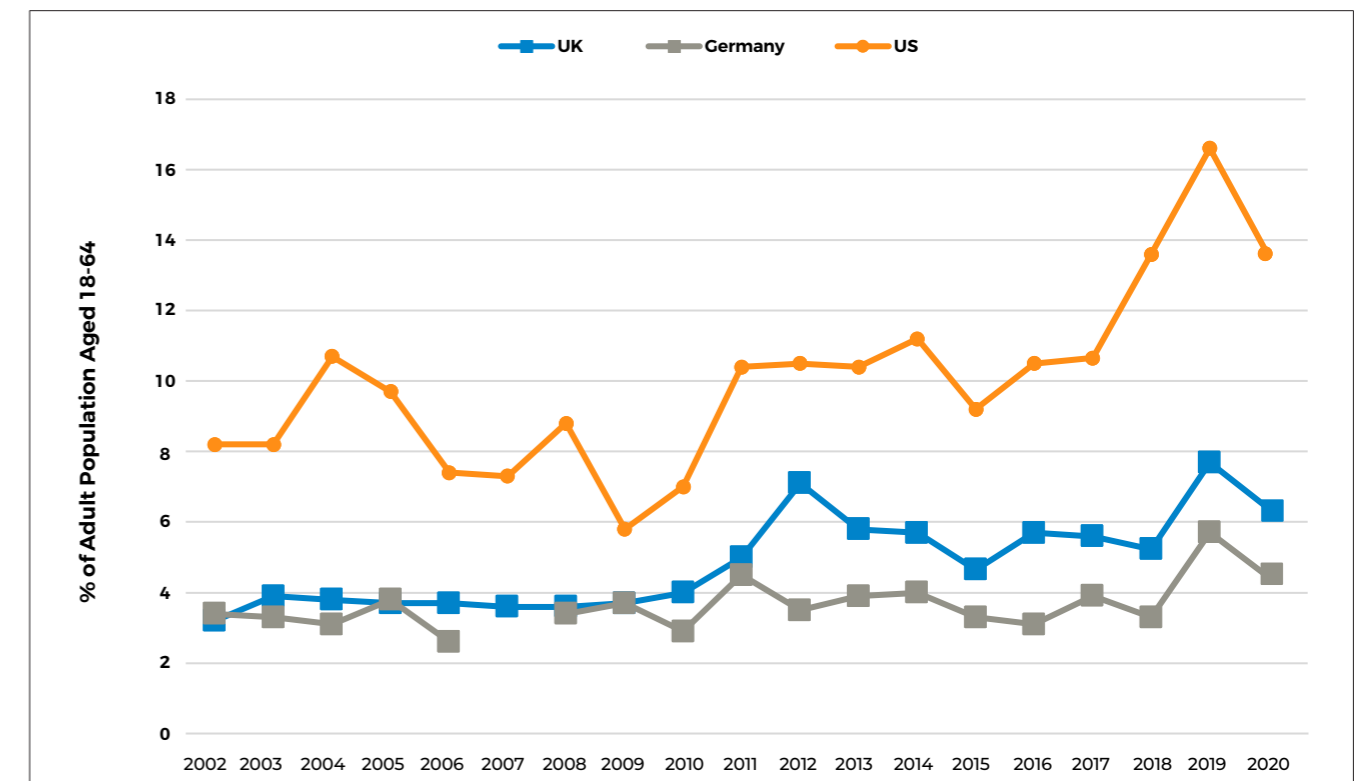


Figure 3.8: Female early-stage Entrepreneurial Activity in the UK, Germany and the US, 2002-2020
(Source: GEM APS 2002-2020)

3.3 ENTREPRENEURIAL ACTIVITY IN THE UK HOME NATIONS

Table 3.2 displays different measures of entrepreneurial activity in the four home nations of the UK for 2020. Together, these measures allow us to assess the degree of entrepreneurial dynamism and stability across the UK's constituent political jurisdictions.

Intention to start a business showed the largest and most statistically significant difference compared to 2019. In the UK, and each of the home nations, intention rates were up significantly with an average of 16% of the population stating that they intended to start a business within the next 3 years compared to an average of 11% in 2019. The only other statistically significant differences over the year were in the nascent and TEA rates in England and the UK, both down by 3 percentage points on 2019.

Across the home nations significant differences in rates were found in new business ownership, whereby the rate in Northern Ireland (1.9%) was significantly lower than in England and the UK (3.7% and 3.5% respectively). Northern Ireland also had a significantly lower TEA rate than the UK (5.4% versus 7.5%). Conversely, established business ownership in Northern Ireland was statistically significantly higher (10.5%) than in Wales (5.8%) and in Scotland (5.7%).

Figure 3.9 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 relatively more volatile. In 2020 the rates, although mainly down, were still above their previous long-run average, with the exception of Northern Ireland. Here, the TEA rate of 5.4% in 2020 was only marginally above the 2002-10 long-run average of 4.9%.

		England	Wales	Scotland	Northern Ireland	UK
I expect to start a business in the next 3 years	(FUT)	16.1	16.7	15.3	19.5	16.2
Nascent Entrepreneurial Activity rate (paying wages for 3 months or less)	(NEA)	4.2	4.4	5.1	3.5	4.2
New Business Owner-manager rate (4-42 months)	(NBO)	3.7	2.4	2.4	1.9	3.5
Nascent + New business owner-manager rate	(TEA)	7.7	6.5	7.3	5.4	7.5
Established Business Owners (>42 months)	(EBO)	7.8	5.8	5.7	10.5	7.6
Business closure rate (Business closed in the last 12 months that has not continued)	(BC)	3.6	4.0	3.6	3.7	3.6
Proxy early-stage business survival rate	(EBO/TEA)	1.0	0.9	0.8	2.0	1.0
Proxy business churn rate	BC/(NBO+EBO)	0.3	0.5	0.4	0.3	0.3

Table 3.2: Measures of Entrepreneurial Intention and Activity in the UK Home Nations, 2020 (Source: GEM UK APS 2020)

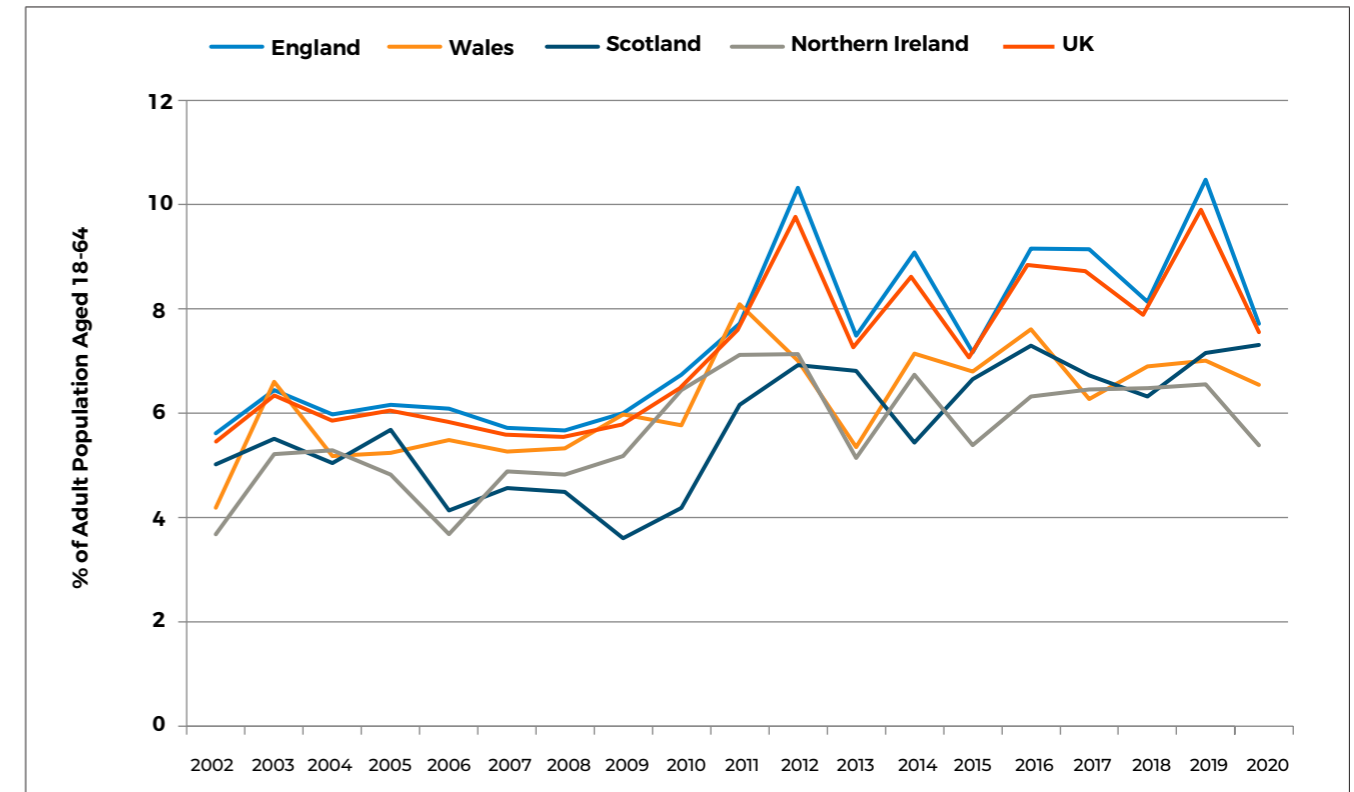


Figure 3.9: Total early-stage Entrepreneurial Activity in the UK Home Nations, 2002-2020 (Source: GEM UK APS 2002-2020)

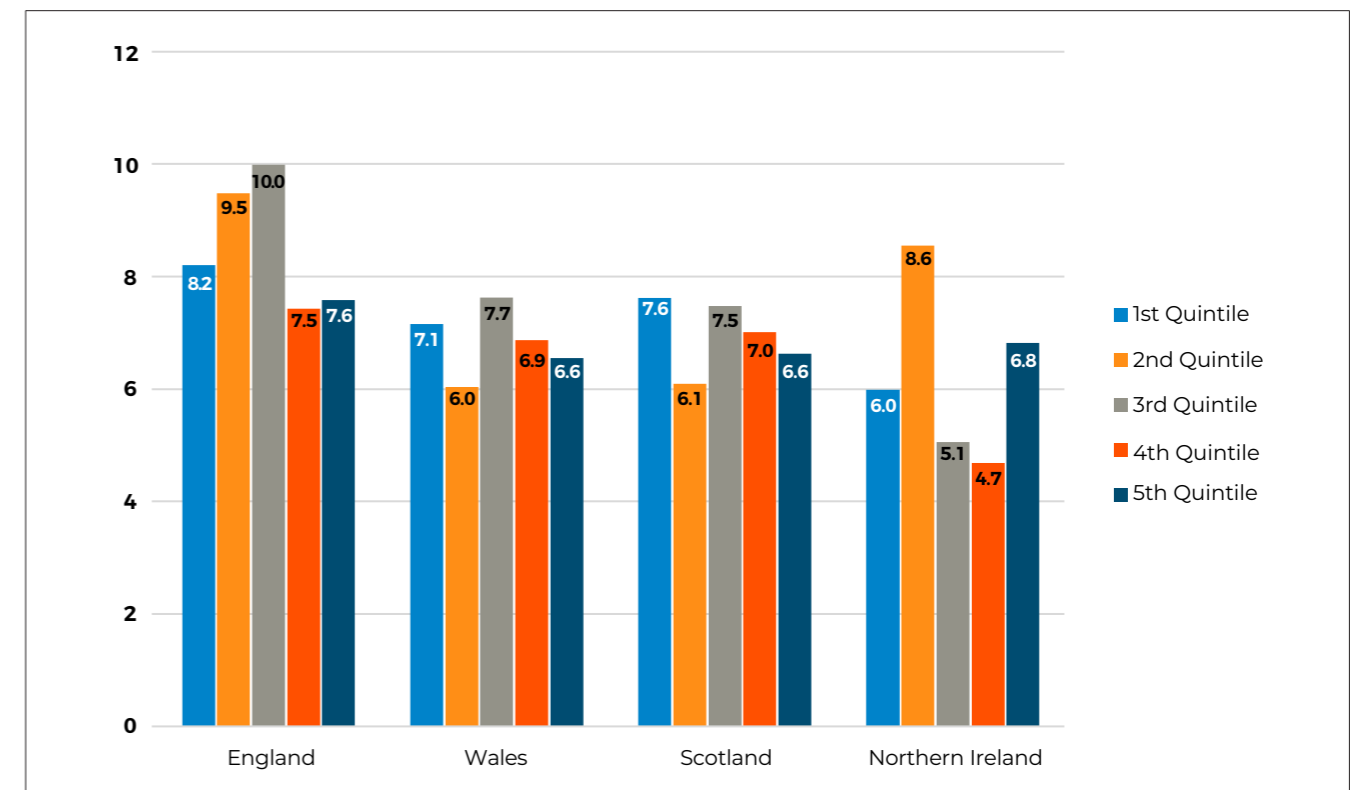


Figure 3.10: Total Entrepreneurial Activity in the UK Home Nations by Index of Multiple Deprivation 2020 (Source: GEM UK APS 2020)

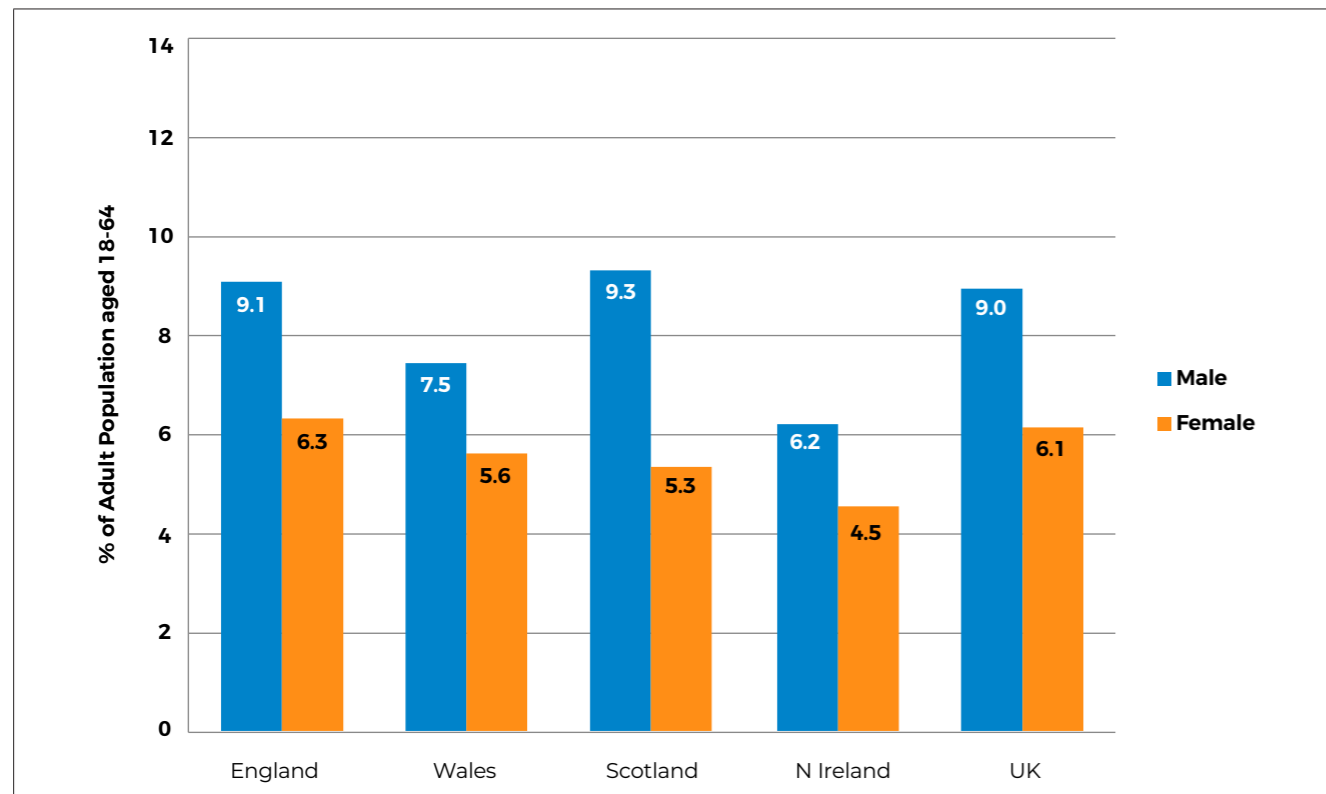


Figure 3.11: Male and Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2020
(Source: GEM UK APS 2020)

TEA rates may be expected to vary based on the extent of deprivation in an area and the differing start-up opportunities available⁵. Figure 3.10 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 for 2020⁶. The highest TEA rate was observed in the third quintile in England at the rate of 10%, which was significantly higher than the same quintile in Northern Ireland. In Scotland, the most deprived area experienced the highest TEA levels of 7.6%. Similarly, the second most deprived quintile in Northern Ireland had the highest TEA rate of 8.6%. Northern Ireland also saw higher levels of TEA among the least deprived quintile when compared with the 3rd and 4th quintiles, however this was not a significant difference. Overall, in 2018-2020, we do not find any readily apparent relationship between deprivation and early-stage entrepreneurship within and between the home nations.

The female early-stage entrepreneurial activity rate in the UK in 2020 was 6.1% compared to 9.0% for males. The female rate was significantly lower than the male rate in the UK; this was also the case for England and Scotland, as Figure 3.11 shows⁷. There were no significant differences in the male TEA rates across the home nations in 2020, nor in the female rates.

The UK female to male TEA ratio of 69% in 2020 was narrower than previous years due to the larger decline in male entrepreneurial activity in 2020. The ratios in England, Wales and Northern Ireland were similar at 70-75%, also narrowing the gap on 2019. Scotland had the lowest ratio at 57%, due to the relatively high male TEA rate of 9.3%. The ratio in Wales had reverted from the 101% ratio of female to male TEA found in 2019.

Combining data from the 2017-20 GEM UK annual surveys to analyse the female to male TEA rates in all the UK NUTS1 regions⁸ reveals considerable variation in the ratios (Figure 3.12).

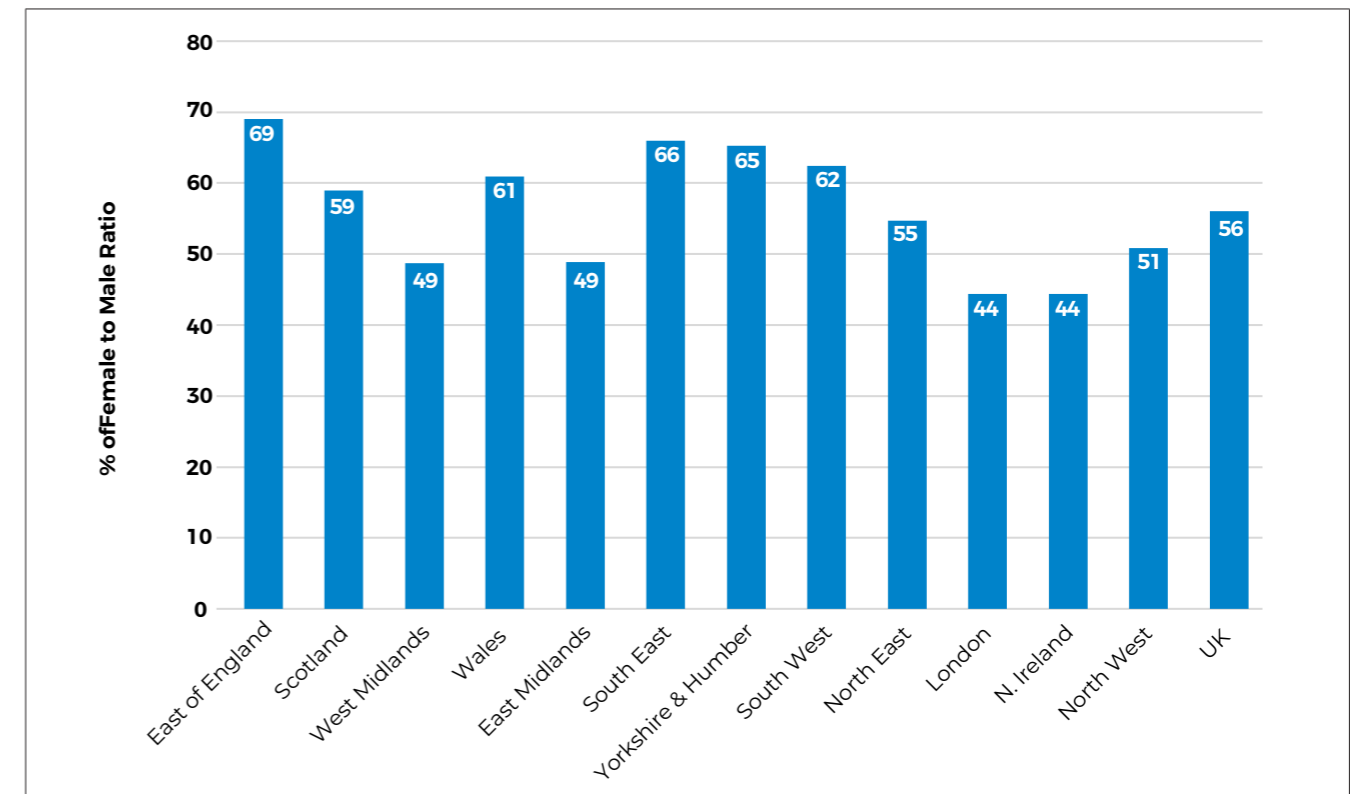


Figure 3.12: Female to Male Entrepreneurship Ratio in the UK regions (combined over 2017-20)
(Source: GEM UK APS 2017-2020)

The East of England has the highest ratio with 69 female entrepreneurs per 100 male entrepreneurs which is driven primarily by a higher than average female rate. In contrast, the high ratio in the South East is driven by the slightly lower than UK average male rate and slightly higher than UK average female rate. Northern Ireland has the lowest ratio with just 44 female entrepreneurs per 100 male entrepreneurs driven by a very low female TEA rate of 3.9%.

In this pooled regional analysis, the female TEA rates in the North East (3.3%), Wales (5.1%), Scotland (5.2%) and Northern Ireland (3.9%) are significantly lower than the highest performing region – East of England (8.1%).

Since 2003-05, there has been a general upward trend in female entrepreneurship activity in the UK home nations (Figure 3.13). Despite the volatility observed since 2011, the rates have remained at around half of the male rate. In 2018-20, Northern Ireland had significantly lower female TEA when compared with England.

However, in 2020, while the female TEA rate in England is similar to the 2017-19 rate, there is an apparent uptick in female TEA rates in Wales, Scotland and Northern Ireland such that in 2020, differences in female TEA rates between the home nations were not statistically significant.

The early-stage entrepreneurial activity rates of different age groups across the home nations are shown in Figure 3.14. There were no statistical differences for each age group in each home nation between 2018 and 2019. In the UK in 2018-20, the entrepreneurial activity rates of all age groups compared across home nations were not statistically different. In Wales, those aged 45 or over had significantly lower TEA than those aged 25-34 years old. In all other home nations, there were no significant differences between age groups.

Figure 3.15 shows the trend in TEA rates for 18-29 year olds, via rolling averages, over 2002-04 to 2018-20. The chart shows the clear increase in entrepreneurial activity amongst this age group, with the rates for England, Scotland and Wales converging towards 10% over 2018-20, around double that of 2002-04. There has been a slower increase in entrepreneurial activity among 18-29 year olds in Northern Ireland, increasing by 50% over the same period.

⁵ See Sahasranamam, S., Murzacheva, E. & Levie, J. (2019) Doubly Disadvantaged: Gender, Spatially Concentrated Deprivation and Nascent Entrepreneurial Activity. *European Management Review* Published online December, doi.org/10.1111/emre.12370

⁶ Due to low sample size, 2018, 2019 and 2020 GEM data were amalgamated for some of the TEA figures.

⁷ 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 8.2% for females and 11% for males.

⁸ Combining data over several years provides more robust samples for disaggregation by gender at the regional level than the annual level data provides.

