

# State of Small Business Britain 2020



The Enterprise Research Centre (ERC) is an independent research centre which focuses on growth, innovation and productivity in small and medium-sized enterprises (SMEs). The ERC is a partnership between Warwick Business School, Aston Business School, Queen's University Belfast School of Management, Leeds University Business School and University College Cork. The Centre is funded by the Economic and Social Research Council (ESRC), The Department for Business, Energy & Industrial Strategy (BEIS), Innovate UK, the British Business Bank, and the Intellectual Property Office. The views expressed in this report are those of the authors and do not necessarily represent those of the funders.

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# Executive Summary

**The State of Small Business Britain report is the Enterprise Research Centre's annual review of trends affecting small and medium-sized enterprises (SMEs) in the UK. The review discusses the findings from ERC research and analysis carried out and/or published in 2020, including the first results from our new Business Futures Survey from 2020q4.**

The COVID-19 pandemic has of course dominated the agenda this year and has had huge implications for entrepreneurs and SMEs in 2020. Many businesses have had to respond quickly to the various restrictions that have been necessary to manage the pandemic, and then deal with the (often considerable) economic costs that have followed.

This review sets out the range of ways in which the UK SMEs have been impacted by the COVID-19 crisis and how they have responded to it. It also considers the challenges that need to be addressed by policymakers going forward into 2021 and beyond. Key insights from the review include:

## **Business dynamism and confidence**

- In 2019 the UK recorded its highest rate of early-stage entrepreneurship since the Global Entrepreneurship Monitor annual survey began nearly 20 years ago. The prevalence of early-stage entrepreneurial activity in the UK adult population was higher than in recent years. This was mostly driven by nascent entrepreneurial activity which was associated with lower levels of growth ambition.
- Overall business dynamism though (i.e., firm entry, exit, survival and growth) on the eve of the pandemic was much weaker than in the period before the Great Financial Crisis. This, combined with falling levels of investment, low productivity and slow growth in GDP meant that the UK economy entered 2020 in a relatively weak position.
- The ONS Business Impact of COVID-19 Survey (BICS) revealed a low level of confidence among business leaders in the early part of Q4 (2020), diminishing cash reserves and almost 1 in 6 businesses trading insolvently. Levels of uncertainty around the nature of the trading relationship with the EU after the UK exits the transition period on 31<sup>st</sup> December 2020 only adds to gloomy economic prospects for the UK economy in 2021.

## **Trade**

- UK SMEs trading internationally have encountered unprecedented challenges in 2020 associated with the COVID-19 pandemic, coupled with Brexit uncertainty. Since late March, lockdown measures and social distancing practices have brought a series of supply and demand shocks and the UK has been one of the most affected European countries, experiencing the largest monthly falls in exports and imports in March and April ever recorded.
- Recent evidence suggests that UK firms have been recently creating a new trading footprint around the world by exploring non-EU markets.
- Looking ahead, UK SMEs will face huge challenges in managing uncertainties and risks in international trading. There are opportunities for SMEs to explore more distant markets. However, this is dependent on investment in skills, innovation and technology, and there is evidence that investment in R&D has been delayed or reduced in SMEs during 2020.

## **Turnover**

- The ERC's Business Futures Survey conducted in 2020q4 shows that more SMEs have experienced a decline in turnover than employment in 2020. Across all the SMEs in the survey more than four in ten saw their turnover fall in the past 12 months. Employment had also fallen in 30 per cent of small businesses and 32 per cent of medium businesses.
- The pandemic has had a larger impact on SMEs in the service sector. The public health response to COVID-19 has had a larger effect on consumer-facing industries such as accommodation, food service and recreation as businesses have responded to social distancing requirements and shut-downs. In the ERC Business Futures Survey, 44 per cent of service businesses had seen a fall in turnover compared with 38 per cent of production businesses.
- Although the net effect of events in 2020 have been negative for SME employment and turnover, some businesses have still achieved growth, either as their sectors remained somewhat untouched by the effects of the pandemic or new opportunities emerged. Just over a fifth of respondents to the ERC's Business Futures Survey said they had something positive to take away from their experience of 2020.

## Barriers to success

- SMEs have been affected in a variety of ways by the pandemic. The most common response from respondents in the ERC Business Futures Survey was the 'direct negative impact' on business activity, cited by over a quarter of businesses. Almost a fifth of businesses cited external barriers to operating normally (such as access to finance, problems in supply chains, and requirements to make workplaces COVID-secure).
- Unsurprisingly, the impact of COVID-19 has been the dominant headwind for many businesses in 2020. For almost three-quarters of businesses in the ERC's Business Futures Survey, the economic uncertainty stemming from the pandemic was regarded as an obstacle to running a successful business.
- Brexit uncertainty was also cited as a barrier to success by just over two-fifths of businesses overall, and just under half of those in the manufacturing sector. Concerns amongst SME leaders about the UK's future trading relationship with the European Union are markedly higher in the ERC Business Futures Survey than reported a year earlier in the Longitudinal Small Business Survey (LSBS) 2019.