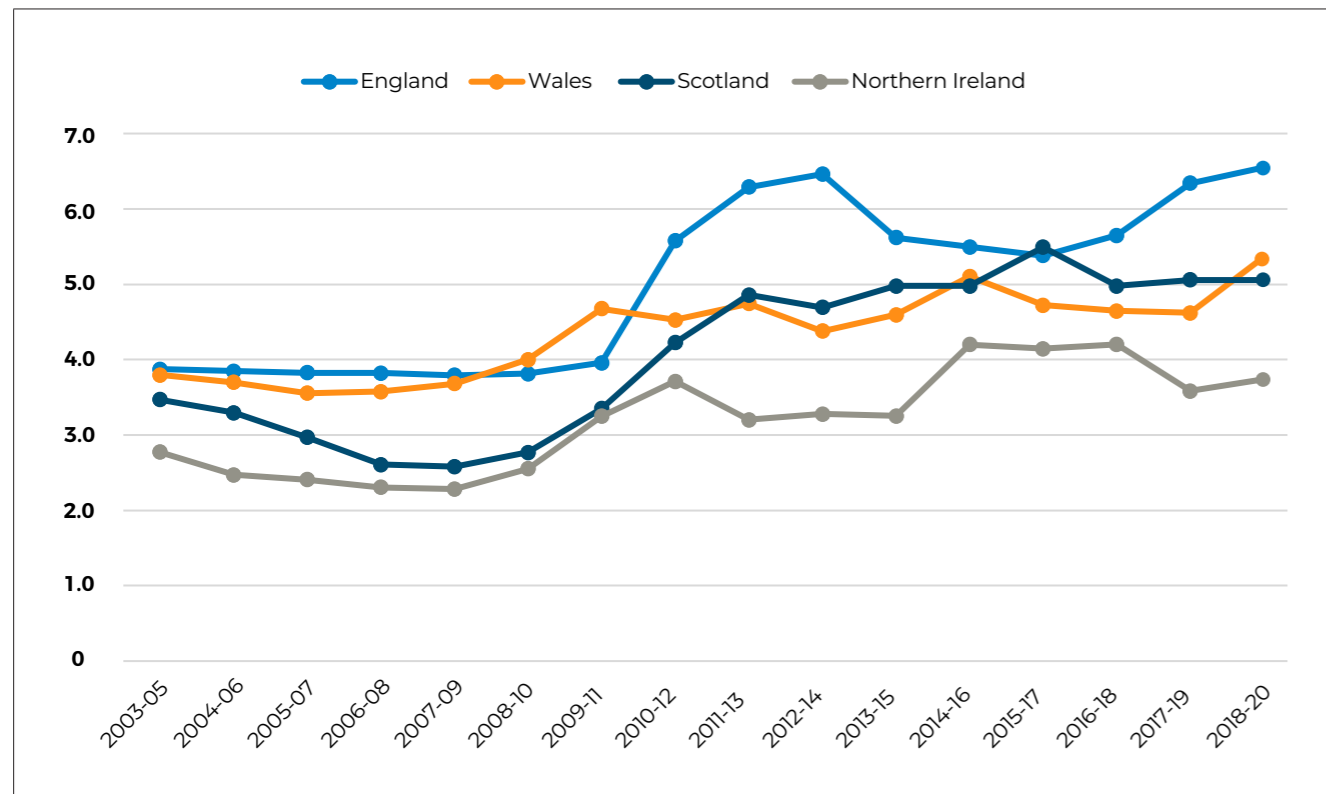


Figure 3.13: Female Total early-stage Entrepreneurial Activity in the UK Home Nations, 2003-2005 to 2020
(Source: GEM UK APS 2002-2020)

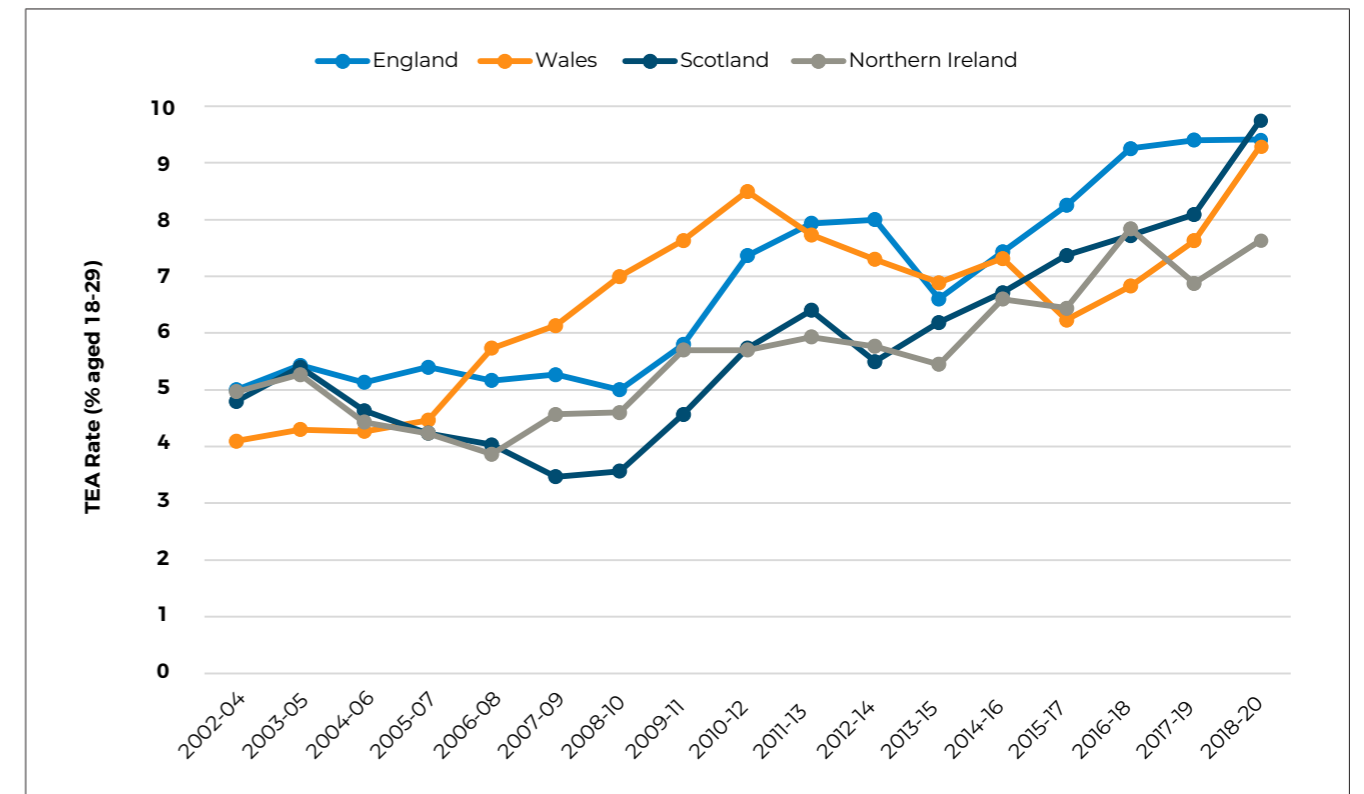


Figure 3.15: Trend in Total early-stage Entrepreneurial Activity in the UK Home Nations for 18 to 29 year olds 3-year rolling averages 2002-04 to 2018-2020
(Source: GEM UK APS 2002-2020)

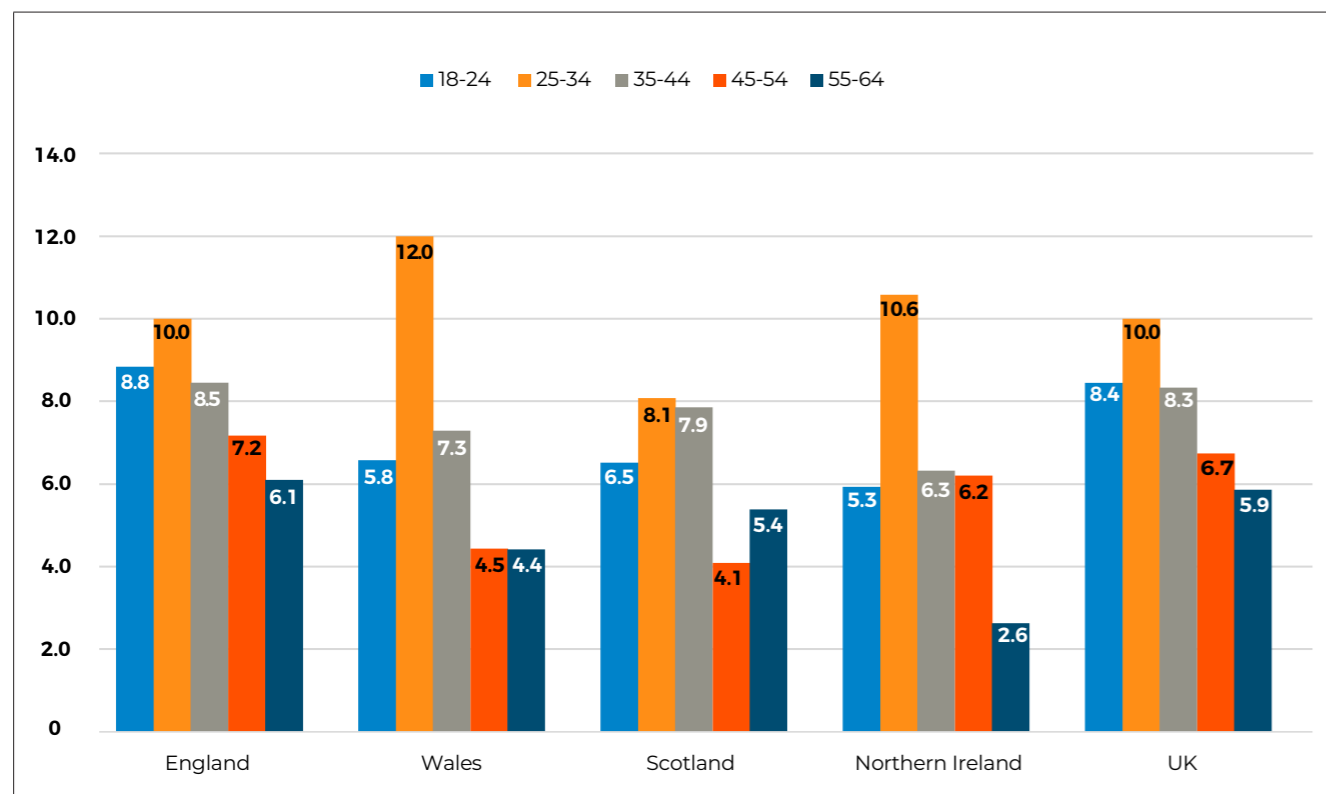


Figure 3.14: Total early-stage Entrepreneurial Activity in the UK Home Nations by Age Group, 2020
(Source: GEM UK APS 2020)

Start-up Motivation

Since the 2019 survey, a new and improved method of looking at founders' motives for starting their business was introduced. Previously the question asked was too constrained, allowing for only one choice between necessity and opportunity. These were replaced with new questions which allowed for a combination of motives to show a more realistic set of drivers for start-up.

The four motives were "to make a difference in the world", "to build great wealth or very high income", "to continue a family tradition" and "to earn a living because jobs are scarce." The former two can be thought of as more opportunity driven, while the third is more complex as this could be both due to opportunity or necessity. The final one can be thought of as more necessity driven. However, the fundamental point is that these options are now not mutually exclusive and entrepreneurs can report more than one motivation and the degree to which they identify with them. Note that these motivations do not include autonomy or independence; this is because pre-tests showed that this was a universal motivation for entrepreneurs and does not distinguish between types of entrepreneurs.

Figure 3.16 shows a breakdown of these motives by gender as a percentage of early-stage entrepreneurs. The only significant difference between male and female motives were in "to build great wealth or a very high income", with 51% of females identifying this as a motive compared to 68% of males. Just under three fifths of TEA entrepreneurs agreed they had "to make a difference in the world" and less than one third wanted "to continue a family tradition". Notably, around two thirds stated it was "to earn a living because jobs are scarce" up from 50% in 2019. "To continue a family tradition" was significantly lower than all the other motives. In 2020, the motive "to earn a living because jobs are scarce" was significantly higher than "to make a difference in the world", previously the proportions were similar, indicating a potential influence of the pandemic.

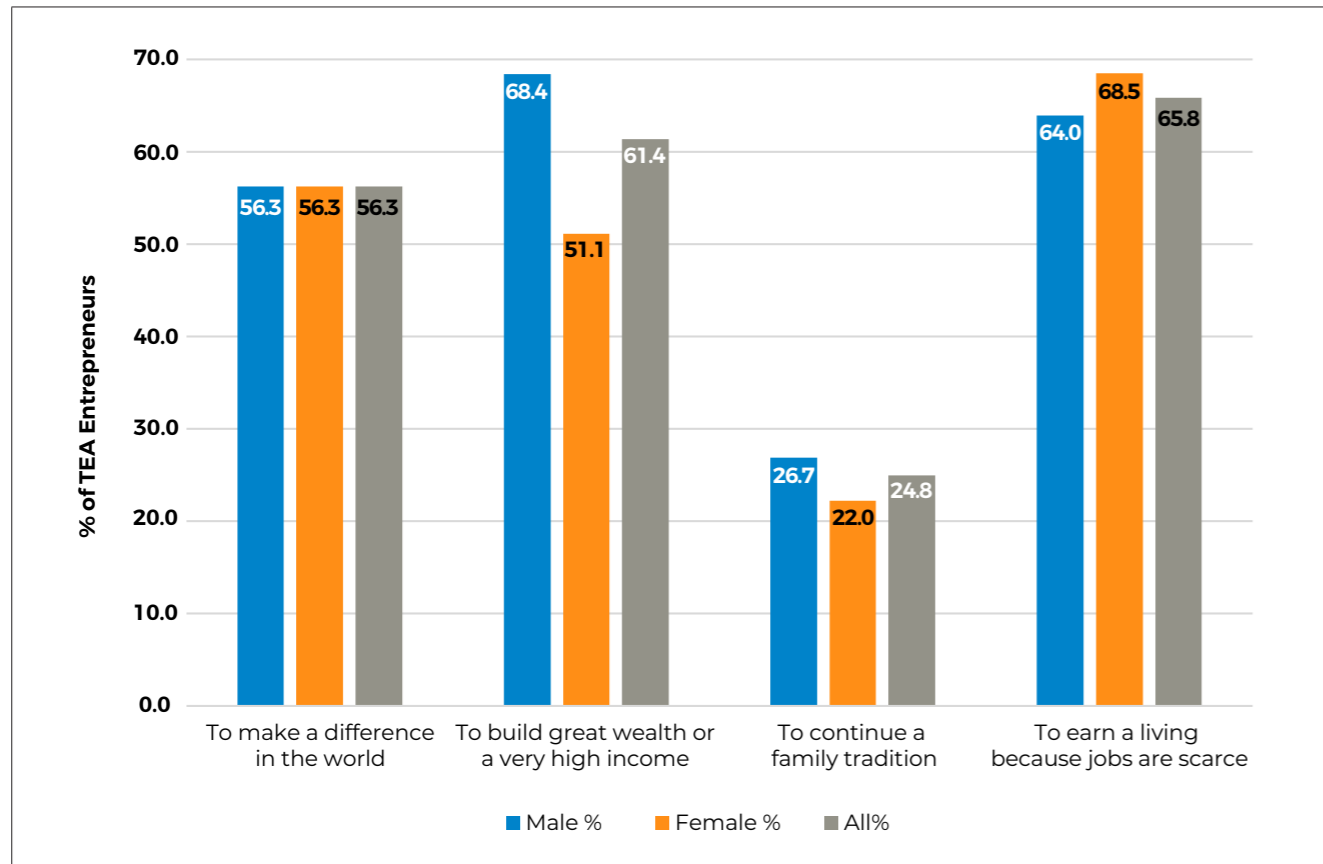


Figure 3.16: Motivations for starting a business in the UK by gender 2020 (percentage of TEA entrepreneurs agreeing somewhat or strongly with the motive) (Source: GEM UK APS 2020)

3.4 ENTREPRENEURIAL ACTIVITY BY ETHNICITY AND RESIDENT STATUS

To analyse TEA rates by ethnicity and resident status, we focus on 3 years aggregated data due to low sample sizes in 2020. Following previous trends, the TEA rate of the white ethnic population in the UK in 2020 was significantly lower than that of the non-white population, at 6.6% compared to 14.1% respectively (Figure 3.17). The TEA rate for the white ethnic group was significantly lower than the rate in 2019.

Entrepreneurial activity by migrant status is shown Figure 3.18. In 2020 immigrant TEA and regional in-migrant TEA are both significantly higher than the rate for life-long UK residents at 10.8% and 8.2% respectively versus 6.1%. In 2019 only the immigrant TEA rate was significantly higher than the other categories. The only statistically significant drop in TEA rates over the year was among lifelong UK residents, falling from 9.5% to 6.1%.

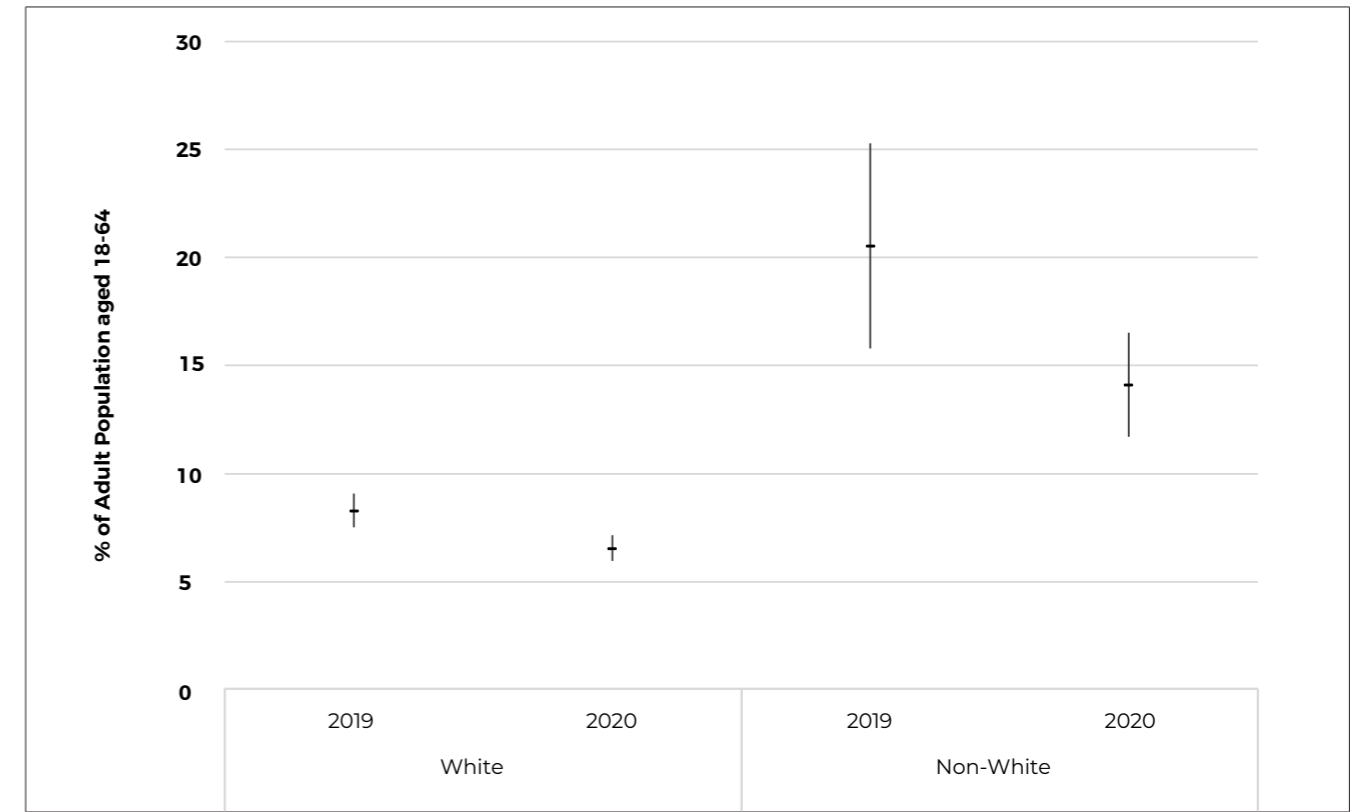


Figure 3.17: Total early-stage Entrepreneurial Activity Rate by White and Non-White Ethnic Status 2019-2020 (Source: GEM UK APS 2019, 2020)

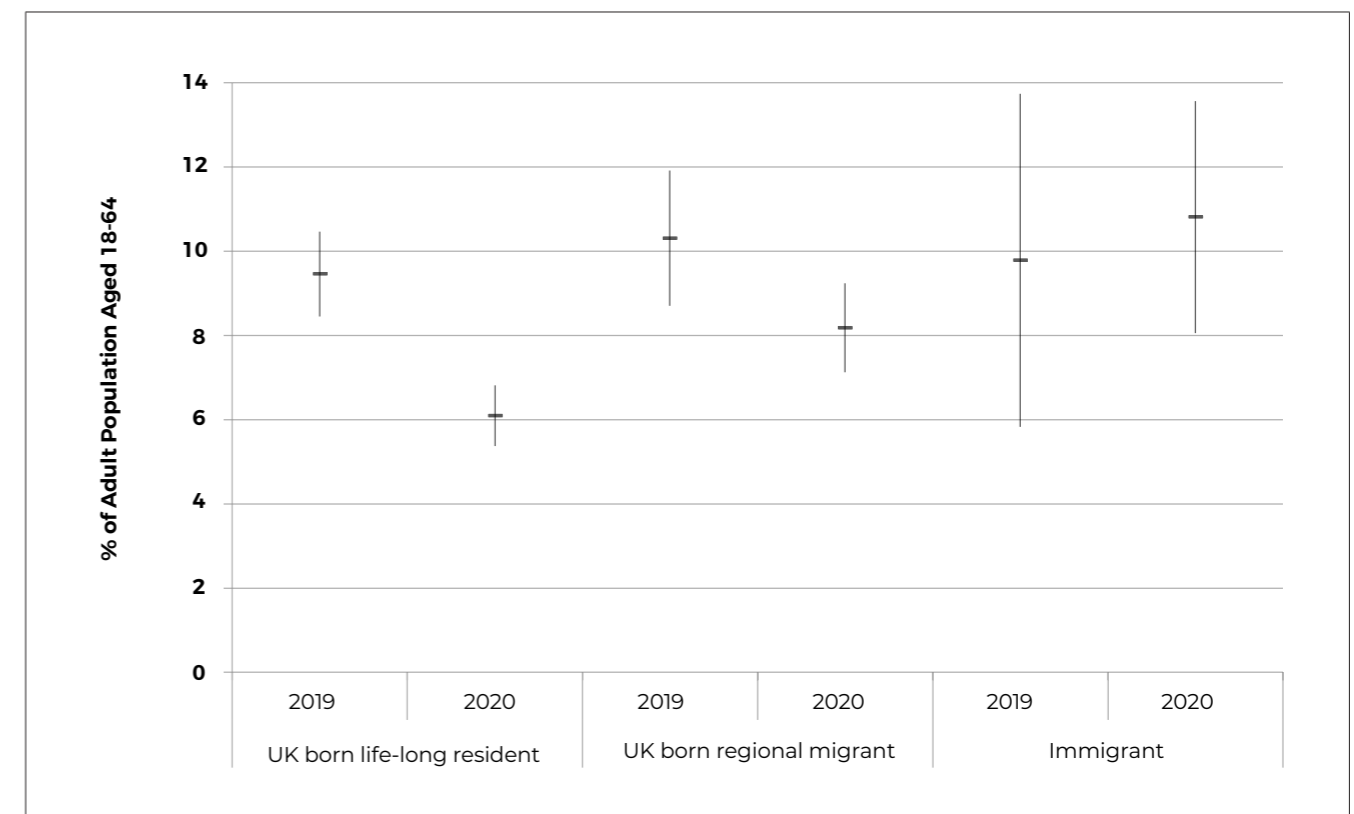


Figure 3.18: Total early stage Entrepreneurial Activity Rate by Migrant Status 2019-2020 (Source: GEM UK APS 2019-2020)

3.5 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 ensue⁹.

A study¹⁰ 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 2020 was 3.2%, which was lower but not significantly different to the rates in Germany (4.1%) and the US (3.3%) as shown in Figure 3.19.

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 3.20 shows the TEA and EEA rates for the UK in 2019 and 2020. In both years the TEA rate is significantly higher than the EEA rate. The EEA rate of 3.2% in 2020 was significantly lower than the rate of 5.6% in 2019. The TEA rate of 7.5% was also significantly lower in 2020 than 2019. Both rates declined by the same proportion over the year.

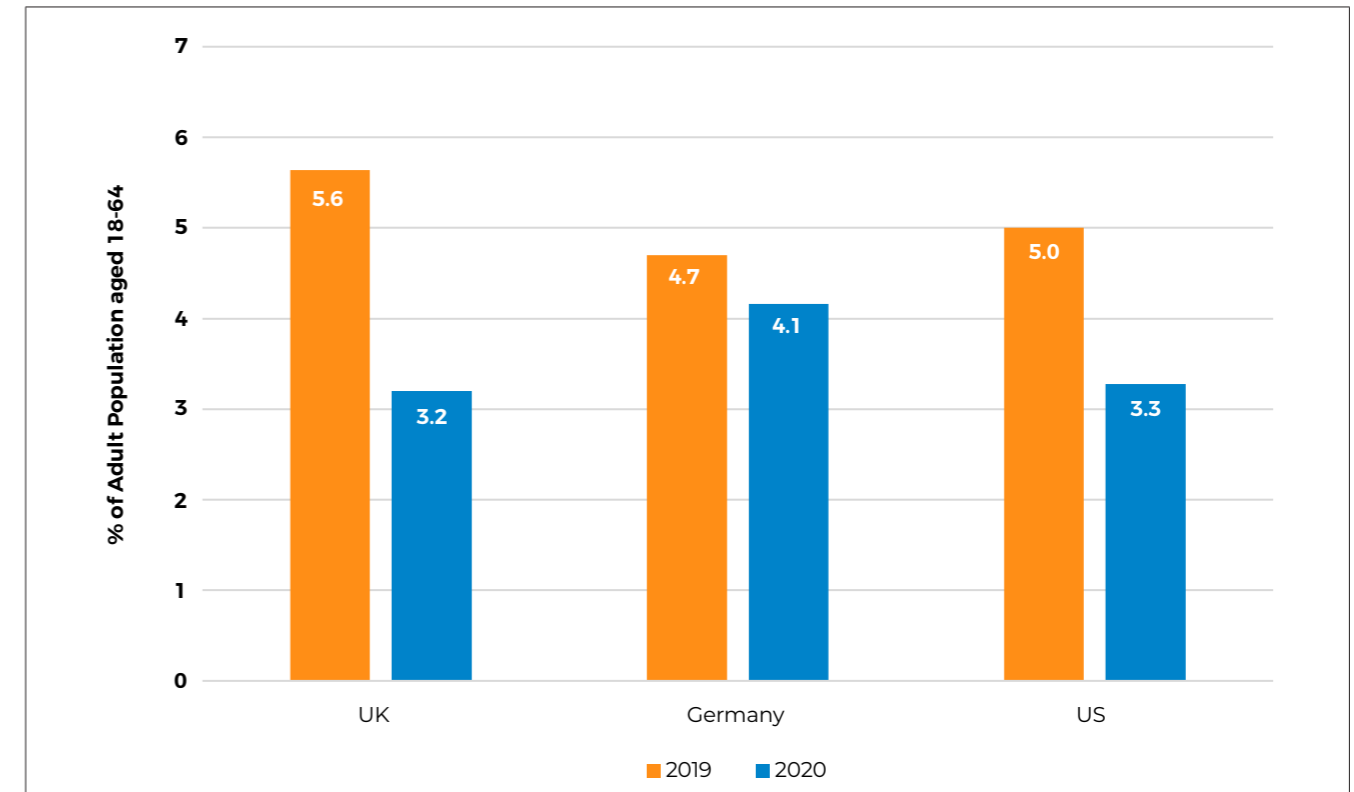


Figure 3.19: Entrepreneurial Employee Activity (EEA) in the UK, Germany and the US 2019-2020 (Source: GEM APS 2019, 2020)

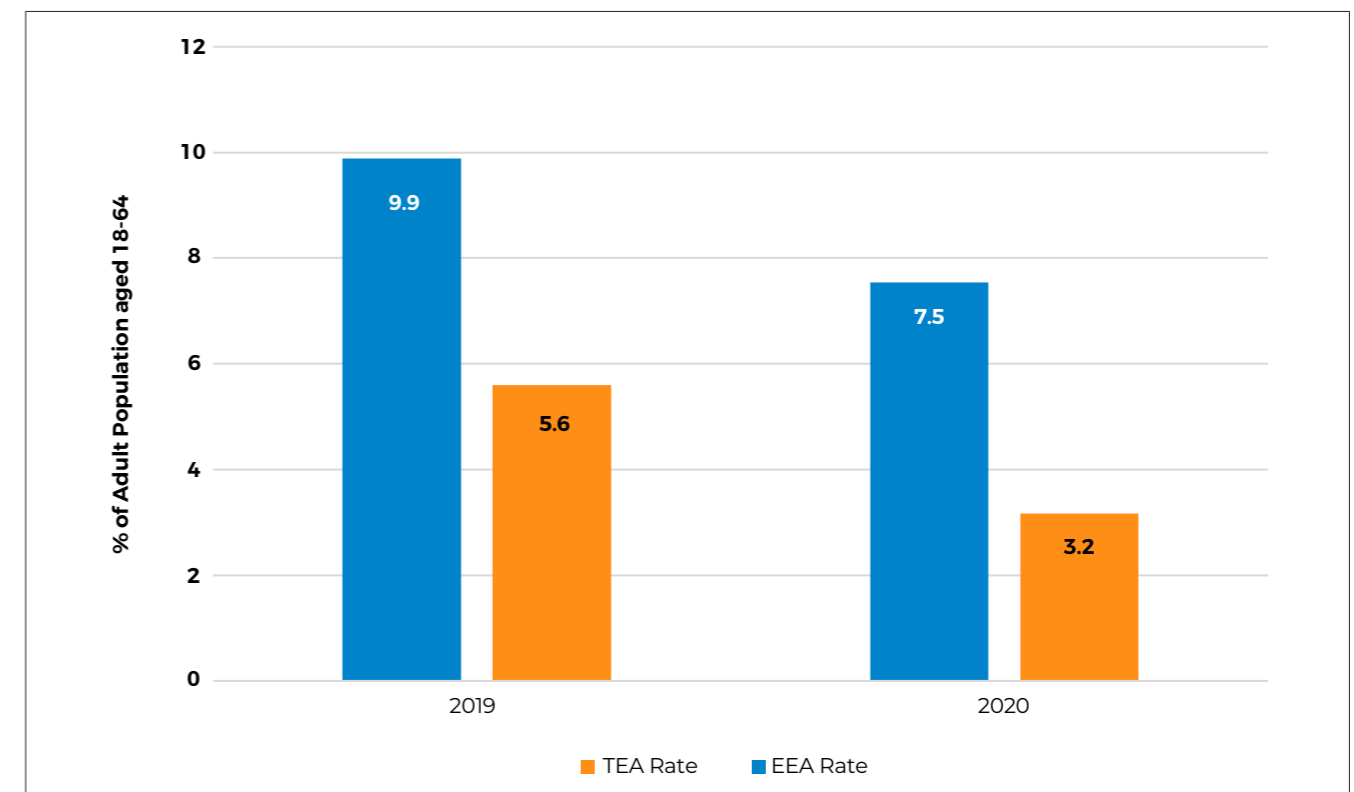


Figure 3.20: Total early-stage Entrepreneurial Activity (TEA) and Entrepreneurial Employee Activity (EEA) in the UK 2019-2020 (Source: GEM APS 2019, 2020)

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". www3.weforum.org/docs/WEF_Entrepreneurship_in_Europe.pdf

4. Entrepreneurial Aspiration

The potential of entrepreneurial activity to promote regeneration and growth will reflect the types of business being established. If an entrepreneur expects to create a large number of jobs, or if the product market is new, then his or her potential contribution to growth and regeneration through entrepreneurship may be greater. The complex nature of the contribution of firms of different age and size to job creation in the UK has been highlighted in recent research¹¹.

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 years¹². The results are illustrated in Table 4.1 for early-stage entrepreneurs (i.e. nascent and new business owners - TEA) and established business owner-managers (EBO). The table also shows the proportion of early-stage entrepreneurs and established business owner-managers who state they operate in “high” or “medium” technology sectors (according to OECD definitions), and sell more than 25% of their revenue 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 14% of UK early-stage entrepreneurs had high job expectations which was lower than in the US and, unlike previous years, was also lower than Germany. In each country the high expectation rates of established business owners are lower than for early-stage entrepreneurs, although the UK rate saw a slight increase in 2020 as compared to 2019. High expectation amongst UK established business owners was higher than in both the US and Germany, again in contrast to 2019, with Germany’s rate decreasing from 13.1% in 2019 to 5.2% in 2020. The TEA high job expectation rate in the UK in 2020 was significantly lower than the rate of 25.0% in 2019 but there was no significant difference in high job expectations among established business owners between 2019 and 2020.

The UK has the highest percentage of TEA firms in the high or medium tech sectors at 10.1% while the US has the lowest at 7.2%. Around 10% of established business owners in the UK and Germany have businesses in the high or medium tech sectors compared to 12% in the US. At 20.8% the UK had the highest share of early-stage entrepreneurs involved in exporting compared to 14% in Germany and just 3.2% in the US. This trend is similar when looking at established business owners, where in the UK 22.1% of firms had more than 25% of customers outside of the country compared to 13% and 6% respectively in Germany and the US. This metric had the smallest difference in rates between early stage and established business owners.

Table 4.2 shows new potential impact variables that were added to the 2019 survey to replace previous “new product to market” variables¹³. The first set of results show the propensity of early-stage entrepreneurs and established business owner-managers with potential national impact. Around 1% of UK and German early-stage entrepreneurs and nearly 2% of the US comprised TEA entrepreneurs with national impact, a drop from 2019 rates. In the UK, both early-stage and established business entrepreneurs experienced a significant decrease in national and international impact in 2020 when compared with 2019. The percentages of established business owner-managers whose businesses had potential national impact were also similar across these countries at around 1%. When looking at international impact, there was very little variation between countries for established business owner-managers (around 0.5%). In the US, 0.8% of early-stage entrepreneurs stated potential international impact compared with 0.3% of entrepreneurs in the UK and Germany. Overall, early-stage entrepreneurs in all countries had the highest potential impact nationally and all the rates had fallen since 2019.

¹¹ 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.

¹² 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.

¹³ The first measure identifies individuals whose businesses are at least national in market scope (i.e. larger than local) and either the product or service is nationally or internationally novel or the process underlying it is nationally or internationally novel. The second measure takes the scope and novelty to an international level.

(% of TEA or EBO entrepreneurs)	High Job Expectation:		High or Medium tech sectors		Exporting:	
	More than ten jobs and growth more than 50%				More than 25% of customers outside the country	
	TEA	EBO	TEA	EBO	TEA	EBO
UK	14.3	9.2	10.1	10.7	20.8	22.1
Germany	23.9	5.2	7.8	10.2	14.3	13.1
US	22.5	8.6	7.2	11.8	3.2	5.5

Table 4.1: Measures of entrepreneurial aspiration in the UK, Germany and the US, 2020
(Source: GEM Global APS 2020)

	National impact		International Impact	
	At least national scope for market and at least national scope for new product or new process		At least international scope for market and at least international scope for new product or new process	
	TEA (%)	EB (%)	TEA (%)	EB (%)
UK	1.1	1.2	0.3	0.5
Germany	0.8	0.8	0.3	0.4
US	1.8	0.9	0.8	0.4

Table 4.2: Measures of entrepreneurial potential impact rates in the UK, Germany and US, 2020
(Source: GEM Global APS 2020)

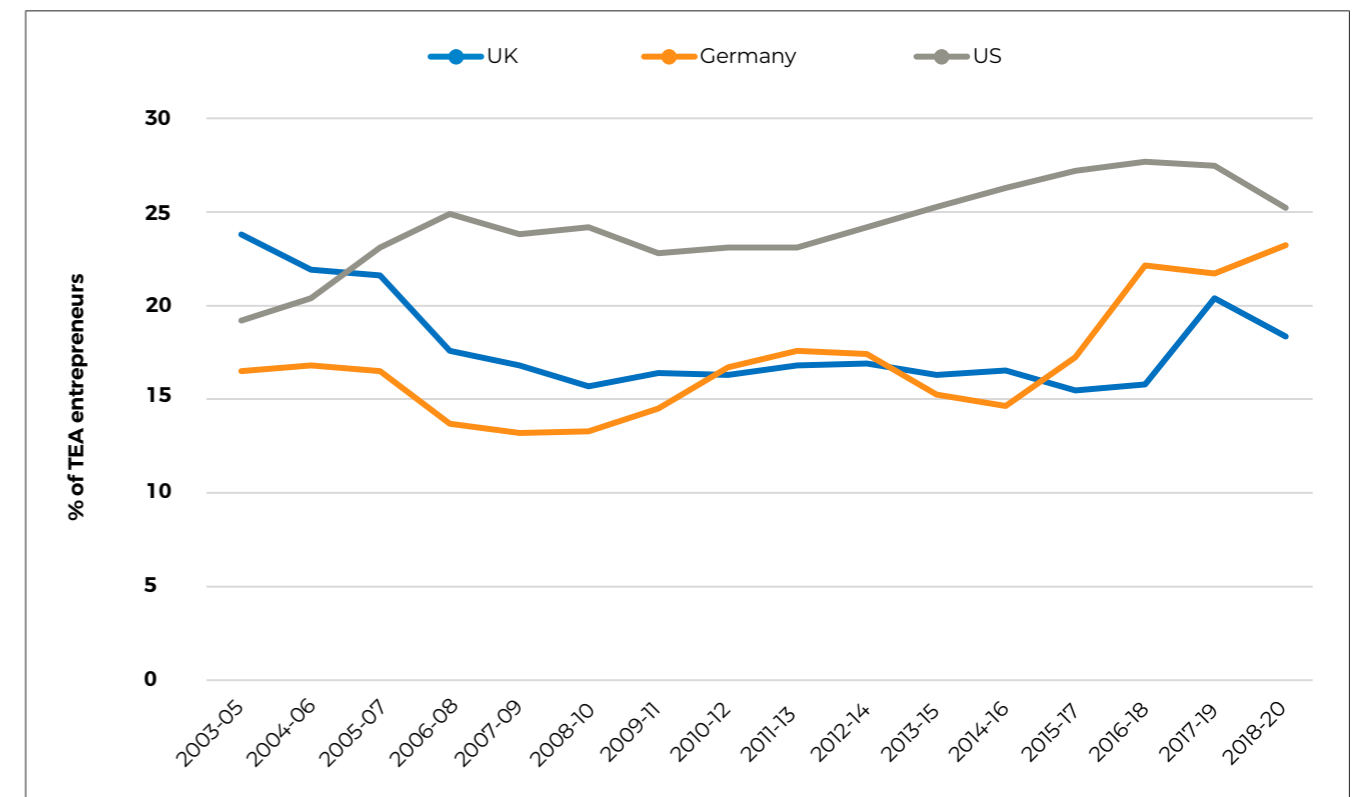


Figure 4.1: Relative frequency of high job expectation early-stage entrepreneurs in the UK, France, Germany and the US, three year rolling averages, 2003-2005 to 2018-2020
(Source: GEM Global APS 2003-2020)

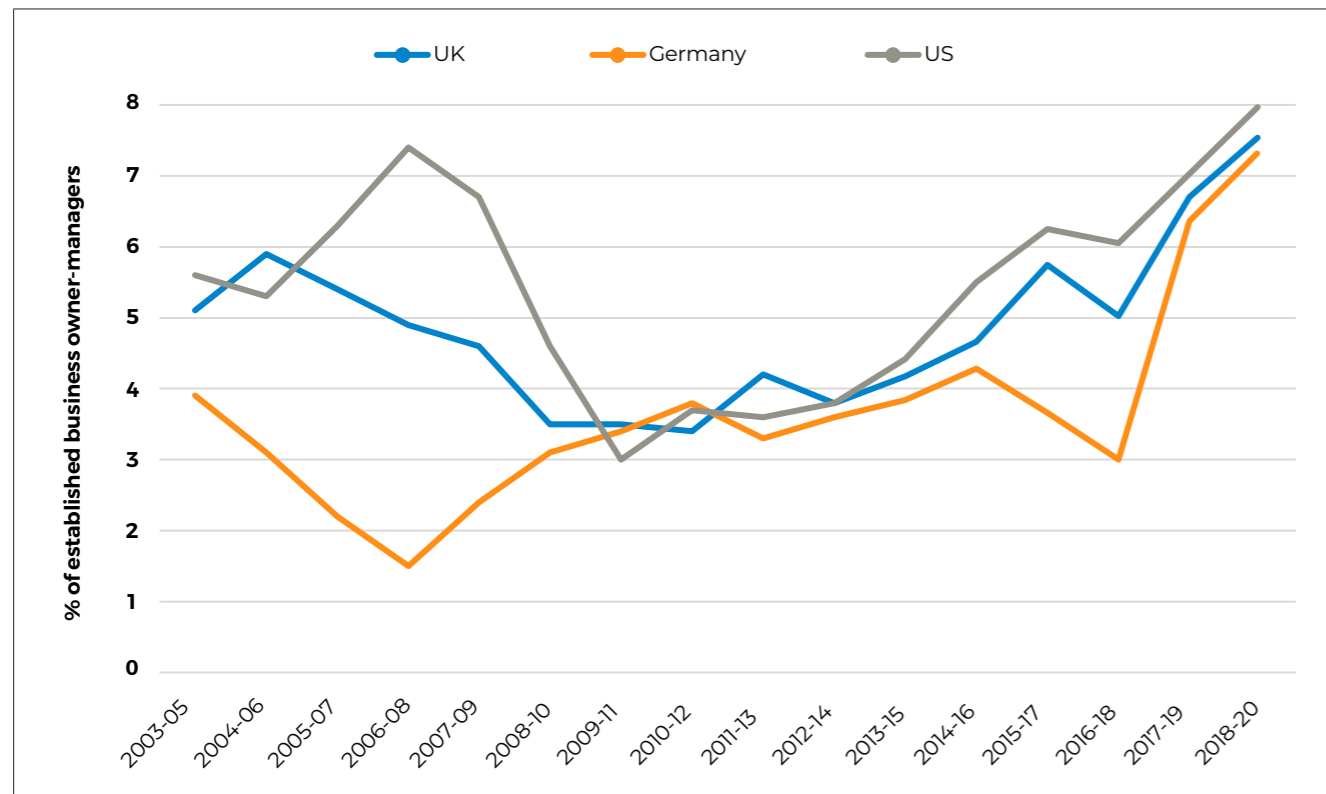


Figure 4.2: Relative frequency of high job expectation among established business owner-managers in the UK, Germany and the US, three year rolling averages, 2003-2005 to 2018-2020
(Source: GEM APS 2003-2020)

The trend in the relative frequency of high job expectation TEA entrepreneurs for the UK, Germany and the US, is shown in Figure 4.1. 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 settled at around 16% between the GFC and 2018, increased to a peak of over 20% in 2017-20 but dipped back to 18% over 2018-20. The US rate also dropped from its 2017-19 peak, in contrast, the German rate moved towards a record high of 23% in 2018-20. Due to a similar drop in both the UK and US rates, the 7 percentage point gap between the two prevailed.

The trend in relative frequency of high job expectation among established business owner-managers is shown in Figure 4.2 using the same method as for Figure 4.1. Note that the relative frequency of high job expectation for established business owners is typically around one third of that of early-stage entrepreneurs.

Across all countries there was a general downward trend in this measure until the GFC, with a gradual increase thereafter amongst established business owners in the UK, US and Germany. In contrast to early-stage entrepreneurs all countries experienced an increase in established business high expectation rates in 2018-20. All three countries appear to be converging towards 8% in 2018-20, which represents peak rates thus far for all three.

Focusing specifically on ‘high value activities’ Table 4.3 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).

(% of TEA or EBO entrepreneurs)	High Value Activities	
	TEA	EBO
None of these activities	48.6	59.3
1 of these activities	34.8	23.6
2 of these activities	13.1	15.4
3 of these activities	3.4	1.7
Total	100.0	100.0

Table 4.3: Percentage of TEA and EBO entrepreneurs engaged in high value activities (high job expectation, new product markets, exporting), three-year average 2018-2020
(Source: GEM APS 2018-2020)

Around three-fifths of established business owners and just under half of early-stage entrepreneurs are not engaged in any high value activities. Around one-third of early-stage entrepreneurs undertake one of these activities compared to one-quarter of established business owners. Just under one-fifth of both TEA entrepreneurs and established business owners are engaged in two or more activities. Since 2019 there has been just over a 12 percentage point increase in the share engaged in two or more of these activities. The results, however, still 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 until very recently. 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 US¹⁴. By contrast, the share of ambitious established business owner-managers is similar in the UK and US, and slightly ahead of Germany.

¹⁴ See ERC Conference Video by Jonathan Levie (2015) - <https://youtu.be/CJAu2fUWWnc>

5. Anticipated Versus Actual Sources of Funding for Start-ups

Obtaining funding remains a major issue for many start-up businesses. Since 2006, GEM has tracked the mix of funds that nascent entrepreneurs expect to use. Table 5.1 shows these expected funding sources over 2017-2020¹⁵. The results suggest that around 4% required no funding while 47% said that they will fund it themselves, an increase from the previous year where just 41% said they will self-fund, but similar to 2017 levels. This is almost identical to the proportion (45%) of all micro-enterprises reporting that they did not intend to use external finance in Q4 of 2020¹⁶. The percentage that stated a close family member would act as a source of funding, remained at the same rate as 2019. There was an increase, however, from 4% to 11%, in those sourcing funding from other relatives, and from friends and neighbours (from 4% to 9%). Given Covid-related support, the share expecting funding from government programmes increased from 14% to 18% while the share expecting bank funding dropped from 22% to 18%. Those expecting funding from crowdsourcing was at its highest ever level, doubling to 13% in 2020.

These trends in higher rates of finance expected from family, friends and neighbours are not surprising given the Covid impact, but they also coincide with recent changes in informal investment, or investment by individuals in other people's new businesses in the last three years, as shown in Table 5.2¹⁷. The informal investment rate increased to 6.6% in 2020 from 2.9% a decade earlier. Investment into companies owned by close family was the most common investment choice, at around one third. The higher incidence of investing in strangers' businesses, first observed in 2014, dropped from a peak of 22.8% in 2018 to 12.4% in 2020, which is more in line with rates observed between 2014 and 2017. The share investing in a work colleagues' business, remained at just over 13% while the share investing in other relatives' business increased from 2% to 10%, matching the rate last observed in 2014.

¹⁵ 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.

¹⁶ BRDC Continental - SME Finance Monitor Q4, 2020. We use the figure for micro-enterprises (1-9 employees) as the best available comparator for nascent entrepreneurs in the GEM survey.

¹⁷ 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.