## Digitisation

- As businesses have responded to the challenges of COVID-19, digital technologies have played an important role. The ERC Business Futures Survey indicates a major positive shift in the adoption of advanced technologies and in attitudes towards digital technologies among SMEs.
- Around half of SMEs identified introducing new digital technologies as a priority in the last 12 months. Over two-fifths of firms surveyed said that they had made some changes in their use of digital technologies in response to the pandemic.
- However, although many SMEs invested in digital technologies during the early phase of the pandemic, only a small proportion of SMEs stated that they had formed an intention to continue further along this route. The main obstacle for this was identified as a lack of digital skills.

## Net-zero practices

- Despite the pandemic, there is also evidence that sustainability is part of the strategic objectives of many UK SMEs, with over half of respondents to the ERC Business Futures Survey reporting 'reducing environmental impact' as a business priority. Over a quarter of firms said that 'reducing environmental impact' had become a more important priority since the COVID-19 crisis.

Nearly three-quarters of firms said that they had taken steps to minimise the environmental impact of their business over the past year despite the COVID-19 crisis.

- The main drivers of the adoption of net-zero practices cited by respondents in the ERC Business Futures Survey were cost reduction – cited by over half of firms – and improving image and reputation, cited by over two-fifths.
- The COVID-19 pandemic appears to have played a dual role in the adoption of net-zero practices in UK SMEs. It has both driven adoption – as some firms have sought to reduce costs in times of crisis – but has also constrained diffusion. Nearly half of firms in the ERC's Business Futures Survey stated that COVID-19 was a barrier to their net-zero practices.

## Innovation

- In terms of innovation in general, ERC working with the ESRC Innovation Caucus, conducted two new surveys for Innovate UK in June and October 2020 with around 250 innovating firms. The findings of these indicated that the impacts of the COVID-19 crisis on R&D and innovation in UK firms have been significant. One in three firms had reduced their R&D and innovation spending in the three months to October 2020. Looking forward, further short-term reductions in R&D and innovation spending were also planned.

## Mental health at work

- The COVID-19 crisis has also had major implications for mental health in the workplace, and many SMEs are grappling with this. As well as having serious impacts on individual well-being, this also affects business performance. An ERC survey on Mental Health and Productivity in 1,900 Midlands firms carried out this year found an association between mental health sickness and lower productivity. Firms reporting a situation in which mental health impacted their performance was associated with productivity which was 25 per cent lower.
- Our follow-up research also found evidence that employees seem to be less likely to admit to mental health issues during and following the COVID-19 crisis and lockdown than before due to fears around stigma and job insecurity. Firms also reported that changes in working practices such as remote working were making it more difficult to identify the changes in behaviour associated with mental health issues.

## Looking ahead

- ERC research published this year on the drivers of productivity in firms found that irrespective of sector, an important characteristic of high-growth firms is transformational and inspirational leadership combined with the use of people-focused Human Resource Management practices. These skills will be crucial for economic recovery from the COVID-19 crisis.
- Our research on learning from failure, published in 2020, indicated that there may be a positive legacy from any initiatives which firms were forced to abandon due to COVID-19 as firms take on board the lessons and re-shape their activities in the future. Surviving a crisis can enable firms to come back stronger.
- Business resilience was a major research theme for the ERC in 2020. We found that SMEs tend to react to crises as they happen rather than implementing pre-established contingency plans. This has taken on a new significance given the wide-scale impact of the COVID-19 crisis. The research also found that leaders of firms that do undertake resilience planning activities (i.e., those who answered that they regularly think about risks and those who said they had a formal risk register) tend to have higher levels of business and individual resilience. This indicates that developing resilience in leaders could be a route to improving the use of resilience practices in firms.
- Evidence indicates that the COVID-19 pandemic has disproportionately affected some SMEs more than others, particularly ethnic- and women-led businesses, partly due to the fact they are over-represented in those sectors that have been most affected by COVID-19 restrictions. Looking ahead attention will need to be paid to the specific support needs of these groups, especially as research has shown they tend to be less likely to seek formal business support.

Early 2021 will see big decisions being made around investment priorities for the UK as the Government sets out a strategy that will support the economy as it moves out of the pandemic, with a Budget to take place in March and a Spending Review later in the year. Our research insights indicate the following areas as priorities for policymakers if we are to have a successful SME-led recovery:

## Business advice

- Business advice can help firms to improve their productivity. As we look towards a post-COVID-19 economic recovery, and with an aspiration to support growth in all parts of the country, we will need to consider how we can simplify and

strengthen the public support offer to growing companies.

## Digitisation

- The introduction of new digital technologies can help to lay the foundations of a thriving and more productive SME base in future. Support programmes could play a key role in maintaining the digital shift the COVID-19 crisis has prompted, but there needs to be a focus on building digital skills within small firms.

## Net-zero

- The COVID-19 pandemic has diverted attention from the climate crisis, but there are grounds to be optimistic as climate impacts remain high up the agenda of many smaller firms. Looking forward, it will be important to maintain a policy mix in the UK which supports firms as they implement net-zero and broader sustainability practices.