Type of funding expected	2017	2018	2019	2020
No funding needed	6.7	8.4	5.0	3.7
All funded by entrepreneur	44.0	53.0	41.0	46.9
None funded by entrepreneur	1.5	2.1	2.9	0.6
Close family member (spouse, parent, sibling)	15.5	16.7	27.5	27.3
Other relatives, kin or blood relations	5.7	7.5	3.7	11.3
Employer or work colleagues	2.4	5.1	8.4	7.7
Private investor or venture capital	14.6	10.4	14.7	14.6
Friends or neighbours	4.4	3.8	3.8	9.1
Banks or other financial institutions	23.4	15.1	22.5	17.8
Government programmes, donations or grants	20.6	11.6	13.9	17.5
Online crowdfunding	6.5	5.8	6.5	13.3
Any other source	9.8	6.2	5.5	10.2

Table 5.1: Percentage of nascent entrepreneurs expecting funding from different sources 2017-2020 (Source: GEM UK APS 2017-2020)

Informal investment rate	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
% 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	5.0	6.6
Relationship of latest investee (% of latest investments)												
Close family member (spouse, parent, sibling)	41.0	37.0	50.2	57.5	46.8	40.3	38.0	37.3	43.4	36.8	37.3	33.3
Other relative, kin or blood relations	4.5	7.5	6.2	2.2	6.6	11.1	0.4	2.1	1.4	2.8	2.1	10.5
Work colleague	8.3	2.2	7.4	8.9	3.9	5.1	0.5	4.0	6.7	8.0	13.4	13.6
Friend or neighbour	35.5	48.5	28.4	23.4	38.7	25.5	39.2	38.4	28.0	29.6	27.9	28.2
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	13.5	12.4
Other	2.1	0.4	0.0	3.8	0.0	0.1	5.7	2.4	4.9	0.0	5.8	2.1

Table 5.2: 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, 2010 to 2020 (Source: GEM APS 2010 - 2020)

6. Entrepreneurial Framework Conditions in the UK

There is a growing recognition in entrepreneurship research that context is highly important for understanding when, why and how entrepreneurial activity happens¹⁸. Any decision to start a new enterprise is taken in a specific context which encompasses a wide range of economic, political, institutional, financial and social conditions. These conditions may encourage and facilitate or discourage and hinder entrepreneurial activity. Each national context is different and evolves with time.

To assess the context in which entrepreneurial activity takes place, GEM created a specific tool which defines *Entrepreneurship Framework Conditions* (EFCs) based on the *GEM National Expert Survey* (NES). At least 36 experts, carefully selected according to their knowledge and experience, participate in the NES each year. These experts, of whom no more than a quarter participated in the survey the previous year (to reduce bias and ensure objectivity), answer questions about how they rate the sufficiency of each framework condition. Each of the nine framework conditions is based on responses of the experts to 5-8 questions¹⁹. Three of the EFCs (Government policy, Entrepreneurship education and Ease of entry) were further split into two subsets in order to satisfy the reliability condition²⁰ bringing the overall number of pillars describing national entrepreneurship context to twelve (Table 6.1).

6.1. NATIONAL ENTREPRENEURSHIP CONTEXT INDEX (NECI)

In order to provide an overall view of how favourable an environment is for entrepreneurial activity across countries, GEM introduced the National Entrepreneurship Context Index (NECI)²¹ in 2018. It is a composite index which represents the arithmetic average of EFCs as set out in Table 6.1.

EFCs and NECI are based on experts' perceptions of the entrepreneurial conditions within a particular economy and in a particular moment of time. Any cross-country analysis should be performed with caution. Entrepreneurial activity, deeply rooted in cultural traditions and norms, can persist despite difficult conditions and, on the contrary, can be lagging despite a relatively favourable setting. However, these metrics provide a useful benchmarking tool to capture the strengths and the weaknesses of the national entrepreneurial context by comparing it with other countries. This exercise may provide guidance on the possible directions of improvement to better support and stimulate thriving entrepreneurial activity.

In 2020, the UK with a total score of 5.0 ranked 14th among 44 countries (Figure 6.1). A score below 5 out of 10 (neutral point) indicates that experts regard the conditions for entrepreneurship to have room for improvement. In 2020, the UK overall index of entrepreneurship context is slightly higher than in Germany (4.9), but lower than in the USA (5.2), and much lower than NECI scores of top-ranked countries, including, in Europe, the Netherlands with the second highest score at 6.3.

1	ACCESS TO ENTREPRENEURIAL FINANCE Are there sufficient funds available to new start-ups, from informal investment and bank loans to government grants and venture capital?
2a	GOVERNMENT POLICY: SUPPORT AND RELEVANCE Do government policies promote entrepreneurship and support those starting a new business venture?
2b	GOVERNMENT POLICY: TAXES AND BUREAUCRACY Are business taxes and fees affordable for the new enterprise? Are rules and regulations easy to manage, or an undue burden on the new business?
3	GOVERNMENT ENTREPRENEURSHIP PROGRAMMES Are quality support programmes available to the new entrepreneur at local, regional and national levels?
4a	ENTREPRENEURSHIP EDUCATION AT SCHOOL Are schools introducing ideas of entrepreneurship, and instilling students with entrepreneurial values such as enquiry, opportunity recognition and creativity?
4b	ENTREPRENEURSHIP EDUCATION POST-SCHOOL Do colleges, universities and business schools offer effective courses in entrepreneurial subjects, alongside practical training in how to start a business?
5	RESEARCH AND DEVELOPMENT TRANSFERS To what extent can research findings, including from universities and research centres, be translated into commercial ventures?
6	COMMERCIAL AND PROFESSIONAL INFRASTRUCTURE Does access to affordable professional services such as lawyers and accountants support the new venture, within a framework of property rights?
7a	EASE OF ENTRY: MARKET DYNAMICS Are there free, open and growing markets where no large businesses control entry or prices?
7b	EASE OF ENTRY: MARKET BURDENS AND REGULATIONS Do regulations facilitate, rather than restrict, entry?
8	PHYSICAL INFRASTRUCTURE To what extent are physical infrastructures, such as roads, Internet access and speed, the cost and availability of physical spaces and such like, adequate and accessible to entrepreneurs?
9	SOCIAL AND CULTURAL NORMS Does national culture stifle or encourage and celebrate entrepreneurship, including through the provision of role models and mentors, as well as social support for risk-taking?

Table 6.1: Entrepreneurship Framework Conditions (Source: Bosma et al. (2020), p.69)

¹⁸ See, for example, Ali, A., Kelley, D. and Levie, J. (2020) Market-Driven Entrepreneurship and Institutions. *Journal of Business Research*, 113, 117-128; Sahasranamam, S., & Nandakumar, M. K. (2020). Individual capital and social entrepreneurship: Role of formal institutions. *Journal of Business Research*, 107, 104-117.

¹⁹ Each item in the form of a statement is rated by each national expert on a scale from 0 (completely false) to 10 (completely true). GEM then harmonizes the data, calculating a rating for every framework condition by applying a principal component analysis to each section of the questionnaire.

See, Bosma, N. et al. (2020). *Global Entrepreneurship Monitor. 2019/2020 Global Report*. London: Global Entrepreneurship Research Association.

²⁰ To measure the internal consistency or reliability of blocks of items for underlying EFC, GEM uses the Cronbach's Alpha. The coefficients for each of the twelve blocks are significantly higher than the cut value of 0.5.

²¹ See, Bosma et al. (2020) for details.

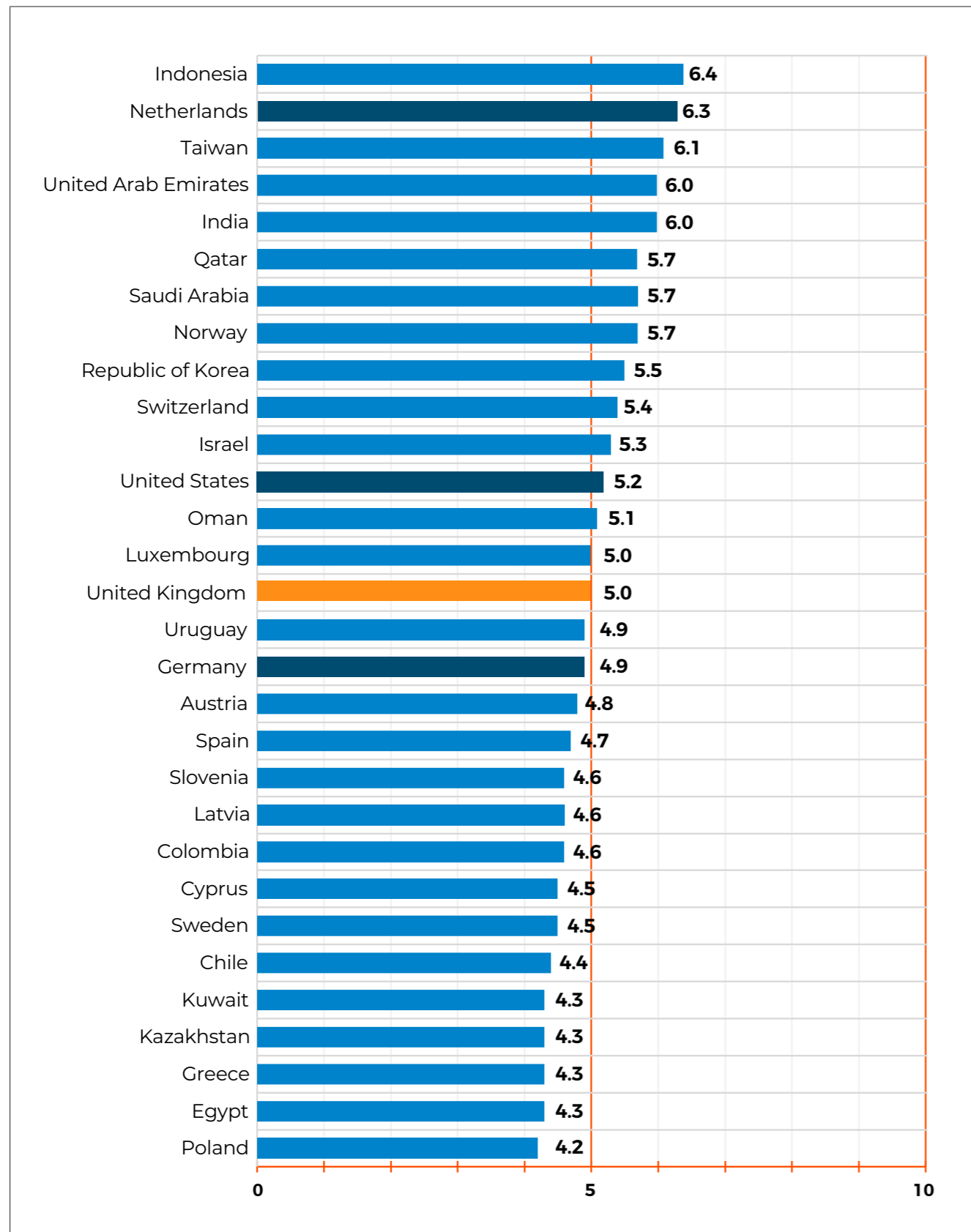


Figure 6.1: National Entrepreneurship Context Index (NECI) in 2020, first 30 out of 44 countries
 (Source: GEM Global NES 2020)

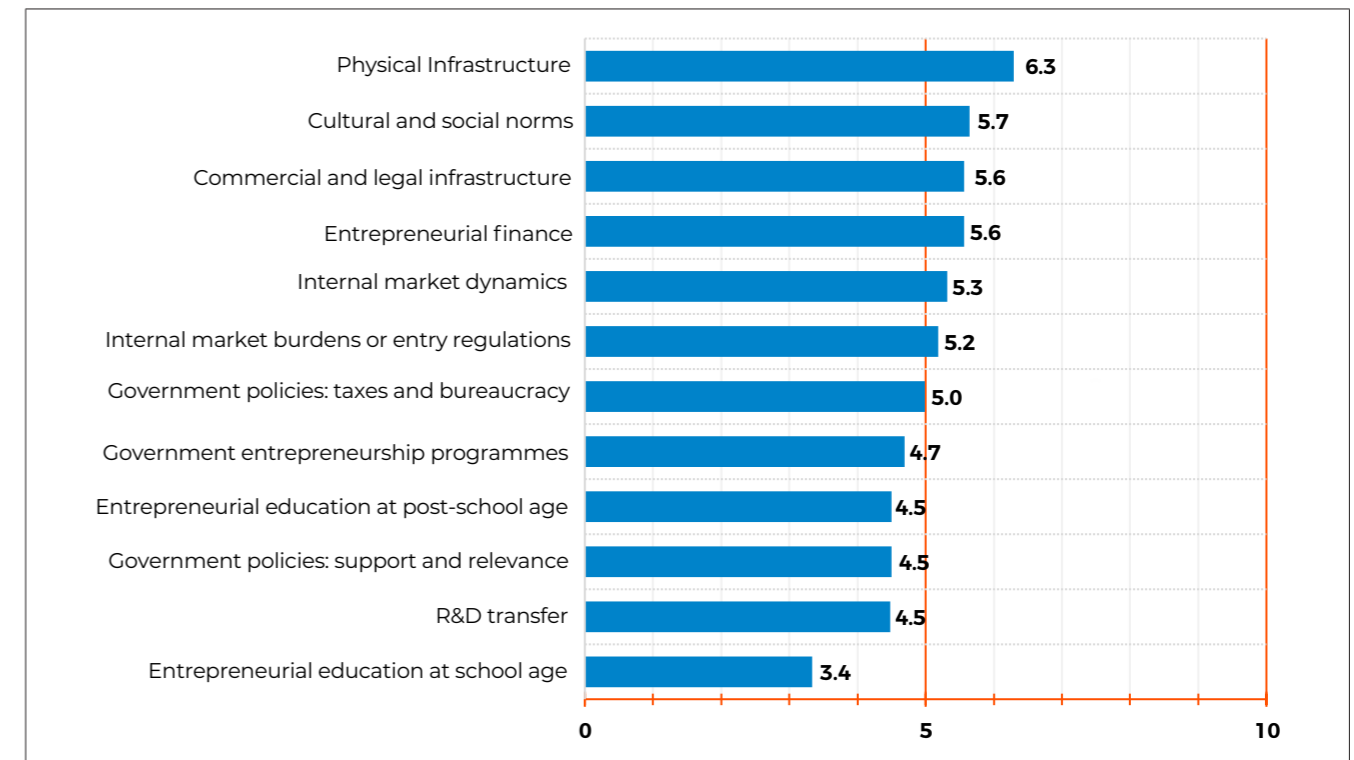


Figure 6.2: Entrepreneurial Framework Conditions in the UK in 2020
 (Source: GEM UK National Expert Survey (NES) 2020)

Figure 6.2 reports the values for each of the twelve pillars describing the entrepreneurial context. Among these twelve pillars, seven have values above 5 (out of 10) meaning that, according to the national experts surveyed, physical infrastructure (6.3), cultural and social norms (5.7), entrepreneurial finance (5.6), commercial and professional infrastructure (5.6), internal market dynamics (5.3), internal market burdens (5.2), and government policies in relation to taxes and bureaucracy (5.0) are relatively satisfactory.

On the contrary, the other five conditions scored below 5 points and are thus areas for particular attention. These include entrepreneurial education at post-school age (4.5) and at school age (3.4), government entrepreneurship programmes (4.7), government policies regarding business support (4.5) and R&D transfer (4.5).

6.2. DYNAMICS OF NECI and EFCs IN THE UK IN 2019-2020

Compared to 2019, there was an increase in perception of the overall state of the entrepreneurial context in 2020: NECI increased from 4.83 to 5.0²². Table 6.2 shows the dynamic of value and importance of each EFC in 2018 and 2019. In this table, framework conditions are organised by order of importance/influence for the entrepreneurial context in 2019²³. Although experts estimate that all factors are important (all importance weights are above 5), some EFCs stand out as the most relevant. Although the ranking of importance changes from 2018 to 2019, entrepreneurial finance, government

policies to support businesses and internal market dynamics are consistently at the top of the list.

On the left-hand side of the table, the cells are coloured in orange when the average EFCs are sufficient (the score is above 5) and in blue when the condition is insufficient (the score is below 5). Blue and orange arrows indicate if there was an improvement in EFC (score and importance) from 2018 to 2019, and from 2019 to 2020.

In 2020, there was an improvement in six conditions. In particular, looking at 'orange areas', scores for government business support policies, government

Score					EFCs	Importance		
2018		2019		2020		2018		2019
5.53	↘	5.33	↗	5.59	Entrepreneurial finance	7.73	↗	8.03
3.77	↗	4.02	↗	4.50	Government policies: support and relevance	7.92	↘	7.20
5.74	↘	5.12	↗	5.59	Commercial and legal infrastructure	6.79	↗	7.00
5.46	↘	4.85	↗	5.33	Internal market dynamics	8.47	↘	6.97
5.43	↘	5.08	↘	5.01	Government policies: taxes and bureaucracy	6.54	↗	6.94
4.93	↗	5.22	↘	5.20	Internal market burdens or entry regulations	7.09	↘	6.89
4.64	↘	3.77	↗	4.49	R&D transfer	6.54	↗	6.75
4.84	↘	4.65	↘	4.51	Entrepreneurial education at post-school age	7.23	↘	6.69
5.36	↗	5.72	↘	5.67	Cultural and social norms	7.00	↘	6.67
6.22	↗	6.54	↘	6.31	Physical infrastructure	7.46	↘	6.58
3.27	↗	3.37	↘	3.35	Entrepreneurial education at school age	7.33	↘	6.56
4.46	↘	4.32	↗	4.70	Government entrepreneurship programmes	6.73	↘	5.86

Table 6.2: Entrepreneurial Framework Conditions in the UK in 2018 to 2020: values and importance
(Source: GEM UK National Expert Survey (NES) 2018, 2019 and 2020)

²² In 2018, 2019 and 2020, the methodology of calculation of NECI differed: in 2018 and 2019 EFC scores were weighted by importance of each EFC to the current state of the entrepreneurship environment according to experts, while in 2020 NECI was calculated as an arithmetic average of EFCs without applying importance weights, in part because the process of compacting the various questions to the 12 pillars itself applies weighting principles in the analysis. Indeed, these methodological differences do not affect NECI scores much.

²³ In 2018 and 2019, national experts along with evaluating the state of EFCs also rated the importance of each EFC to the current state of the entrepreneurship environment on a scale from 0 (not at all important) to 10 (extremely important). For example, experts were asked to assign a weight of 10 to entrepreneurial finance component, if they think that the availability of financing for entrepreneurs is currently the biggest factor contributing to the (good or bad) state of the entrepreneurial framework. NES questionnaire 2020 did not include these questions, hence, here we present importance scores only for 2018 and 2019.

entrepreneurship programmes, and R&D transfer increased. However, these changes were not sufficient to bring these conditions above the threshold score of 5. There was no improvement in entrepreneurial education, both at post-school and at school age which decreased slightly. Interestingly, after a sharp decline in 2019, internal markets dynamic has almost recovered in 2020 to 2018 levels.

There was also a positive dynamic for entrepreneurial finance, and commercial, professional and legal infrastructure. The scores for government policies in terms of taxes and bureaucracy and internal market burdens and entry regulations remained broadly similar to 2019 levels.

6.3. EFCs IN THE UK AND BENCHMARK COUNTRIES IN 2020

Typically, the UK framework conditions mirror relatively closely the US EFCs, except for lower scores for Physical infrastructure and Cultural and social norms in terms of support of new and growing firms as shown in Figure 6.3. Entrepreneurial education at school, post-school age and access to entrepreneurial finance are also generally evaluated by the US experts higher than by their UK peers, and this is again the case in 2020 for entrepreneurial education at post-school age. On contrary, the gap narrowed for two other dimensions driven by a positive dynamic in the UK and a negative dynamic in the US. One dimension for which the UK shows consistently higher scores than the US is ease of market entry for new and growing firms and internal market burdens and regulations – the UK ranked 7th for this framework condition among 54 countries which participated in NES in 2019 and 10th (among 44 countries) in 2020.

Compared to Germany, the UK framework conditions as evaluated by experts in 2020 were less favourable in terms of commercial and professional infrastructure, R&D transfer, and more so in government entrepreneurship programmes. In contrast, the EFCs scores indicate more favourable conditions in the UK than in Germany when it comes to cultural and social norms (5.67 vs 4.78), terms of taxes and bureaucracy (5.01 vs 4.06) and internal market burdens and entry regulations (5.2 vs 4.5).

Compared to the Netherlands, the country with the second highest NECI in 2019 and 2020, and the highest NECI among European countries, the UK had a higher score for internal market dynamics (5.33 vs 5.14). For all other entrepreneurial framework conditions, the Netherlands reported higher scores.

The gap is particularly notable for R&D transfer (4.49 vs 6.06), government support policies (4.5 vs 6.14), entrepreneurship programmes (4.7 vs 6.57), physical infrastructure (6.31 vs 8.04), and entrepreneurial education at post-school (4.51 vs 6.5) and at school age (3.35 vs 6.01).

The entrepreneurial finance framework condition describes the availability of financial resources to new and growing firms across different types of finance (debt, equity, subsidies, and alternative sources of finance).

Overall, access to entrepreneurial finance was one of the UK's strongest framework conditions compared to other countries in 2020: with a total score of 5.59, the UK ranked 7th among 44 countries for this EFC. The highest scores are attributed by experts to traditional sources of finance – debt and equity – but also to alternative sources of finance, such as crowdfunding, where the UK is known to be at the forefront of financial innovation.

There are two dimensions of this pillar that UK experts evaluate as insufficient - government subsidies and informal investors. There is a significant difference in the government subsidies score particularly when compared with the Netherlands (Figure 6.4).

Government policies are evaluated along two dimensions: public support to new and growing firms at national and local levels and taxation policy and regulations for enterprises. The taxes, regulations and bureaucracy framework condition is evaluated as sufficient: on average experts find that taxes and regulations are applied to new and growing firms in a consistent and predictable way, that taxes are not a burden and that regulations are not unduly difficult to cope with.

Figure 6.5 shows that for this condition the UK compares positively to the US: the UK has higher scores for all four components. However, the speed of obtaining permits and licences and coping with bureaucracy have scores below 5.

Experts on average disagree that the support for new and growing firms is a high priority at the national level and even less so that government policies consistently favour new firms (Figure 6.6). The support at the local government level was rated higher in 2020 (5.11) than in 2019 (4.5) and reached the sufficiency threshold.

The government entrepreneurship programmes framework condition is identified as one of the potential areas for improvement.