## Innovation

- Innovation will be critical to future growth and productivity, but during 2020 around a third of innovating firms significantly reduced their R&D and innovation investments. Sustaining the strength of local innovation ecosystems during the recovery period will need to be a key policy objective, and one which may require spatially differentiated R&D and innovation policies.

## Management and leadership

- Inspirational leadership is strongly associated with high-performing firms. To ensure recovery we need to invest in more support for SME owner-managers to develop the skills they need to be effective leaders of transformational change.

## Mental health and well-being at work

- The challenges associated with COVID-19 have had major implications for the mental health of the workforce and SME business leaders. There is a need for policy thinking around employee and employer well-being as part of policy for sustainable business performance.

## Business resilience

- Business resilience is a theme brought to the fore in 2020. As we look towards a post-COVID-19 economic recovery phase, it is vital that effective support and advice networks are in place dedicated to support SMEs specifically with crisis planning. The business community needs to learn lessons from the crisis if we are to help protect SMEs against future shocks.

# 1. Introduction

**The State of Small Business Britain report is the Enterprise Research Centre's annual review of trends affecting small and medium sized enterprises (SMEs) in the UK.**

2020 has been an unprecedented year, an 'annus horribilis' for many firms and other organisations. The dreadful public health impacts of the COVID-19 pandemic have been accompanied by significant socio-economic consequences. The crisis continues but the arrival of vaccines offers hope of recovery and a resumption of more business as usual in 2021.

Looking back now, the pre-Christmas election of 2019 seems like an age ago. As well as bringing Boris Johnson and Government to power, this introduced us to new terms such as 'levelling-up'. Even at the time of the 2019 election – and well before any impacts from the COVID-19 pandemic – growth in the UK economy was weakening. ONS figures suggest GDP grew only around 1.0 per cent in 2019 and only by 0.1 per cent in 2019q4. The early impacts of the COVID-19 pandemic during 2020 were reflected in the worsening health crisis and sharp decline in business confidence. In 2020q1 the Federation of Small Business (FSB) Small Business Index showed that business confidence hit a record low, falling well below levels during the Great Financial Crisis of 2008-10. In the same survey, one in four small business owners said that they were also considering scaling back or closing their businesses during 2020.

The first national lockdown from March 2020 led to a record fall in GDP. Compared with a year earlier, GDP was 21.5 per cent down. And, despite major and widely welcomed intervention by the government, significant business closures and job losses followed. Job opportunities also largely disappeared, with the number of vacancies falling to 327,000 in May 2020 down from 827,000 in May 2019. Micro firms (1-9 employees) fared a little better, but vacancies in small firms (10-29 employees) fell most dramatically, dropping by three-quarters between May 2019 and May 2020.

As the health crisis deepened in the second quarter of 2020, the first national lockdown meant hospitality, travel and non-essential retail all suffered badly. Some aspects of the economy fared better though, with food and drink, on-line retail and exercise equipment sales rising sharply. The summer provided some respite both from the health and economic impacts of COVID-19. Staycations

became the new normal with some UK resorts seeing record visitor numbers.

The arrival of Autumn saw rising COVID-19 case numbers again and a range of local and eventually national lockdowns. The full economic impacts of these are not yet clear, although despite the extension to the furlough scheme and other support measures, unemployment continues to increase. Vacancy data suggests a little more optimistic picture, however, although significant regional disparities are emerging.

As 2020 ends, the UK's future outside the EU begins, with many uncertainties lying ahead adding to the insecurities created by COVID-19.

During 2020 the ERC team has explored many aspects of the impact of COVID-19, publishing over 30 separate pieces of research and commentary. At the same time, other long-term ERC research projects have continued related to issues such as trade, net-zero transitions, productivity and business growth. We provide an overview of some of this research in this review. We hope you find the material interesting. The authors would be happy to discuss any of the research further, so please do get in touch if an issue is of interest.

You can find our contact details on the ERC website at: [www.enterpriseresearch.ac.uk](http://www.enterpriseresearch.ac.uk)



# 2. The State of Small Business Britain: SME responses to the COVID-19 crisis

The COVID-19 pandemic has had a major, visible effect on the UK's small business community. The effects of lockdowns, social distancing restrictions and supply chain disruptions can be seen on our high streets and on the evening news. Official statistics show the unprecedented hit to GDP and the challenges of sustaining any real recovery this year. The numerous measures introduced by the Government to support jobs and cashflow, though not as comprehensive as many businesses have required, are further evidence of the enormous hit to activity that many businesses have faced in 2020.

In this section of the review, we explore what the research evidence tells us about how UK SMEs have been impacted by the crisis and how they have responded to it, drawing on key findings from ERC research and secondary data analysis.

## 2.1 The pre-pandemic state of play

Even before the COVID-19 crisis hit the UK, the economy was in a state of change with the UK having formally left the European Union but in a transition period due to end on 31<sup>st</sup> December 2020. The most up-to-date information on entrepreneurial activity and business dynamism before the pandemic is from the UK Global Entrepreneurship Monitor (GEM)<sup>1</sup> 2019 survey data, as well as analysis of job creation and destruction constructed from the longitudinal version of the ONS Business Structure Database (BSD) which is based on annual abstracts from the Inter-Departmental Business Register (IDBR).