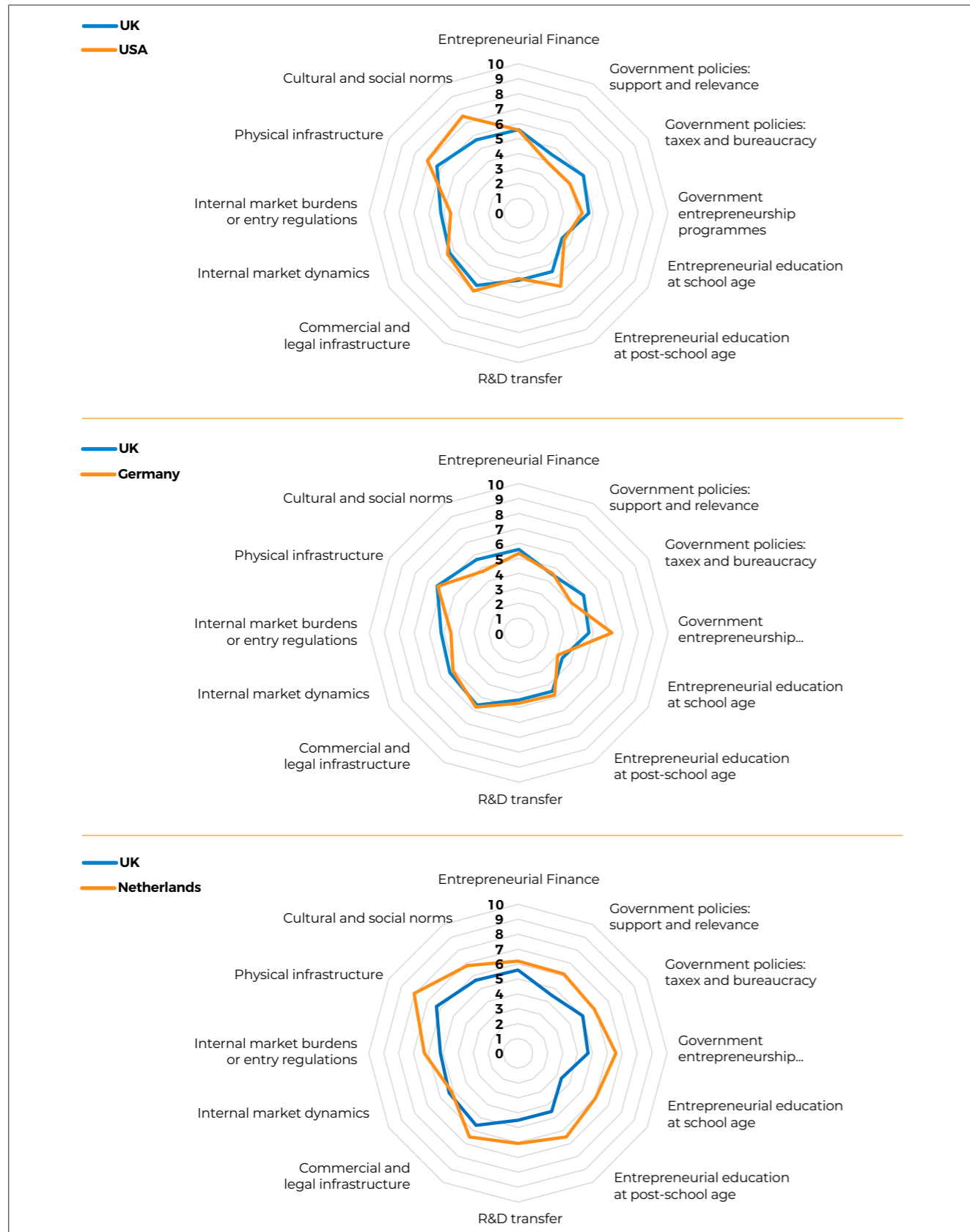


Figure 6.3: EFCs in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

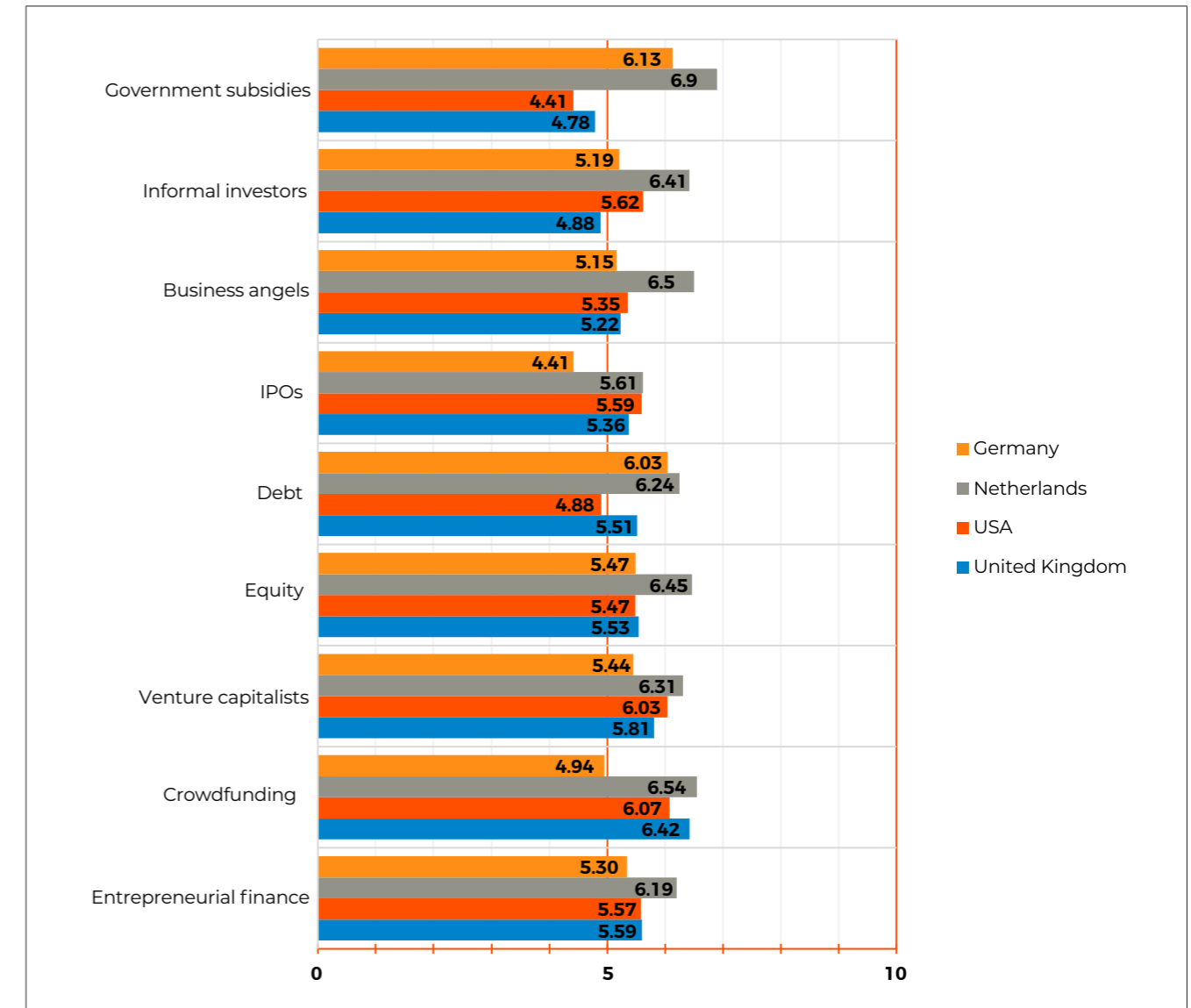


Figure 6.4: Entrepreneurial Finance in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

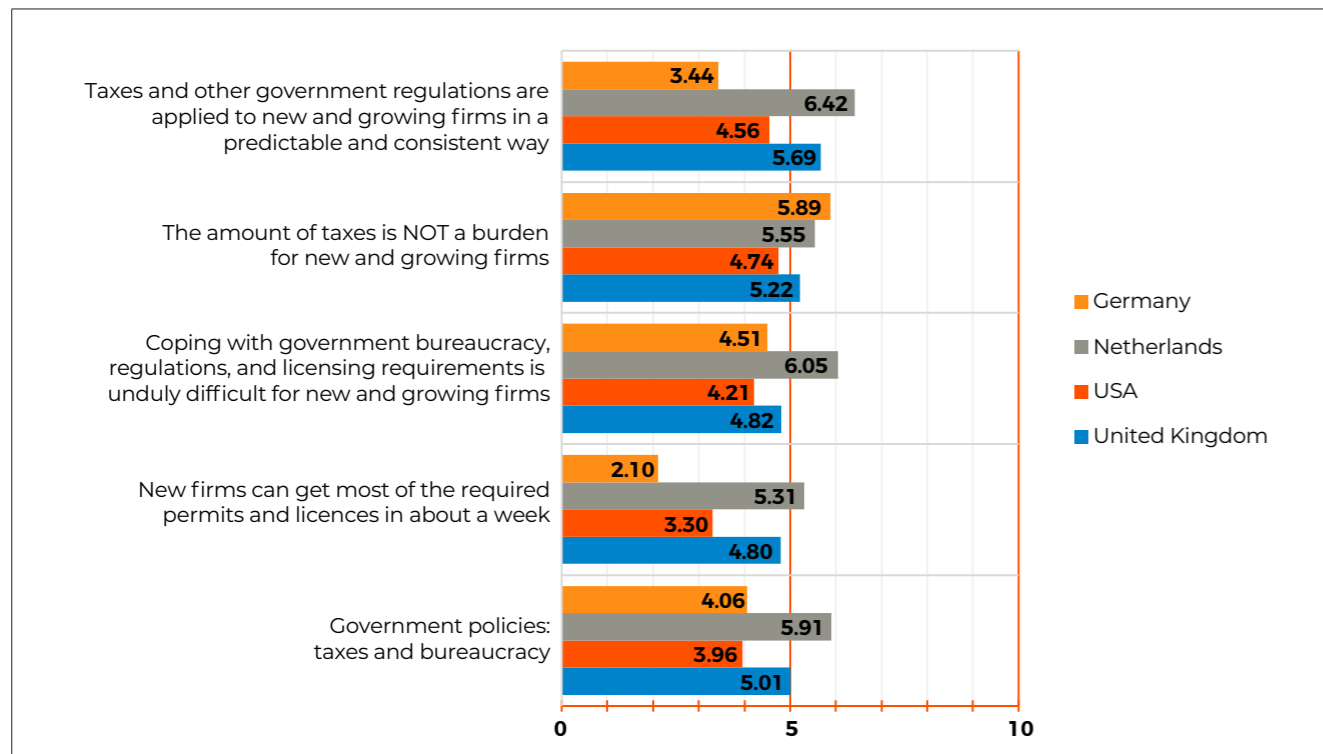


Figure 6.5: Government policies: taxes and bureaucracy in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

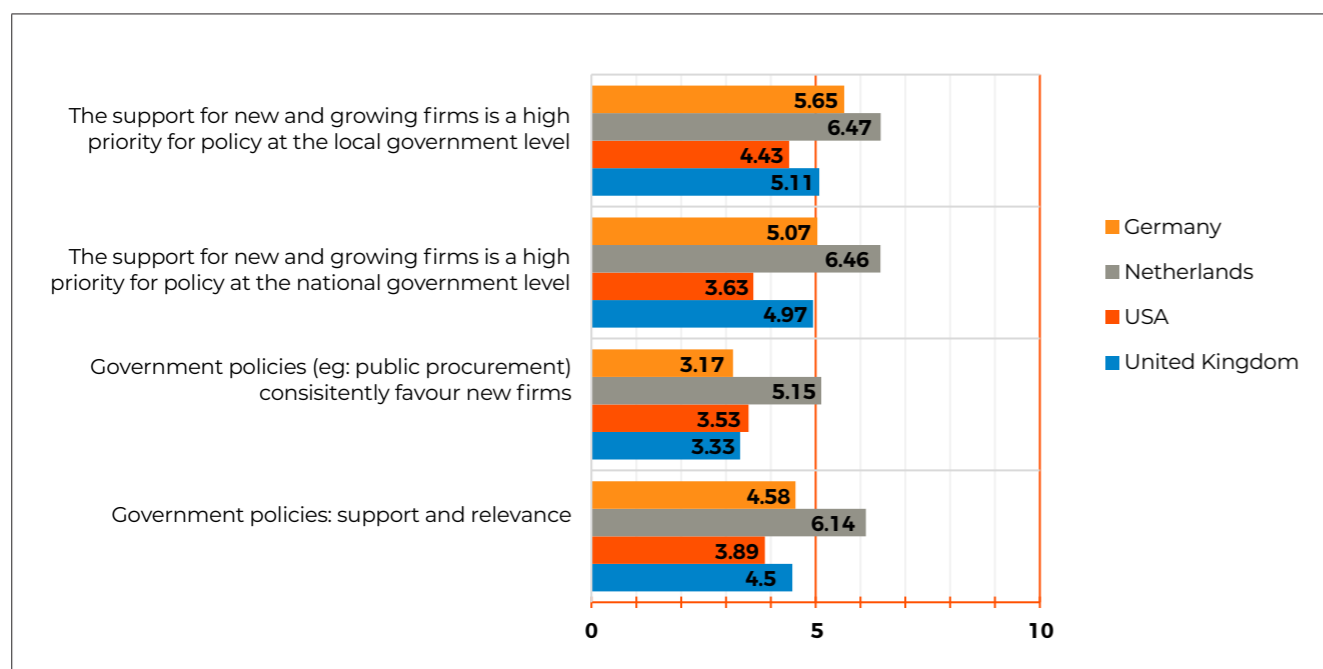


Figure 6.6: Government policies: support and relevance in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

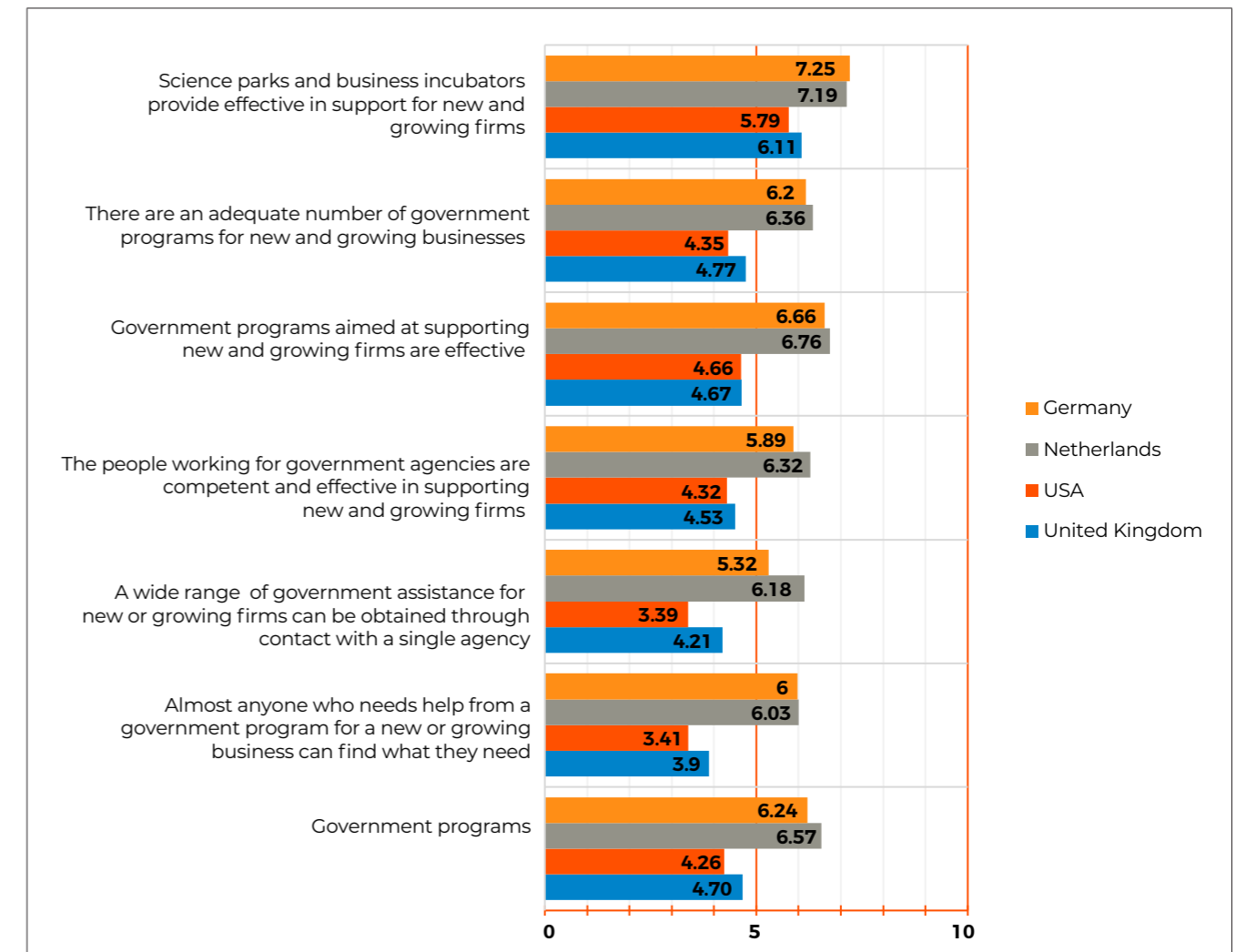


Figure 6.7: Government entrepreneurship programmes in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

As Figure 6.7 shows, while experts evaluate positively the effectiveness of support provided to firms by science parks and incubators (6.11), they do not find the government programmes to support start-ups and growing firms either adequate in numbers or sufficiently effective. The question “almost everyone who needs help from a government programme for a new or growing business can find what they need” has received the lowest average score (3.9/10) among all the components of this EFC. The UK compares favourably with the US in 2020 but underscores the Netherlands across all the dimensions of the government entrepreneurship programmes.

The entrepreneurial education framework condition describes the extent to which entrepreneurial qualities are encouraged and developed at schools, vocational education institutions and universities (Figure 6.8). Entrepreneurial education at school age, especially in the early years of schooling, is increasingly seen as one of the keys to successfully develop entrepreneurial capabilities and encourage innovative entrepreneurship at later stages. For this EFC, in 2020 with a total score of 3.35/10 the UK ranked 16th among the 44 countries that took part in the GEM Global survey. However, low scores for this condition are not uncommon: experts from many high-income countries recognise that there is insufficient attention to entrepreneurial education at primary and secondary school level in their countries. Only six countries have scores higher than 5 and Indonesia and the Netherlands are the leading countries for entrepreneurial education at school level with the scores 6.60 and 6.01 respectively.

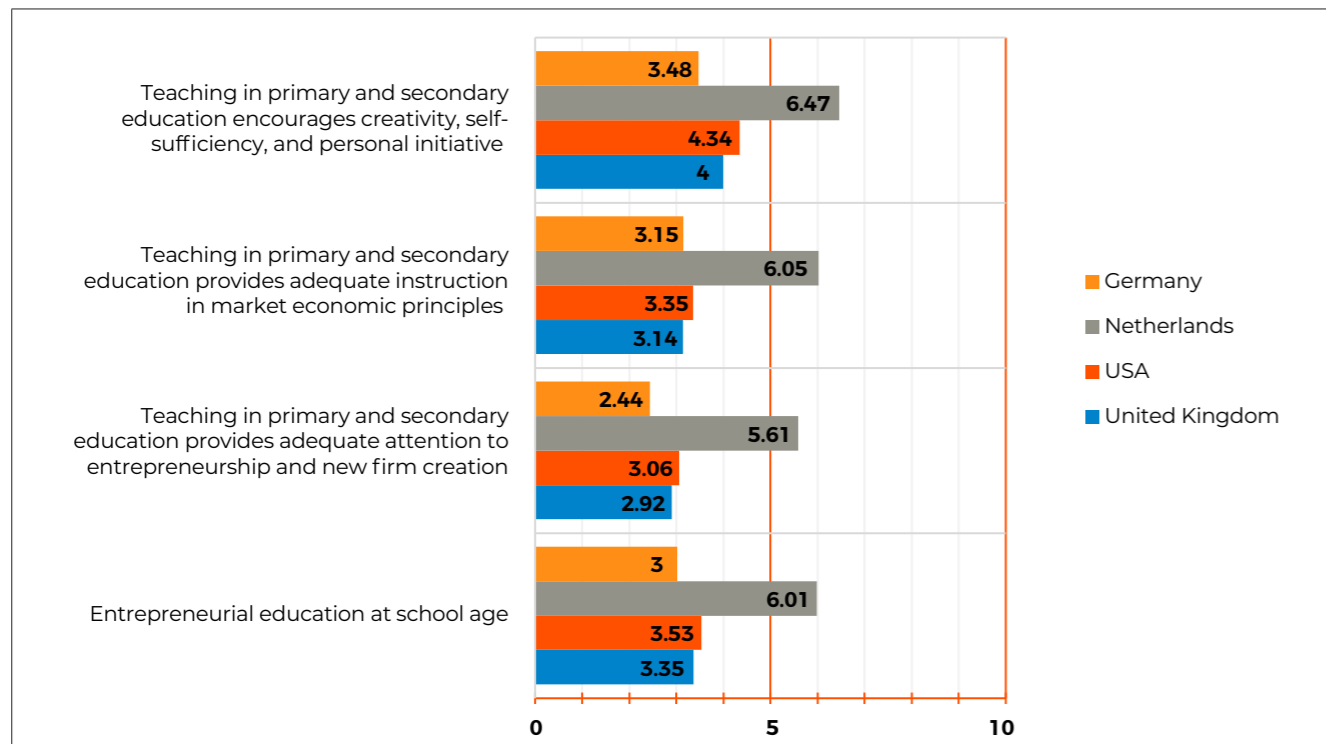


Figure 6.8: Entrepreneurial education at school age in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

Entrepreneurial education at post-school age in the UK received scores below 5/10 for all three components (vocational, professional and continuing education, business and management education, colleges and universities) which is lower than the US and the Netherlands (Figure 6.9). Here, experts are clearly pointing to the need to improve entrepreneurial education at post-school level in the UK.

The R&D transfer condition describes the extent to which scientific research findings can create new commercial opportunities and be transferred from universities and research centres to new and growing firms. With a total score of 4.49 the UK ranked 16th among 44 countries for this EFC. In Figure 6.10, experts particularly underline the concern that new and growing firms are often unable to afford the latest technology (3.28/10) and that smaller firms do not have as good access to technology and research findings as large firms.

The commercial, professional and legal infrastructure framework condition, as shown in Figure 6.11, refers to the availability and affordability for businesses of banking, accounting, legal, consulting services, as well as to the presence of subcontractors and suppliers. While the availability of banking, professional legal and accounting services is evaluated as globally

satisfactory, experts underline the difficulty for new and growing firms to get good subcontractors, suppliers and consultants (4.97/10) and to afford the costs of their services (4.08/10). The UK is behind leading benchmark countries for this EFC with the total score of 5.59 (15th out of 44 countries).

The internal market dynamics framework condition describes the level of change in both consumer and business-to-business markets from year to year. As Figure 6.12 shows, in 2020, experts evaluated both components of the condition just over 5 (ranking 18/44) which represents a considerable improvement compared to 2019. South Korea leads the ranking for this condition (7.94). Among European countries, the highest scores for market dynamics are demonstrated by Poland (6.8) and Sweden (5.58).

In contrast, the UK compares well to other countries in terms market openness: internal market burdens and entry regulations were evaluated at 5.2 by the experts (10th highest score of 44 countries). Figure 6.13 shows that the UK demonstrates higher scores for anti-trust legislation and market entry fairness compared to the US. However, the score for market entry cost dropped below the 5/10 threshold in 2020.

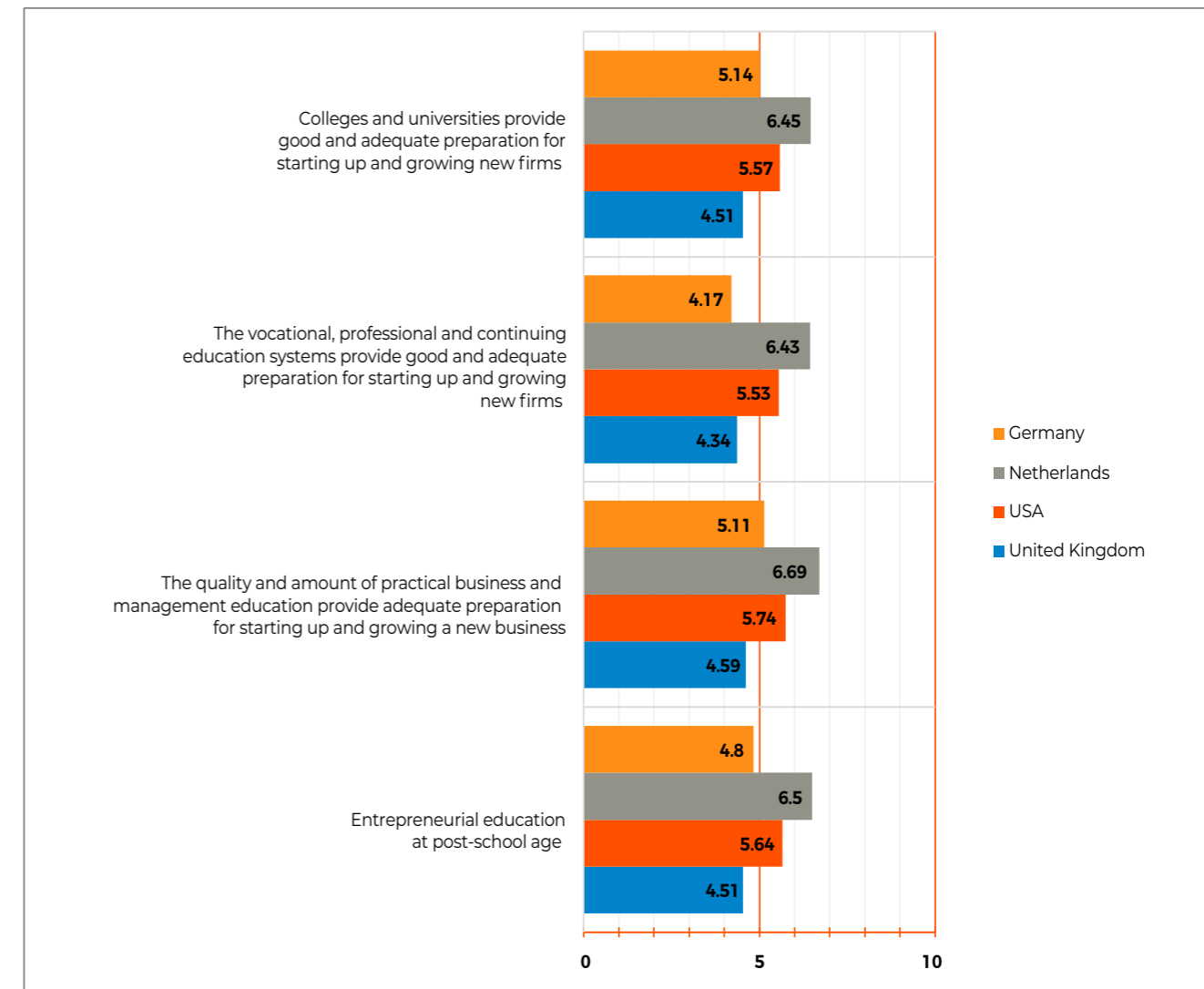


Figure 6.9: Entrepreneurial education at post-school age in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

The physical infrastructure framework condition describes the availability and the cost of basic utilities, transport and communication networks to new and growing businesses. While experts evaluated the access to physical infrastructure for businesses as globally satisfactory and this EFC had the highest score (6.31) among all twelve pillars, it put the UK only on 28th place out of 44 countries which participated in NES in 2020.

Figure 6.14 shows that benchmark countries often showed higher scores for each of the dimensions of this EFC. Particular attention should be taken to make physical infrastructure (roads, utilities, communications, and water disposal) more supportive to business development and growth.

Cultural and social norms play an important role in encouraging and supporting entrepreneurship and vary a lot across countries (Figure 6.15). Unsurprisingly, the US is the leading country for this framework condition with a score of 7.49/10. The UK with the overall score of 5.67 comes in at 14th position among 44 countries.

Experts evaluated very positively the extent to which the national culture supports individual success (6.1) and encourages innovativeness (5.92), emphasizes individual as opposed to collective responsibility (5.82), self-efficacy and personal initiative (5.74). The extent to which the national culture in the UK encourages entrepreneurial risk-taking received the lowest score compared to other components (4.79).

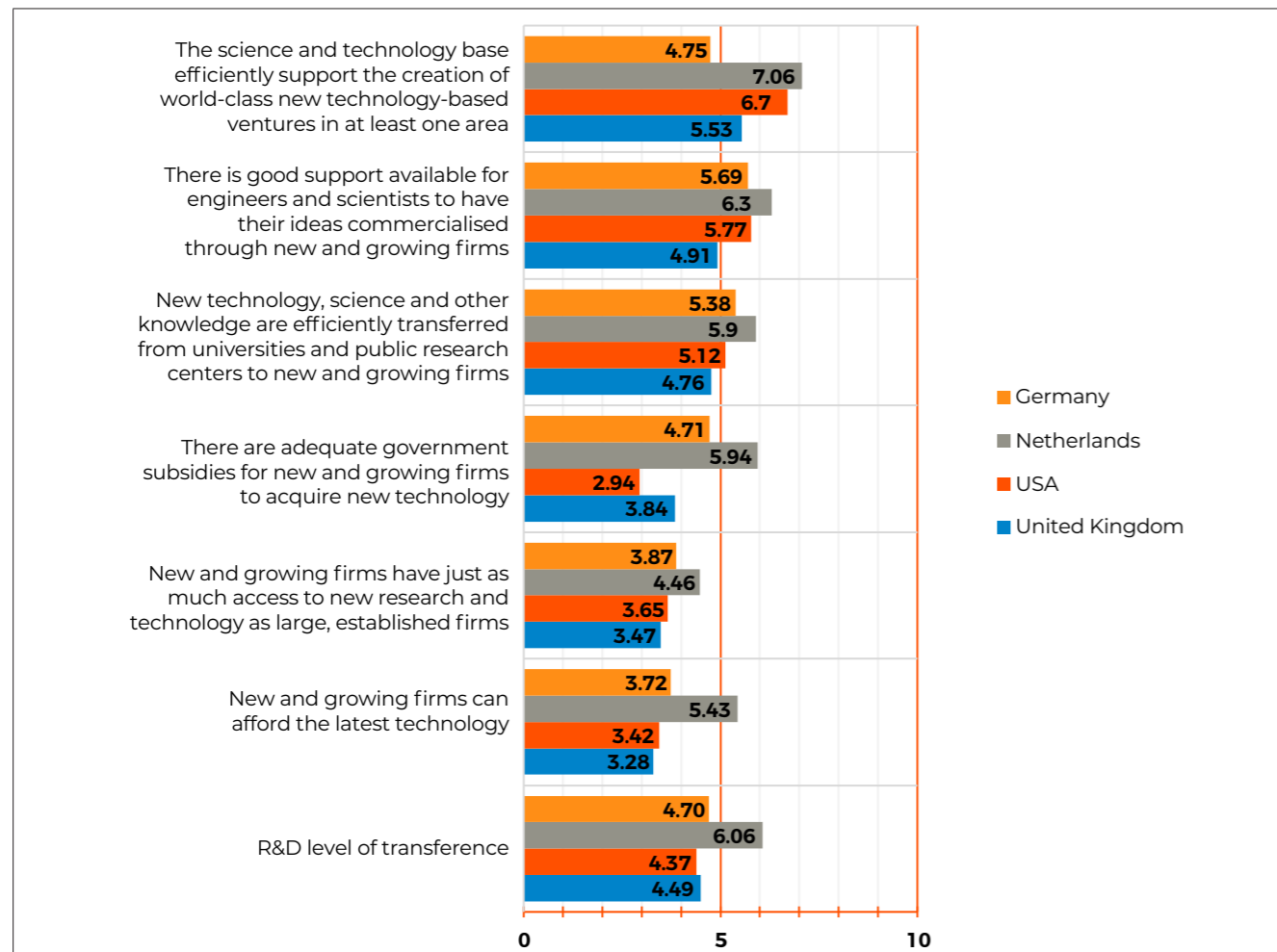


Figure 6.10: R&D transfer in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

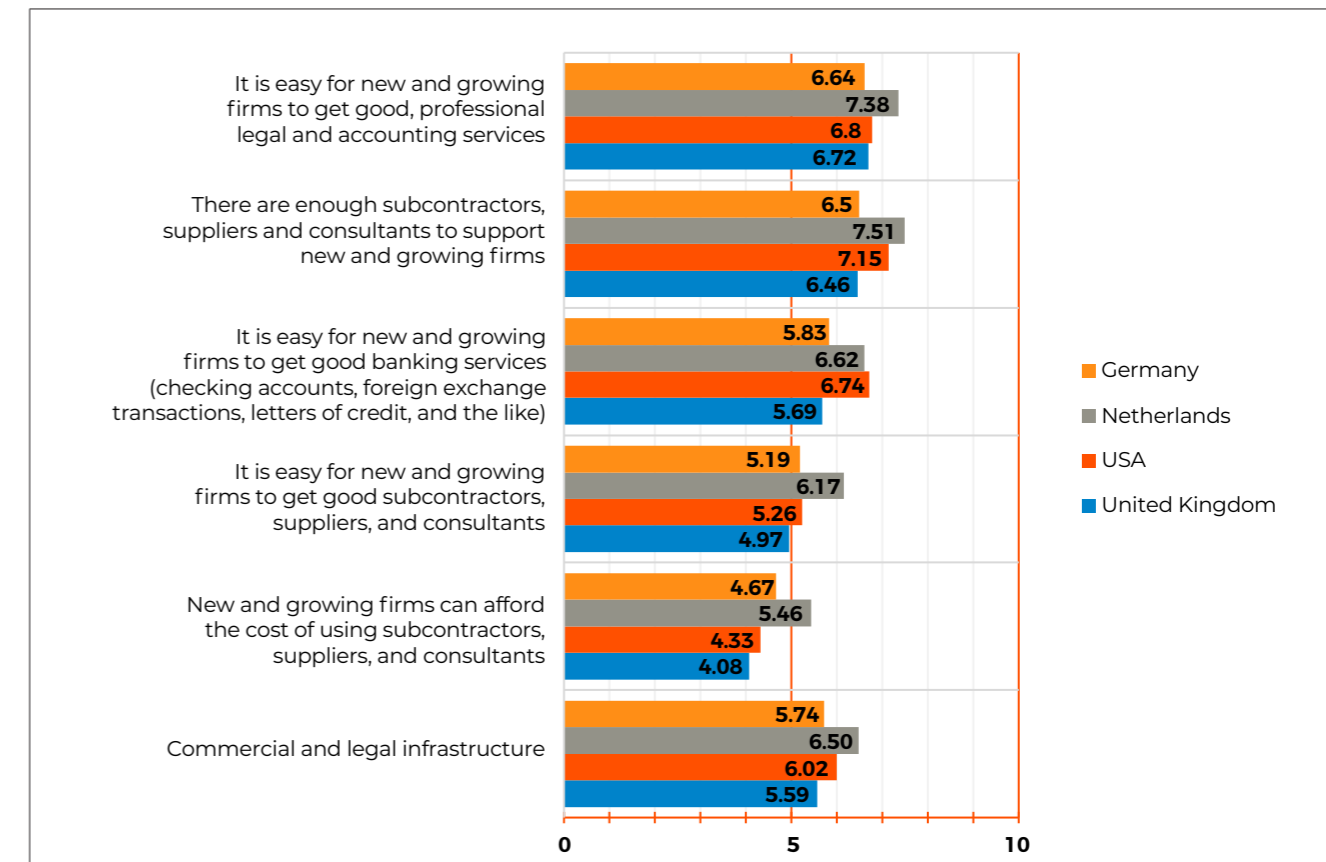


Figure 6.11: Commercial, professional and legal infrastructure in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

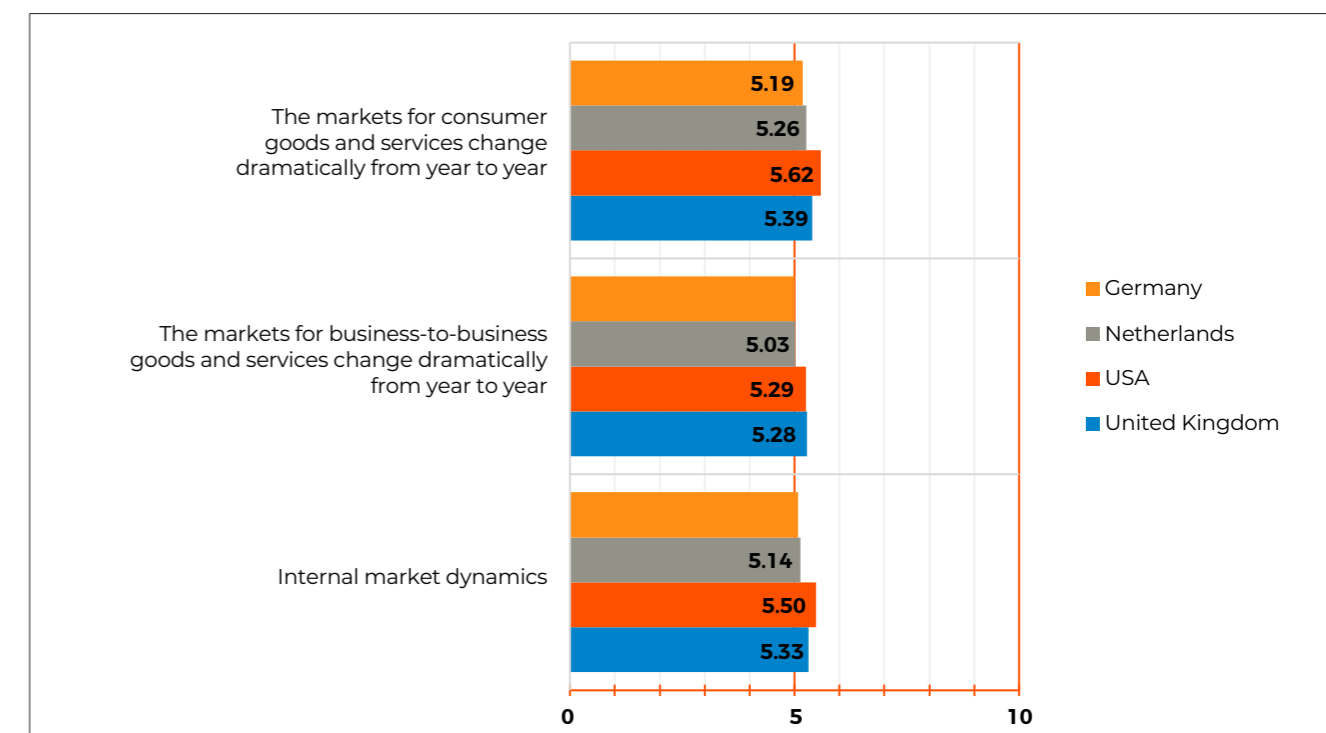


Figure 6.12: Internal market dynamics in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

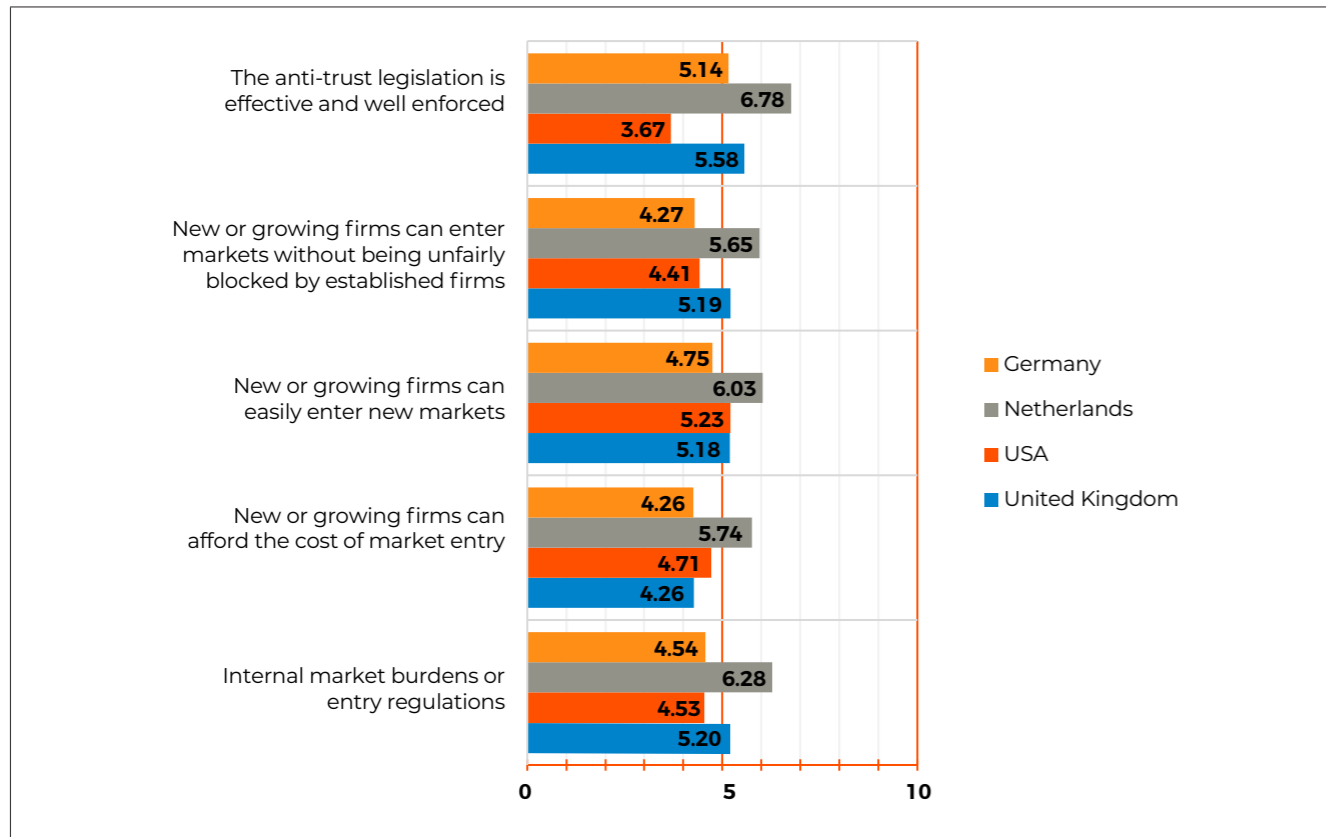


Figure 6.13: Internal markets burdens or entry regulations in the UK and benchmark countries in 2020
 (Source: GEM UK NES 2020, GEM Global NES 2020)

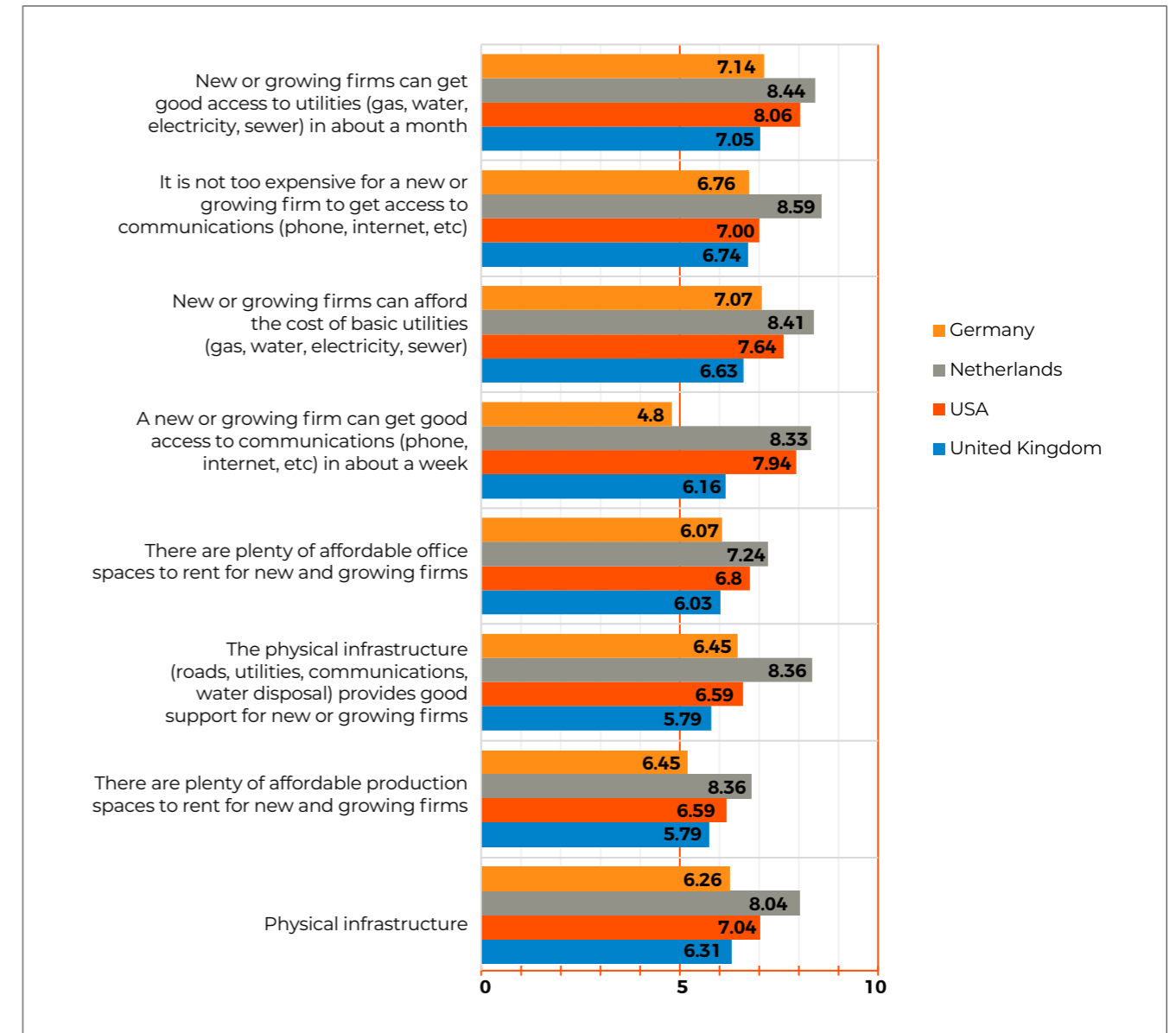


Figure 6.14: Physical infrastructure in the UK and benchmark countries in 2020
 (Source: GEM UK NES 2020, GEM Global NES 2020)

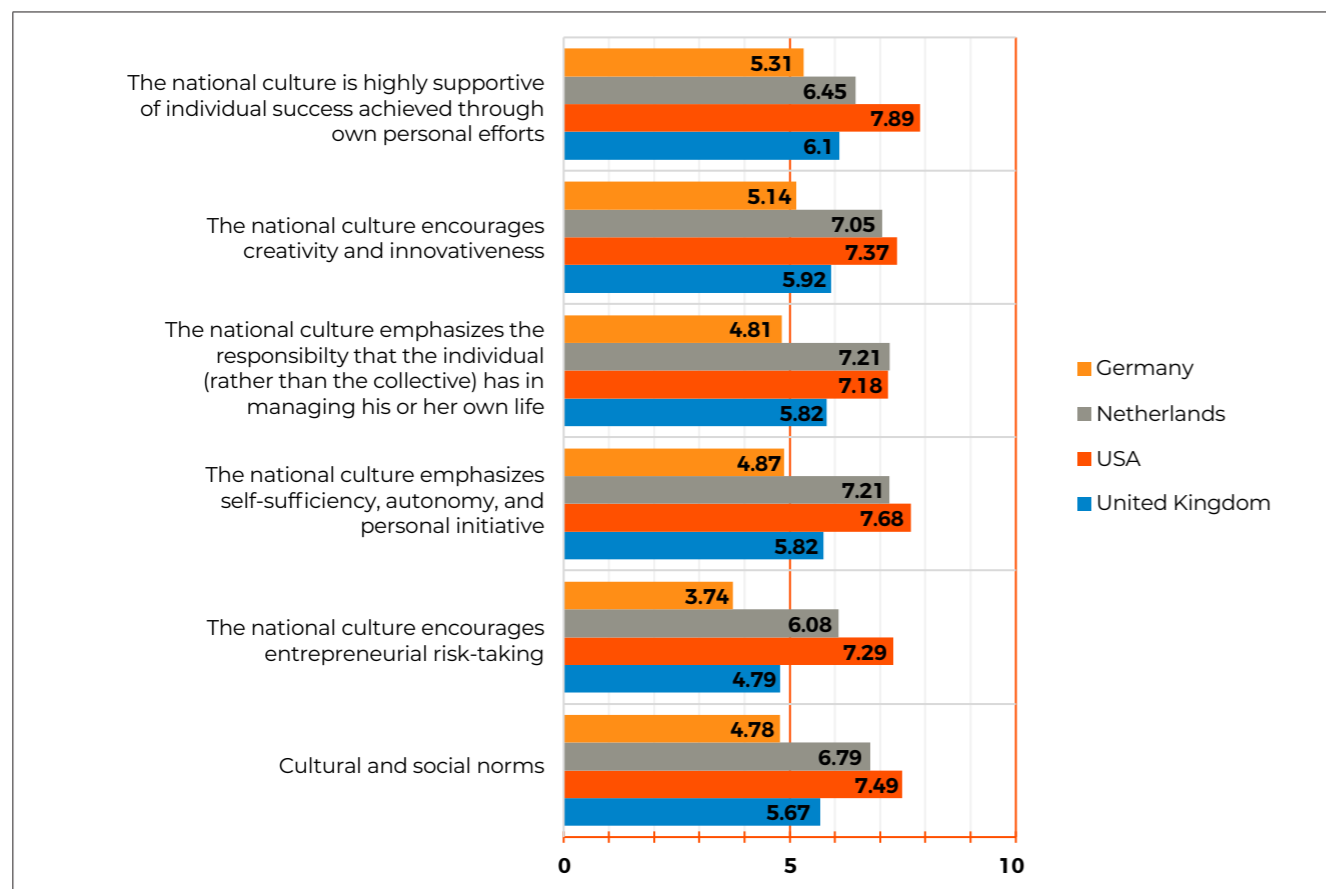


Figure 6.15: Cultural and social norms in the UK and benchmark countries in 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

6.4. OBSTACLES TO ENTREPRENEURSHIP

To better understand driving forces and barriers to entrepreneurship in the UK, experts were asked to state areas that, in their view, are constraining or, on the contrary, are fostering entrepreneurial activity. They were also asked to provide recommendations to improve the entrepreneurial context in the UK.