### Business dynamism

To understand long term trends in business dynamism, we undertook analysis of how the business stock in the private sector in the UK changed over 20 years from 1998 to 2019, with a specific focus on the key dynamics of job creation and destruction. The analysis is based on a simple accounting framework which has been used in

many previous studies. This sets out the level of turbulence in jobs and identifies the type of firms (i.e., size) which most contribute to job creation/destruction in the UK. We do this by using employee data for all employer enterprises in the UK private sector and create the average annual job creation and destruction rates between 1998 and 2019, as well as firm entry and exit rates.

Figure 1 shows the 'birth/entry' and 'death/exit' rate of firms between 1998 and 2019. Overall, firm birth rates in 2019 were lower than during the recovery period after the Great Financial Recession (GFC), and indeed lower than in the period immediately prior to the last recession in 2008. Firm death rates had been steadily rising since 2016, but fell back slightly in 2019, and are much lower than historical levels.

We use our longitudinal firm-level dataset covering the 21 years 1998 to 2019 to provide a summary of average annual rates of job creation and destruction, entry, exit and reallocation rates in the UK disaggregated by region and firm size (employment). The job creation and destruction rates presented below are defined in the conventional way, as follows:

- **Job Creation** – employment changes summed over all businesses that expand or start up in a given year
- **Job Destruction** – employment changes summed over all businesses that contract or exit in a year

These job creation and destruction figures are expressed as rates by dividing by employment averaged over the current and previous year (businesses with no change in employment do not contribute to either job creation or job destruction). So, the change in employment between two years – often referred to as the net employment change – is equal to the difference between job creation and job destruction over the period, and the net employment rate equals the job creation rate less the job destruction rate.

<sup>1</sup> The Global Entrepreneurship Monitor (GEM) research consortium measured rates of entrepreneurship across multiple phases in 50 economies in 2019, making it the world's most authoritative comparative study of entrepreneurial activity in the general adult population. See: [www.gemconsortium.org](http://www.gemconsortium.org)

**Figure 1: Firm birth and death rates in the UK, 1998-2019**

Source: ONS BSD

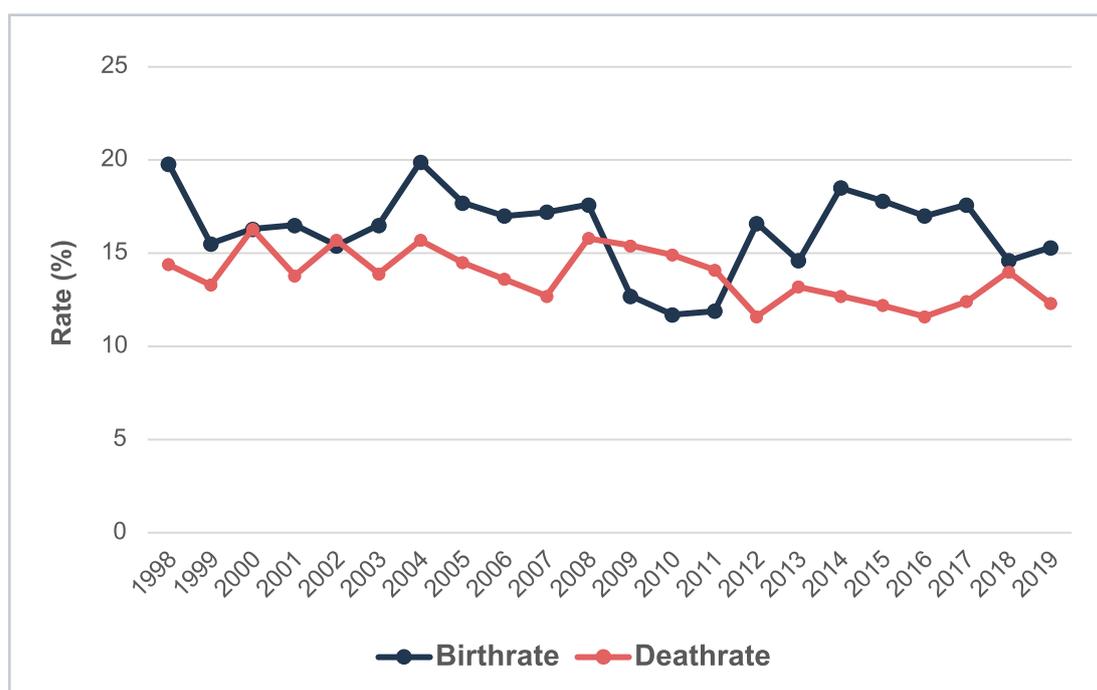


Figure 2 shows the level of business dynamism in the UK between 1998 and 2019. In 1998, job creation is slightly lower than job destruction and thus net employment is negative, signifying more jobs were lost than created resulting in an overall decline in UK job market. The sum of the job creation rate and the job destruction rate is referred to as the job reallocation rate. It summarises the overall volume of change, and in essence represents the ‘reshuffling of job opportunities across locations’ (Davis et al., 1996). Tracking the job reallocation rate allows us to arrive at a measure of business dynamism for the economy.