The analysis of these responses shows that access to finance remains one of the major obstacles to entrepreneurial activity in the UK: 58% of experts in 2020 and cite financial support to entrepreneurship as a constraint. This increased from 47% in 2019 and was at the same level as in 2018. This contrasts with the fact that entrepreneurial finance was evaluated as one of the strongest EFCs in the UK. One explanation of this apparent contradiction lies in regional disparities in terms of access to finance in the UK, with regions outside London and the South East known to have relative difficulties, and in mismatches between supply

and demand. Experts thus emphasize the necessity to improve access to finance for start-ups and early-stage businesses.

Interestingly, economic crisis, the second most cited constraint in 2019, is cited only by 18% of experts in 2020. Rather, it is government programmes that comes at the second place in 2020 with 34% of experts mentioning it as a major concern.

Education and training were the third most cited obstacles to entrepreneurial activity as in 2019 (34% in 2020, 28% in 2019 and 25% in 2018). Experts particularly emphasised the need to improve entrepreneurial education at school level with the focus on innovation and financial literacy. Other often cited constraining factors were capacity for entrepreneurship and government policies and programmes as summarised in Table 6.3.

		2020	2019	2018
1	Financial support for entrepreneurship	58	47	58
2	Government programs	18	42	19
3	Education and training	34	28	25
4	Capacity for entrepreneurship	13	28	22
5	Government policies	21	22	42
6	Physical and services infrastructures	34	22	6
7	Economic Crisis	24	22	11
8	Cultural and social norms	16	14	36
9	Commercial and professional infrastructure	18	11	8
10	Work force features	13	8	8
11	Labour costs, access and regulation	5	8	3
12	Information	3	6	0
13	Internationalization	8	6	0
14	Internal Market openness	0	3	3
15	Perceived population composition	3	3	8
16	Different performing of small, medium and large companies	13	0	6
17	R&D transfer	0	0	0
18	Economic climate	0	0	0
19	Political, institutional and social context	11	0	3
20	Corruption	0	0	0

Table 6.3: Constraints to entrepreneurial activity, % of citations by experts
(Source: GEM UK NES 2018, 2019, 2020)

6.5. IMPACT OF COVID-19 ON EFCs

Finally, in this section the GEM NES survey carried a set of specific questions on the impact of the COVID-19 pandemic on the entrepreneurial framework conditions. From Figure 6.16 experts in the UK, and to a lesser extent Northern Ireland, are more likely to report that new and growing firms have adjusted their business model as a result of the pandemic and have developed opportunities that were not there in 2019. There has also been greater co-operation between firms in the UK and Northern Ireland, and particularly on social and global challenges facing many countries.

Turning to the response of governments to the pandemic it is not surprising given the Trump administrations well-publicised response to the crisis to see the USA rated rather differently by the GEM experts (Figure 6.17). On all metrics, the USA scores significantly lower than the UK and Northern Ireland, which are almost identical (again hardly surprising given the UK Government sets the overall response with very little deviations permitted for the Home Nations). In the case of The Netherlands, the Government's response is rated highly by all their experts and aligns with the overall positive assessment of their EFCs in the first place and indeed the high level of early-stage entrepreneurial activity – more than 4 percentage points higher than in the UK.

The lower rating of the UK compared to The Netherlands may well be due to the fact that around three million early-stage or part-time entrepreneurs, freelancers and limited company directors continue to be excluded from the support packages on offer, as recently confirmed by the UK's National Audit Office. While the pandemic has hit all businesses hard, the decision by the UK Government since March 2020 to exclude three million early-stage entrepreneurs and company directors from any financial support has created an arbitrary and unfair distinction that can only harm enterprise. By denying support in this way, especially the newly self-employed, the Chancellor (Rishi Sunak) is in danger of chipping away at the foundations of our enterprise economy. However, it should be noted that the NI Executive introduced an additional set of measures to support the newly self-employed²⁴.

6.6 EXPERT RECOMMENDATIONS

To summarise, the main recommendations of experts consulted in 2020 concerned:

- improved financial support for entrepreneurship (62% of experts citing it as crucial) with particular focus to patient and inclusive funding with a fair distribution to different groups of entrepreneurs, micro-funding and improved and more accessible grant funding, including better information about the latest, improved incentives to increase angel investment;
- improved government programmes, support and advice, both to start-ups and scale-ups; joined-up approach to support programmes through different stages of the business lifecycle;
- enhanced tax benefits for entrepreneurs, such as tax breaks for start-ups and businesses in difficulty (to reduce early exits) and better tax incentives for recruitment, investment in managerial and digital practices and skills;
- improved entrepreneurial education, especially at school age; improved technical education and improved links between educational system and industry;
- improved entrepreneurial eco-system in regions.

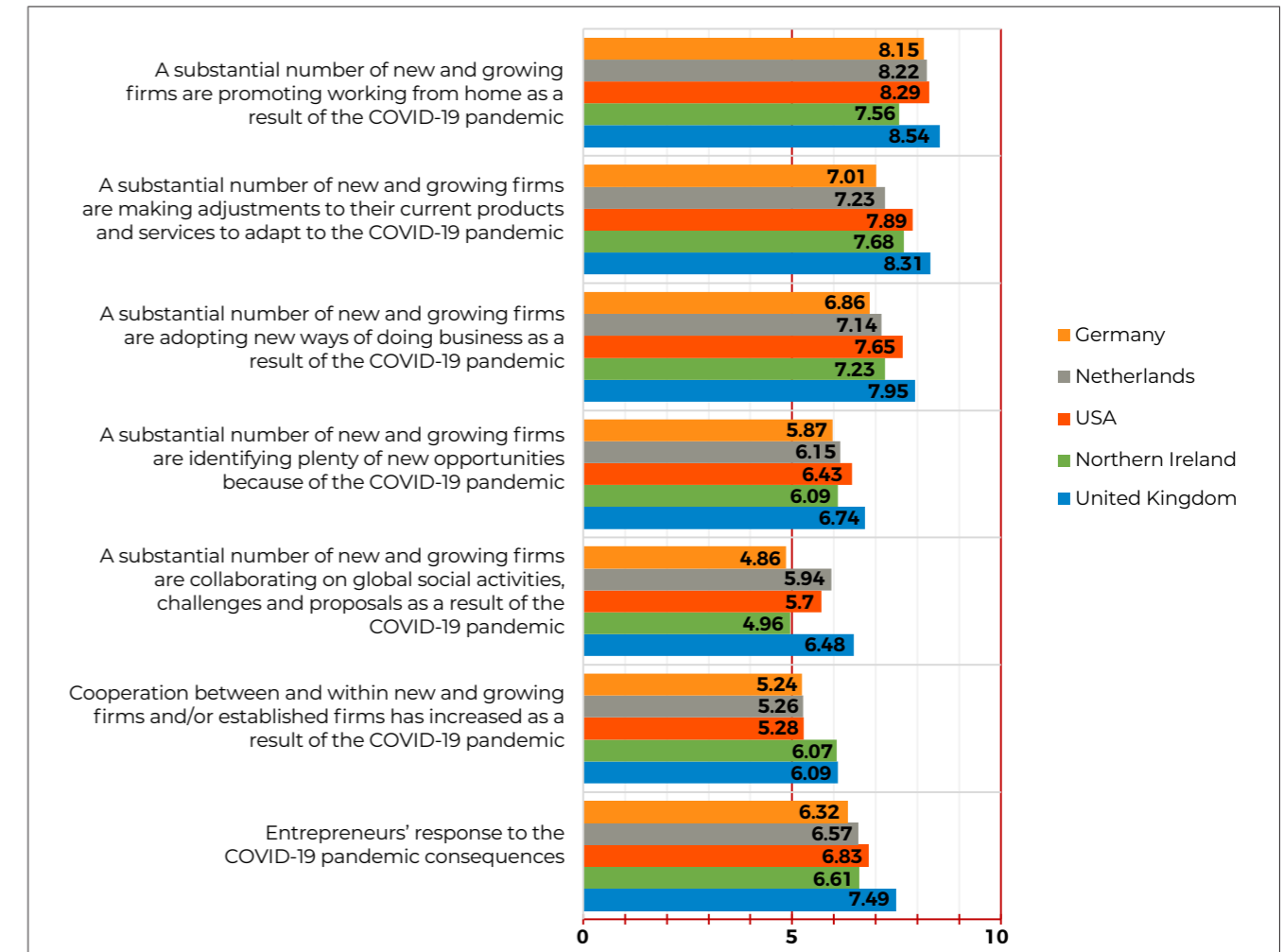


Figure 6.16: Entrepreneurs' response to the COVID-19 consequences, 2020
(Source: GEM UK NES 2020, GEM Global NES 2020)

²⁴ The Minister for the Economy in Northern Ireland has launched the Newly Self-Employed Support Scheme (NSESS), designed to provide support to newly self-employed individuals (sole traders and those in partnerships) who have been adversely impacted by COVID-19.

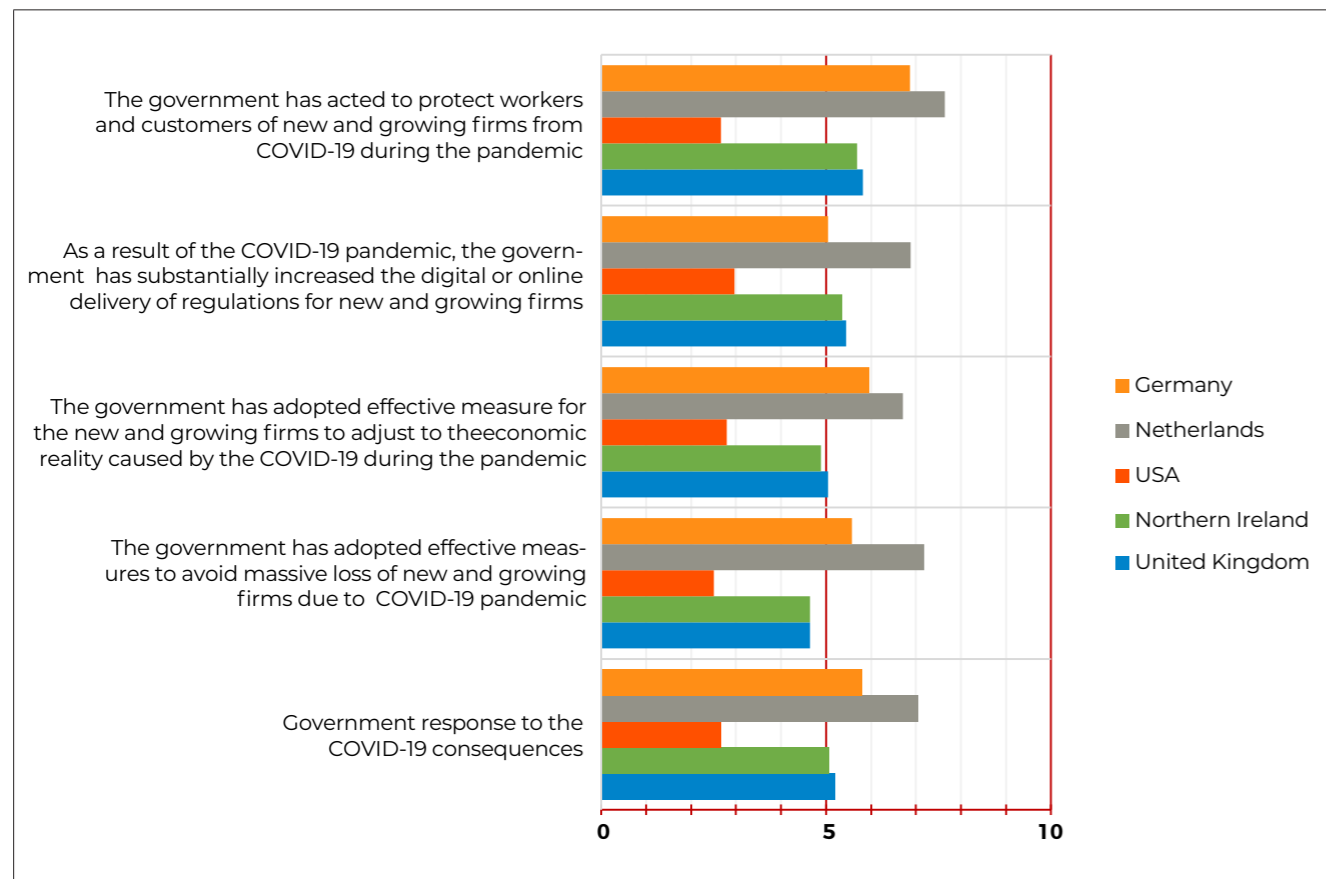
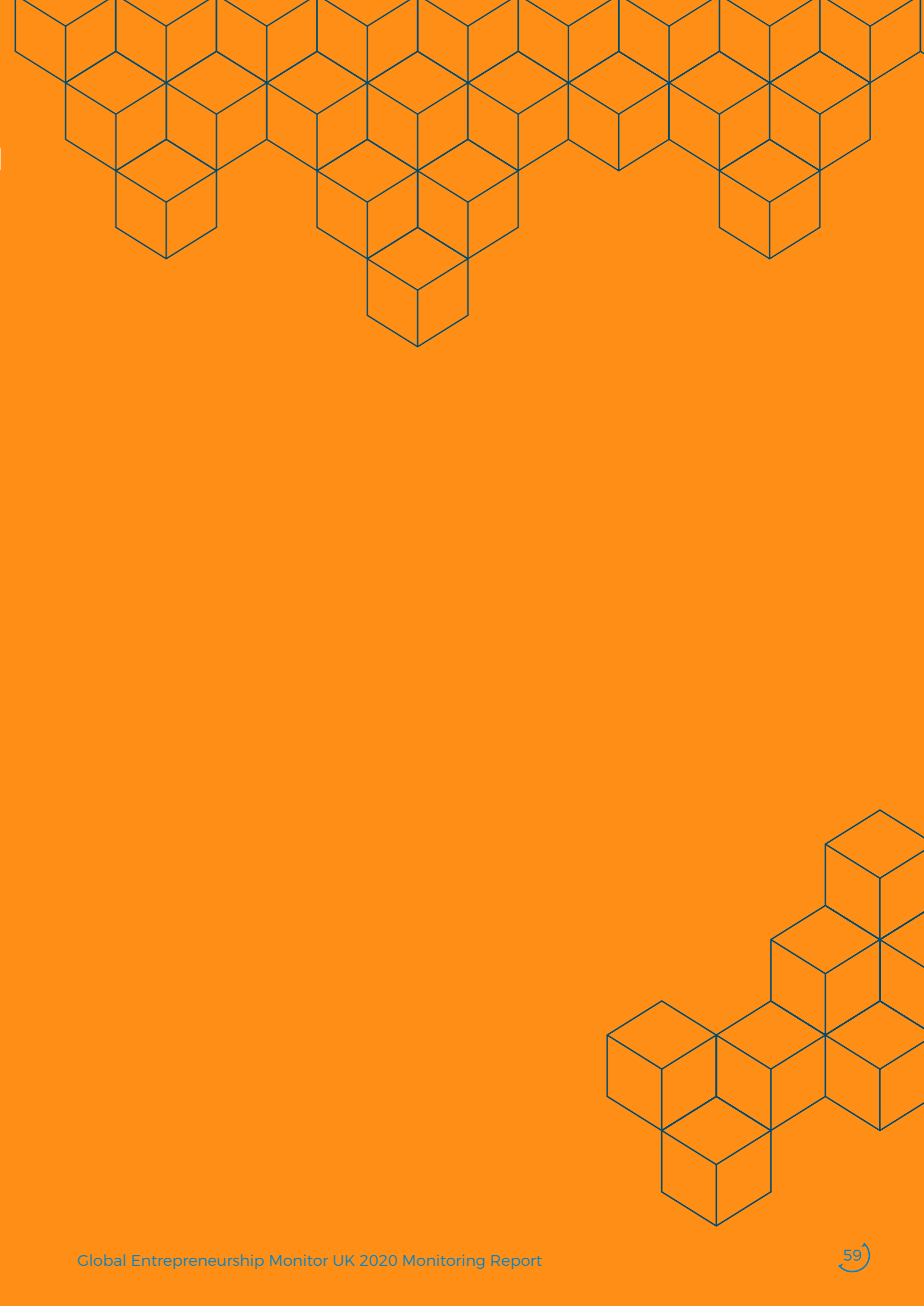


Figure 6.17: Government response to the COVID-19 consequences, 2020
 (Source: GEM UK NES 2020, GEM Global NES 2020)



7. Impact of covid-19 on entrepreneurial activity

Besides the pandemic's impact on framework conditions discussed above, the GEM 2020 study also sought to understand how the Coronavirus pandemic influenced entrepreneurial activity itself. Among the 16.2% of working age adults that indicated that they expected to start a business or become self-employed within three years, almost two thirds (63%) indicated that their expectations were influenced by the pandemic with 37% maintaining that these were unrelated to the pandemic (Figure 7.1).

Within working-age adults already engaged in entrepreneurial activity, the GEM 2020 study further explored the extent to which the coronavirus pandemic was seen to have provided opportunities that their business could pursue. As Figure 7.2 shows, over half of nascent (start-up) entrepreneurs, new business owner-managers and entrepreneurial employees agreed with the idea that the pandemic had provided new plausible opportunities. Notably, only about a third of established business-owners had similar sentiments. This suggests that early-stage entrepreneurs and entrepreneurial employees were potentially more agile to perceive new opportunities afforded by the crisis than established business-owners. The latter could be argued to have been more concerned about upholding their established venture in the face of the pandemic than seeking out new opportunities they could shift their attention to.

Nevertheless, among entrepreneurs that were actively trying to set up a business in 2020, 61% indicated that they had had to delay getting business operational because of the coronavirus pandemic (Figure 7.3). Simultaneously, 62% of all owner-managers (Figure 7.4) and 55% of all entrepreneurial employees (Figure 7.5) agreed with the statement that the coronavirus pandemic had caused their business to stop some of its core activities. Nearly 1 in 5 entrepreneurs (17.6%) also highlighted the pandemic as the most important reason for quitting their business (Figure 7.6).

While disruption to business activity is well documented during prior crisis periods, the above findings shed further light on the scale of the fallout in terms of new opportunities and their potential for timely operationalisation in backdrop of nationwide lockdowns. Indeed, our analysis suggests that a majority of working-age adults with entrepreneurial intentions formed in 2020 for enactment later, as well as those actually undertaking entrepreneurial activity in 2020 saw the coronavirus pandemic as something that provided new opportunities. This entrepreneurial optimism must however contend with the fact that a majority of start-up entrepreneurs are facing significant delays in operationalising their new businesses and that established entrepreneurial activity is experiencing stoppages.

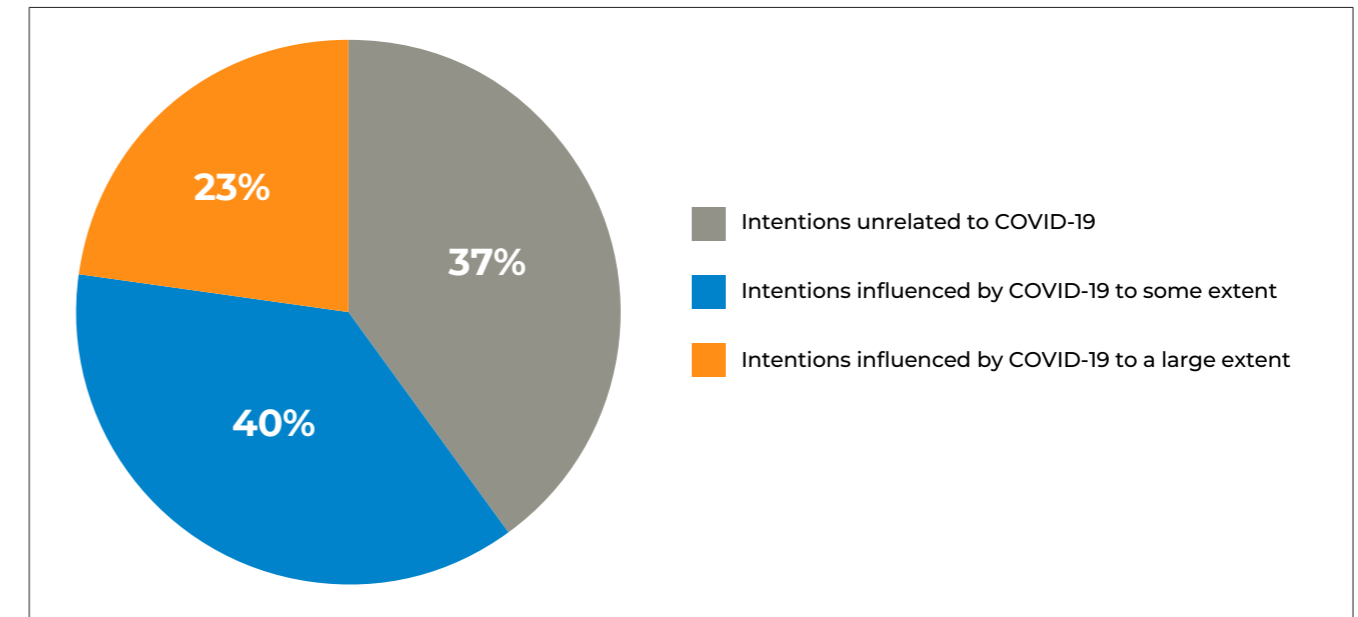


Figure 7.1: Impact of COVID-19 on entrepreneurial intentions, 2020 (Source: GEM UK APS 2020)

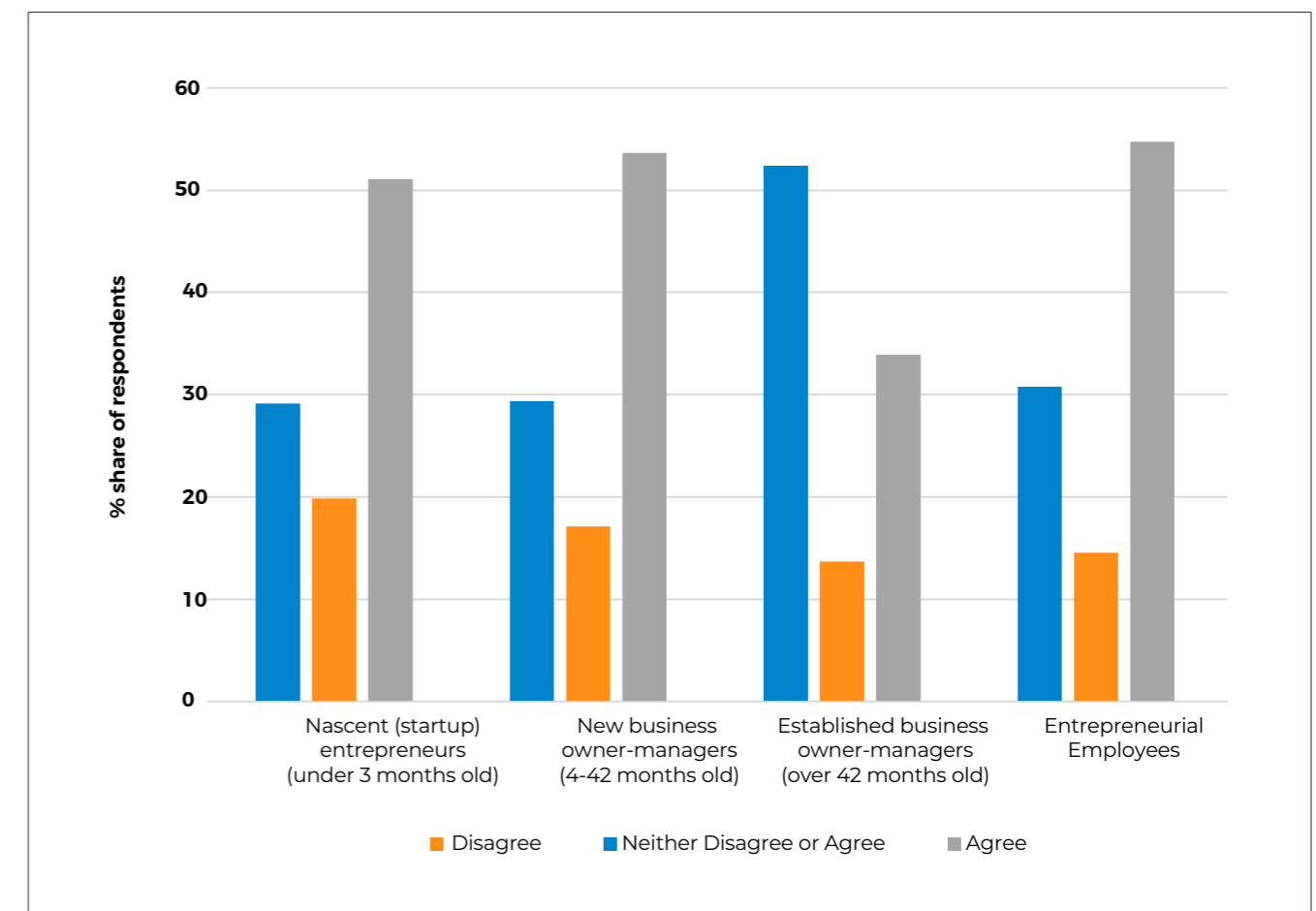


Figure 7.2: Incidence of perception of plausible new opportunities due to the coronavirus pandemic (Source: GEM UK APS 2020)