On average, job destruction is lower than job creation in the post-GFC period and job reallocation rates are noticeably higher before 2008, with an average of 28.5 per cent of jobs being created or destroyed. This is much lower after 2008, at just 23 per cent, indicating lower business dynamism and a lack of recovery to pre-recession levels.

In 2019, net employment rose to 2.5 per cent, but was lower than in the recovery period after the GFC. Overall, business dynamism on the eve of the pandemic was much weaker than in the period before the GFC, which combined with falling levels of investment, low productivity and slow growth in GDP meant that the UK economy entered 2020 in a relatively weak position.

### Entrepreneurial Activity

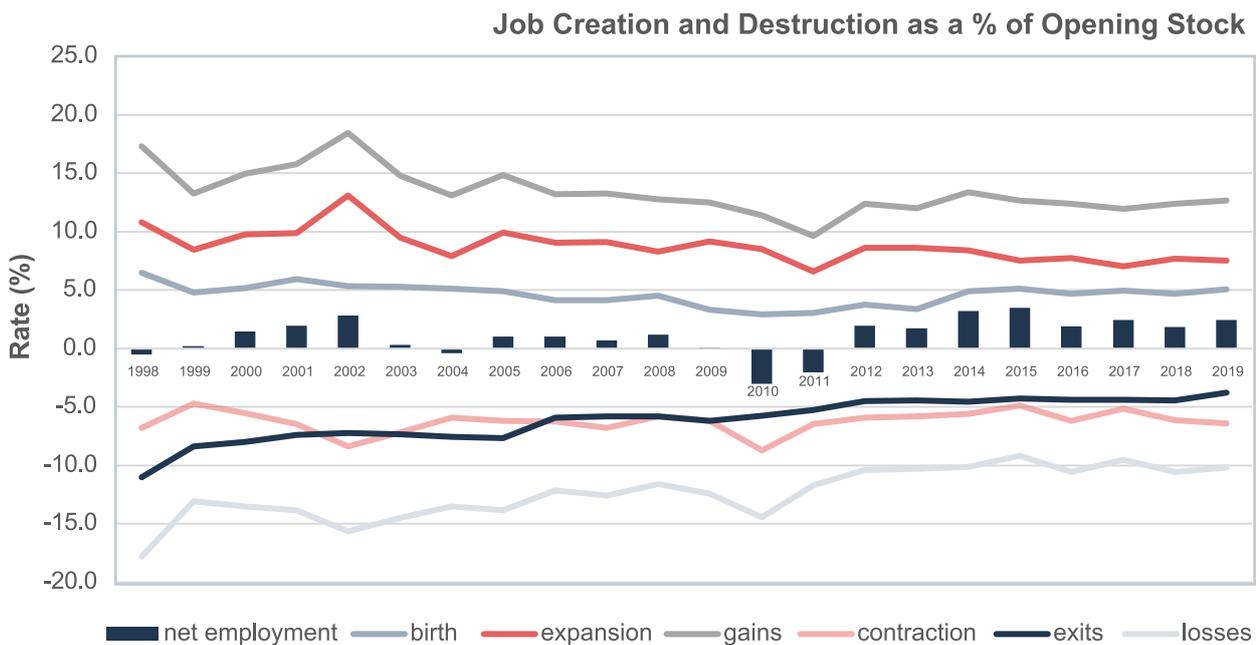
In 2019, the UK recorded its highest rate of early-stage entrepreneurship since the global annual survey began nearly 20 years ago<sup>2</sup>. The prevalence of early-stage entrepreneurial activity in the UK was higher than in recent years mostly driven by nascent entrepreneurial activity. Total Entrepreneurial Activity (‘TEA’) rate was 9.9 per cent - meaning nearly 1 in 10 working age adults were in the early stages of starting or running a business. In 2019 one-quarter of working age individuals in the UK either intended to start a business within the next three years; were actively trying to start a business; or were running their own business. This proportion represents an increase on the previous long-run rate of 16 per cent, or 1 in 6 working age individuals.

In addition, female early-stage entrepreneurship hit an all-time high of 7.7 per cent, further closing the longstanding gap with men, whose rate stood at 12.1 per cent. Looking at the entrepreneurial population as a whole in 2019, those aged 25-34 were the most likely to be in the process of starting or running a business, while immigrants to the UK were more likely than lifelong residents to be early-stage entrepreneurs.

<sup>2</sup> See: <https://www.gemconsortium.org/economy-profiles/united-kingdom-2>

**Figure 2: Job creation and destruction in the UK, 1998-2019**

Source: ONS BSD



**Figure 3: Total early-stage entrepreneurial activity in UK, US and Germany (2002-19)**

Source: GEM UK Adult Population Survey (APS) 2002-2019

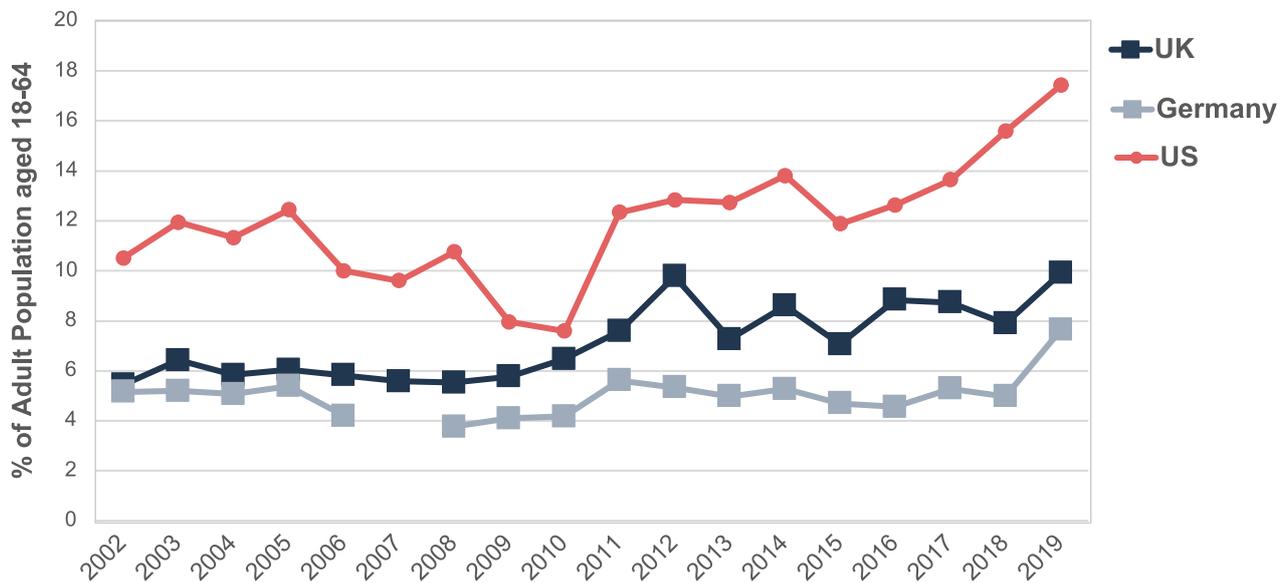


Figure 3 shows the Total Early-Stage Entrepreneurial Activity (TEA) for the UK, US and Germany. The US has always had a higher TEA rate than the UK, even during and just after the GFC in 2008. Looking at the last four years, there was a dip in TEA rates in the UK between 2016 and 2018, when the Brexit referendum took place, Article 50 was triggered, and an extension was sought to when the UK left the EU. A comparison with benchmark countries across different entrepreneurial framework conditions

(EFCs) allows us to identify potential strengths and weaknesses of the entrepreneurial context in the UK in 2019. Entrepreneurial finance; ease of market entry and doing business; government policies in relation to taxes and regulations, as well as cultural and social norms are identified as the principal strengths, while R&D transfer; government policies and programmes to support entrepreneurship and internal market dynamics are pinpointed as areas for particular attention.

## 2.2 The effects of COVID-19 on the private sector in 2020

The previous section looked at the state of businesses and entrepreneurial activity pre-pandemic, but what does current data tell us on what has been happening during the pandemic? The ONS Business Impact of COVID-19 Survey (BICS) is a fortnightly survey of businesses asking questions around the health of the business. Wave 17 (19<sup>th</sup> October to 1<sup>st</sup> November 2020) is used in the following charts, the most recent wave available when conducting this analysis.

Figures 4 and 5 show data on how long businesses think their cash reserves will last by sector and by size, respectively. Over 50 per cent of businesses in the accommodation and food services, arts, entertainment and recreation and the other service sectors stated that they only expect cash reserves