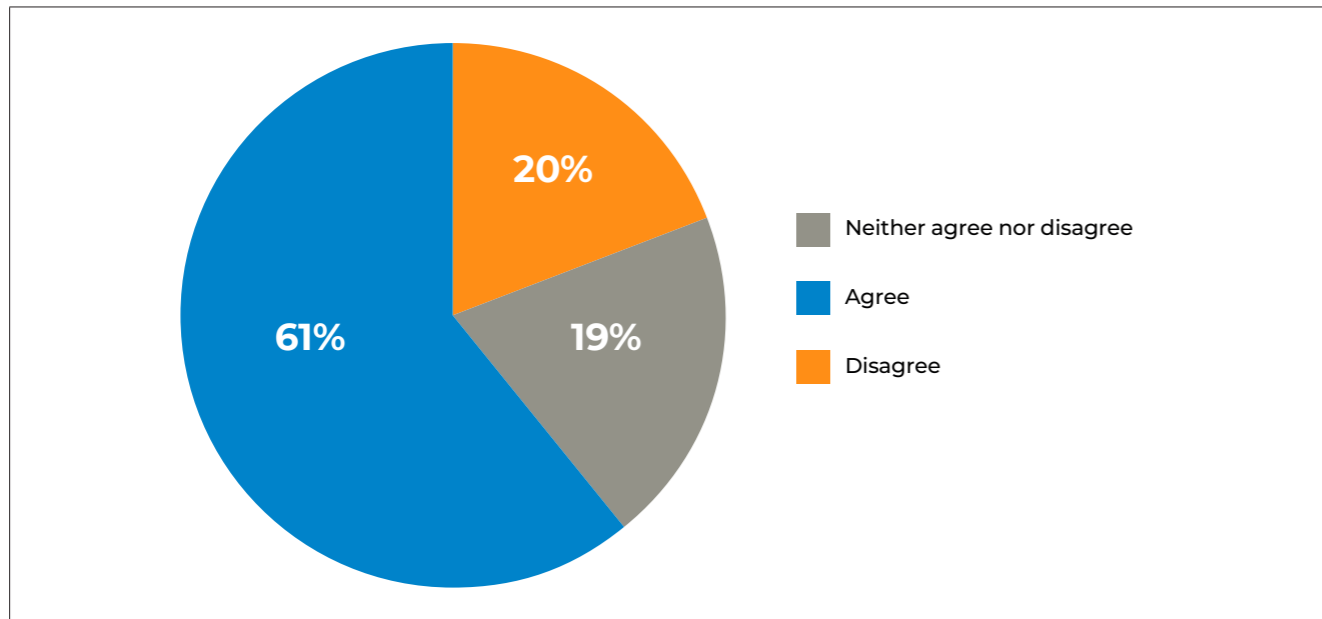


Figure 7.3: Incidence of delays in getting new start-ups operational due to the coronavirus pandemic (Source: GEM UK APS 2020)

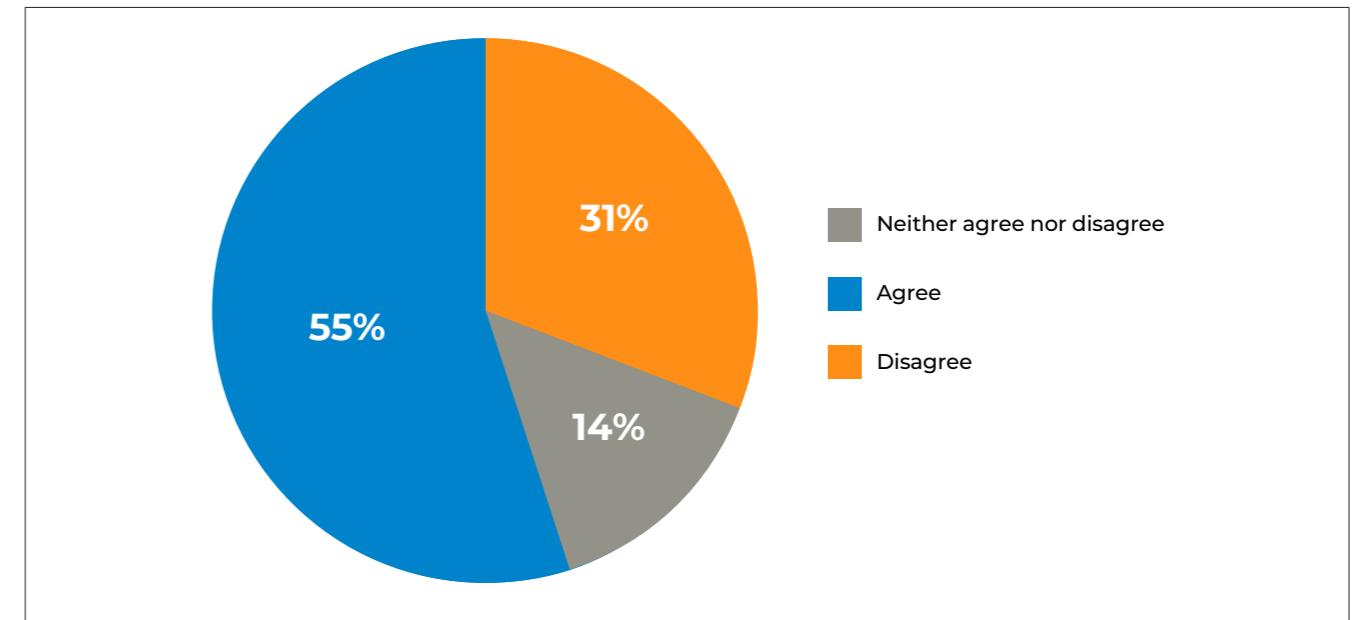


Figure 7.5: Incidence of stoppage of core activities due to the coronavirus pandemic as reported by entrepreneurial employees (Source: GEM UK APS 2020)

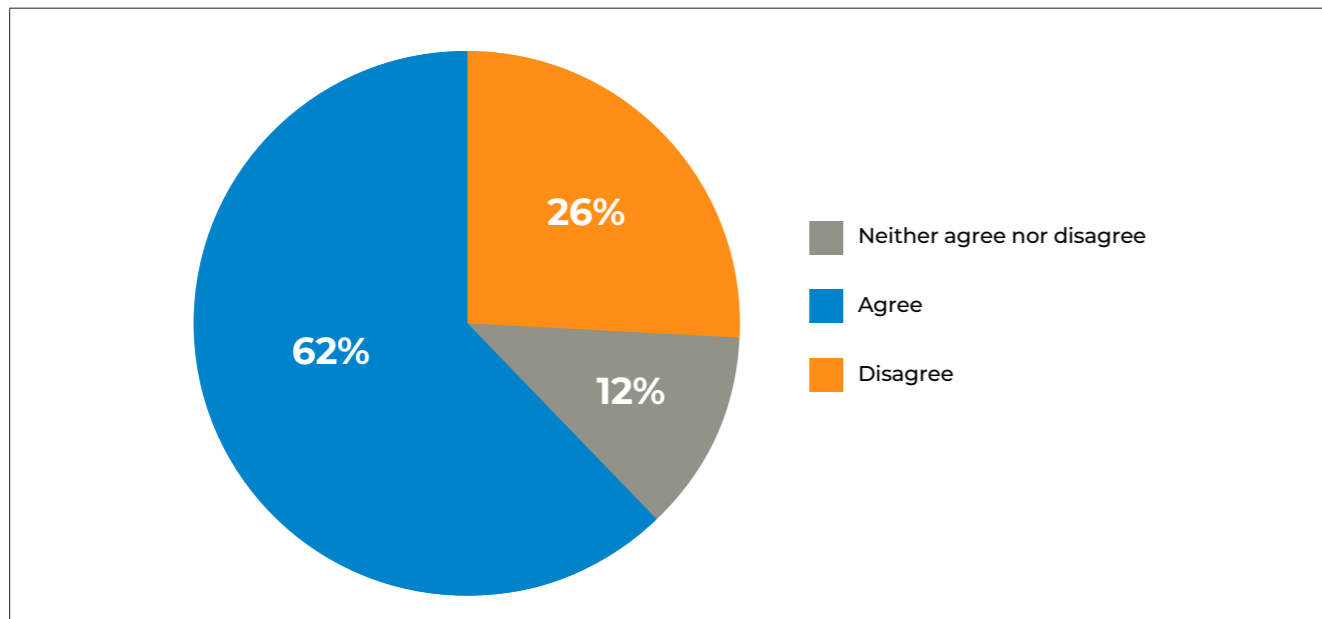


Figure 7.4: Incidence of stoppage of core activities due to the coronavirus pandemic as reported by owner-managers (Source: GEM UK APS 2020)

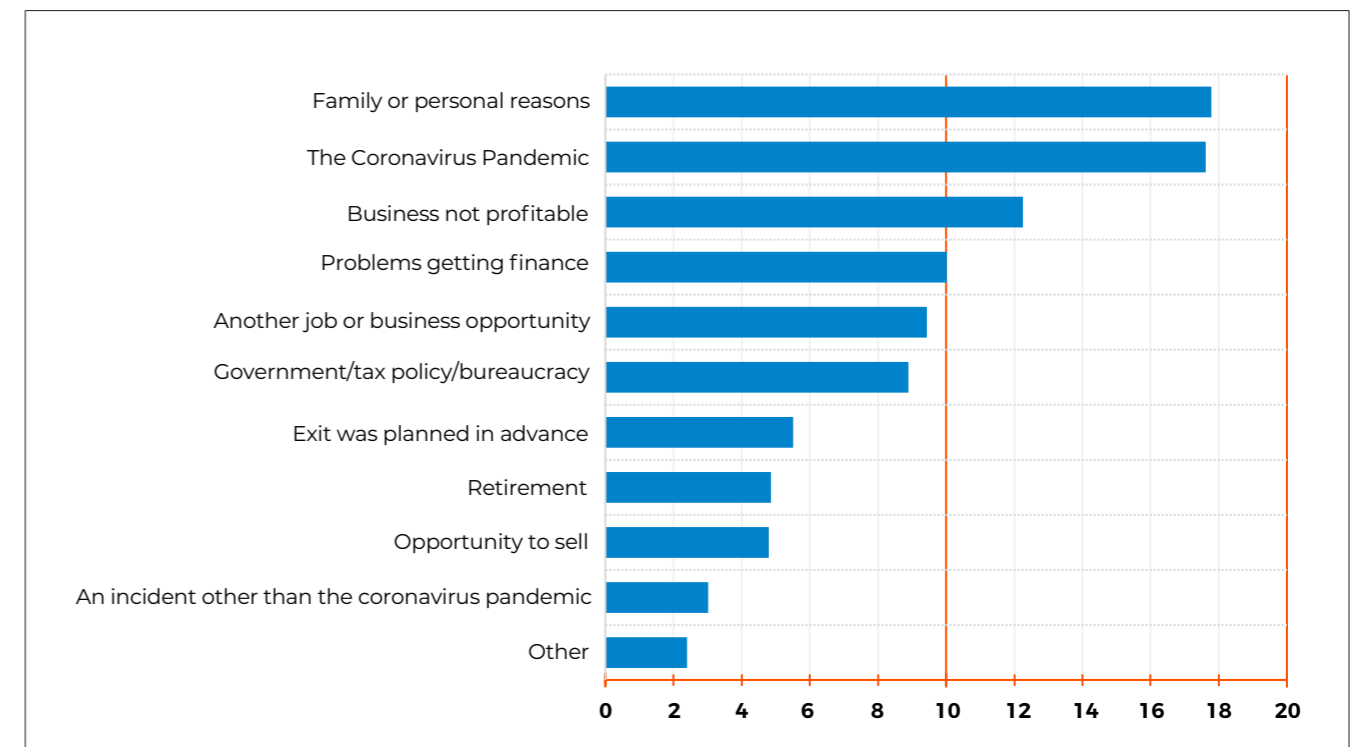


Figure 7.6: Most important reason for quitting the business (Source: GEM UK APS 2020)

8 Conclusion

As a result of the COVID-19 pandemic and the obvious disruptive impact on the lives of all of us and the huge impact on the economy it was decided that the GEM UK survey, in line with all GEM Global participating countries, should be pushed back until Q4 of 2020 rather than June through August. The UK team felt that this was preferable to not undertaking the survey at all as the pandemic raised many important questions about the ability of entrepreneurs, and indeed the wider population, to navigate their way through the crisis as the economy was effectively closed down and household incomes were under great stress for the majority of the population.

The results from the GEM UK Adult Population Survey (APS) and National Expert Survey (NES) for 2020 provided a unique opportunity to lift the lid on a range of issues which lie at the heart of the entrepreneurial process in the midst of the crisis. As it turned out Q4 in the UK witnessed another second and third waves of the COVID-19 virus which led to two further lockdowns. The specific COVID-19 questions in the surveys need to be understood against that context.

Without doubt 2020 was a year of crisis for start-up activity as the GEM headline metric (TEA rate - nascent and new business owners) fell significantly from 10% to 7.5% since 2019 and we saw similar sharp reductions in the US and Germany. In the UK it was the collapse of the nascent entrepreneur rate, that is, those individuals in the first 3 months of starting to set up their new venture that drove the overall fall in the TEA rate. Around 1 in 7 UK early-stage entrepreneurs have high job expectations, a statistically significant decrease from 2019 where 1 in 4 had high job expectations. The business closure rate was statistically significantly higher in 2020 (3.6%) than in 2019 (2.1%). However, to counter this the intention to start a business statistically significantly increased in 2020 (16.2%) compared to 2019 (11%) and this is an important finding as we know from previous crisis periods (i.e., the GFC) that new small firms are crucial to the recovery process.

We also observed that those ethnic-minority communities that have borne the brunt of the pandemic in terms of infection, hospitalisation and sadly deaths demonstrated their resilience by maintaining their previous levels of early-stage entrepreneurial activity (TEA rate) which were significantly higher than for the

non-ethnic minority population. Similarly, the analysis also showed that, while there was a collapse in male early-stage entrepreneurial activity, female TEA rates were similar to those observed in the pre-pandemic year of 2019. This underlines perhaps their greater resilience and/or determination as well as their ability to respond more effectively to the needs of their local communities with new business activities in the time of crisis.

We also know that self-employment, which is included in the TEA rate, was also significantly reduced²⁵ with a decline of 500,000 recorded in Q2 of 2020. After consecutive years of rising self-employment the UK has reversed back four years to 2016 levels. The dramatic reduction in self-employment is due to more people leaving and fewer people entering self-employment in April-June 2020 compared to previous years. The ONS monitoring of entries and exits to the Inter-Departmental Business Register (IDBR), notably excluding the self-employment, report sharp falls in entry early in 2020 but overall the year ended at similar levels to that in 2019.

Yet, at the same time 2020 saw record numbers of start-ups registering at Companies House (772k) which was an increase of 13% since 2019. However, many of these new registrations, as in previous years, are not active businesses, can be existing businesses registering to become a limited company and many did so to seek to become eligible for COVID-19 emergency government support, EU-based businesses registering in the UK for VAT reasons as a result of Brexit and finally, many overseas online businesses also registering for VAT reasons as a result of the increase in e-commerce activity as lockdowns drove greater levels of online shopping activity.

Attitudes of non-entrepreneurial individuals to entrepreneurship slightly declined in 2020 with the share of those who felt they had the skills, knowledge and experience to start a business (44.3%) statistically significantly lower than the share in 2019 (47.5%). The start-up opportunity perception was also statistically significantly lower (32%) than in 2019 (39.1%). Finally, the proportion of those who felt that fear of failure would prevent them starting the business, on the contrary, was statistically significantly higher (53%) than in 2019 (46%).

When asked specifically about the COVID-19 pandemic around 1 in 2 of those involved in early-stage entrepreneurship agree that there are new opportunities because of the pandemic (29.6% somewhat agree and 22.1% strongly agree). This is higher than among established business owner-managers: only 1 in 3 would agree with this statement and is indicative of the vitality new entrepreneurs bring to the economy. Nevertheless, just under 2 in 3 (60.5%) of those engaged in early-stage start-up activity think that the coronavirus pandemic has led to a delay in getting the business operational and equally 3 in 4 (76.8%) think that entrepreneurial intention was somewhat impacted by the pandemic. This points to a potential large pool of untapped entrepreneurial endeavour which can be harnessed as the recovery strengthens throughout 2021.

The Entrepreneurial Framework Conditions (EFC) that entrepreneurs face as they develop their businesses were examined using the GEM UK National Expert Survey (NES). In 2020 the experts were asked to evaluate entrepreneurs' and Government response to the COVID-19 consequences. The entrepreneurial response (referring to whether entrepreneurs are introducing new ways of doing business, promoting working from home, adjusting their products or services, identifying new opportunities, or are increasing cooperation with other businesses, including on global projects) was rated highly 7.5/10 (rank 5/44). The government response to the consequences of the pandemic: whether governments are effectively helping businesses to adjust, are helping to avoid the loss of firms, are effectively protecting workers and customers, and whether governments are increasing digital delivery of regulations was rated 5.2/10 (rank 20/44).

So while the experts see entrepreneurs rising to the task during the crisis in the way only entrepreneurs can there were aspects of the government response which many felt could have been better. In particular, while all acknowledged the speed and scale of the introduction of the emergency business support packages since March 2020, there was some concern over the reach and the fact that many of the newly registered self-employed, for example, were unable to access any financial support as the economy went into shutdown. This included many directors, self-employed, freelancers and contractors who are crucial

to the success of the economy as they provide many irreplaceable services to small and large businesses throughout the UK.

Overall, this report has provided a range of indicators on the entrepreneurial attitudes, activity and aspirations in the midst of the public health emergency which led to the government(s) effectively closing down the vast majority of economic activity across the whole of the United Kingdom. Obviously, the effects of the ending of the transition period associated with Brexit are also intertwined with the pandemic, but the analysis has shown that the entrepreneurial foundations of the economy and society are still strong and these will be crucial for the recovery after the pandemic and in dealing with the on-going economic fallout from Brexit.

²⁵ Changes in UK Self-employment in April-June 2020 - Darja Reuschke, Andrew Henley, Elizabeth Daniel and Victoria Price

APPENDIX 1: GEM UK Sampling and weighting methodology

GEM UK is one of the largest, longest-running national studies of entrepreneurial activity in the world, with over 250,000 individuals interviewed since monitoring began with a sample of 1,000 adults in 1998. In 2020, 9,453 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, the West Midlands Regional Economic Development Institute (WM REDI) at the University of Birmingham and Aston University, 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 9,453 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: 402; South East: 630; East of England: 455; London: 633; West Midlands: 1,290; East Midlands: 342; Yorkshire & Humberside: 390; North East: 203; North West: 506; Wales: 1,540; Scotland: 2,019; Northern Ireland: 1,043.

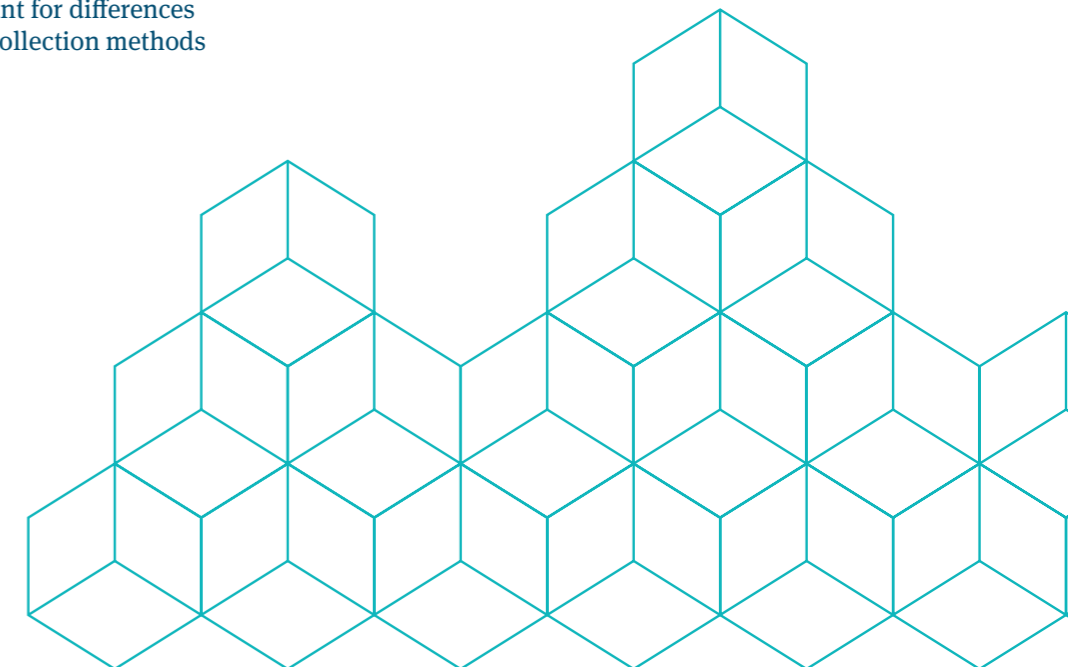
According to Ofcom, households in the UK which have access to a mobile phone but not to a fixed telephone landline increased from 14% in Q1 of 2016 to 22% in Q1 of 2020²⁶. In 2020, 20% of the unweighted GEM sample across the UK consisted of mobile-only households. At the same time, more people are using internet and spending increasing amount of time online each day. According to the World Bank, in 2019 the share of population using internet in the UK has reached 93%²⁷.

According to Ofcom, the average time spent online each day by adults aged 18+ was 4 hours 2 minutes in April 2020, this increased by 37 minutes compared to January 2020. Internet take-up varies by age group with 100% of aged 25-34 going online²⁸. Moreover, younger age groups, and specifically young males, are less likely to respond by phone as experience of GEM UK APS of recent years clearly demonstrated.

In this changing context, the question of the choice of appropriate method for data collection to assure representativeness of the sample has never been so acute. Wherever the truth lies, it is clear that fixed line surveys are no more fully representative of UK households, that the distribution of mobile-only households and online panels is different to that of fixed line households, and that these differences are not fixed but change over time. There are advantages and disadvantages in each before mentioned method of data collection. Online panels are representative in terms of geo-demographics, but there are some questions about the attitudinal representativeness of people who opted into online panels. On the other hand, when answering online, people have more time to re-read questions before responding – this is an important advantage considering the length and complexity of GEM APS survey. In 2020, given the disruptions that COVID-19 caused, the GEM UK team felt that it was time to introduce a blended approach to data collection. Hence, GEM UK 2020 APS marks a methodological step change: for the first year, the data was collected via random digit dialling (RDD) of landlines, mobile phone numbers and BMG's online panel network.

Every attempt is made to ensure that the results reported are as reliable and robust as possible. To do this, five 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.
- Moreover, the final dataset was calibrated by using separate weights to account for differences between CATI and online data collection methods (details available on request).



²⁶ <https://www.statista.com/statistics/386778/share-of-calls-enabled-landlines-in-uk-hoseholds/> accessed 21/06/21

²⁷ <https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=GB/> accessed 21/06/21

²⁸ https://www.ofcom.gov.uk/_data/assets/pdf_file/0027/196407/online-nation-2020-report.pdf / accessed 21/06/21



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