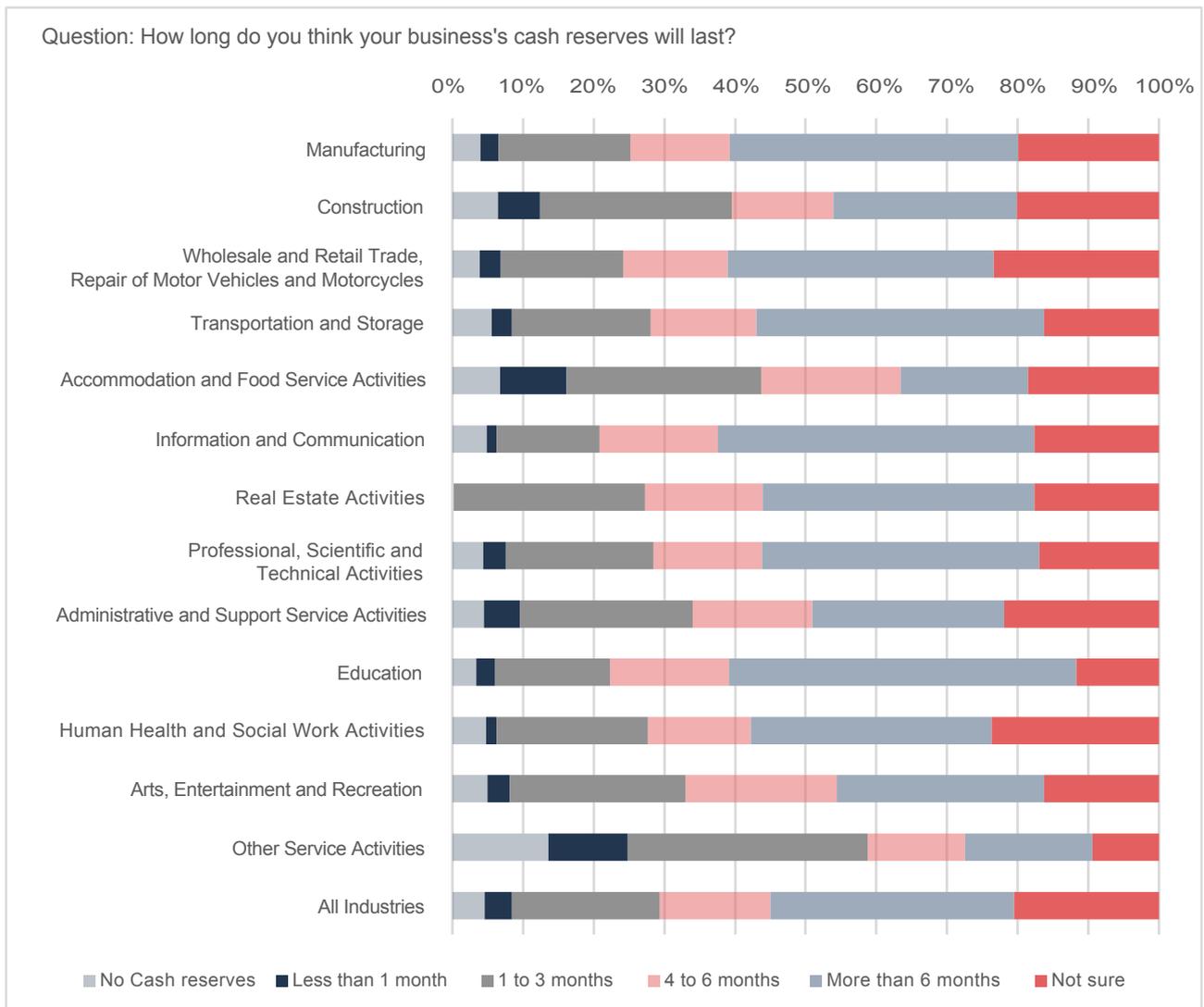
to last up to six months. Over 15 per cent of businesses in the accommodation and food service sector had either no cash reserves or less than one month of cash reserves. When looking at all industries, just under 30 per cent had up to three months of cash reserves.

When looking at the breakdown by size in figure 5, the highest percentage of firms with no cash reserves, at 10 per cent, are the smallest firms (0-9 employees) and over 50 per cent of firms with 0-9 employees and 10 to 49 employees have six months or less cash reserves. The smallest sized firms also show the most uncertainty on how long their firm's cash reserves will last at just over 25 per cent while all other sized firms are around 20 per cent.

BICS also captures data on how much confidence businesses have that they will survive the next 3 months.

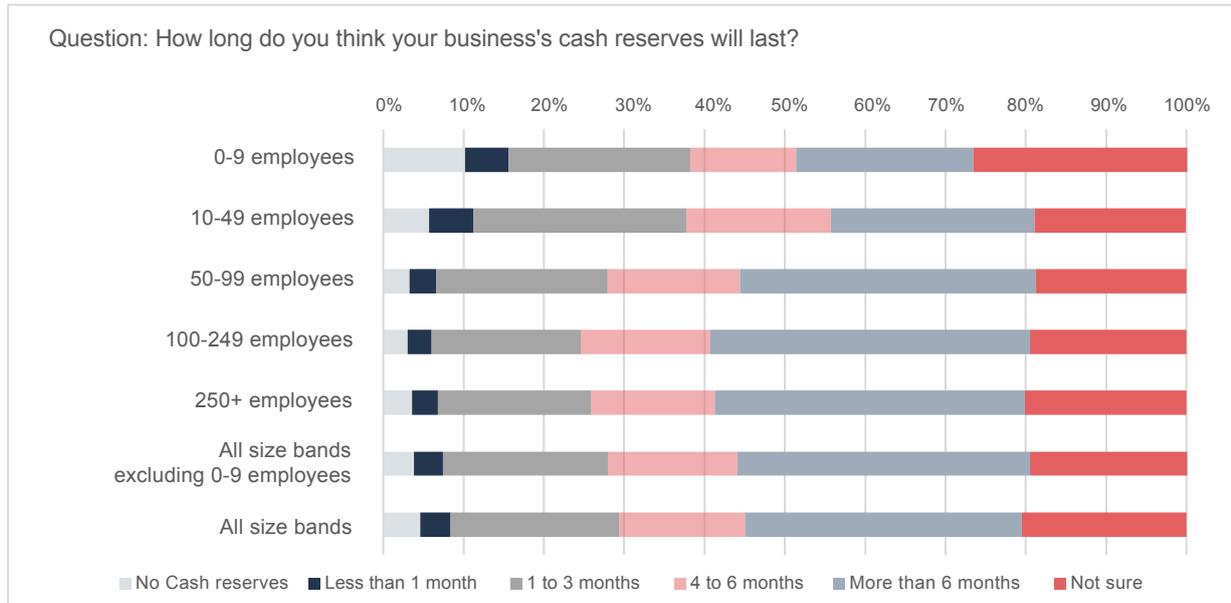
**Figure 4: Business cash reserves in second lockdown by sector**

Source: ONS BICS Wave 17



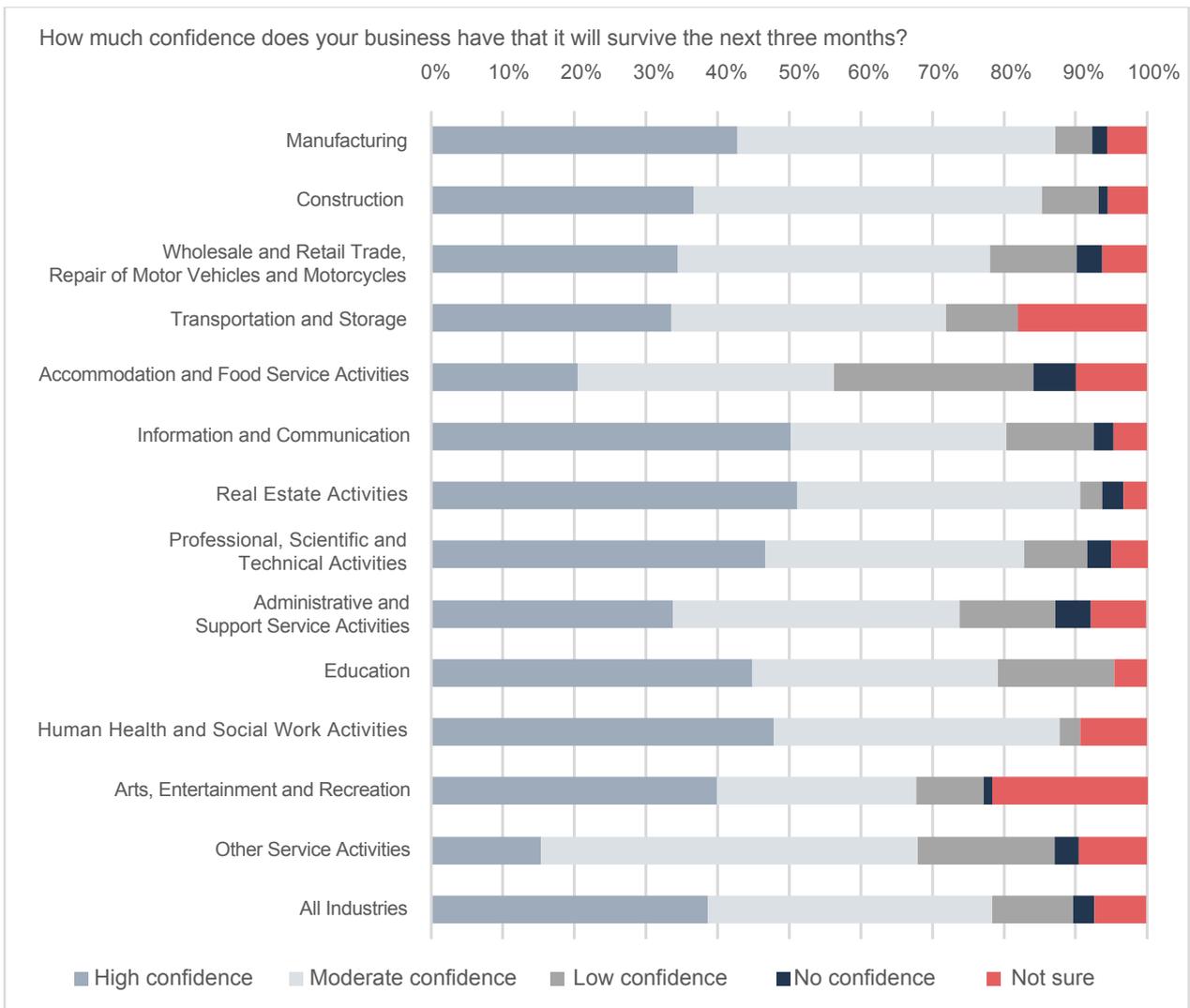
**Figure 5: Business cash reserves in second lockdown by firm size**

Source: ONS BICS Wave 17



**Figure 6: Business confidence in survival by sector**

Source: ONS BICS Wave 17



**Figure 7: Business confidence in survival by firm size**

Source: ONS BICS Wave 17

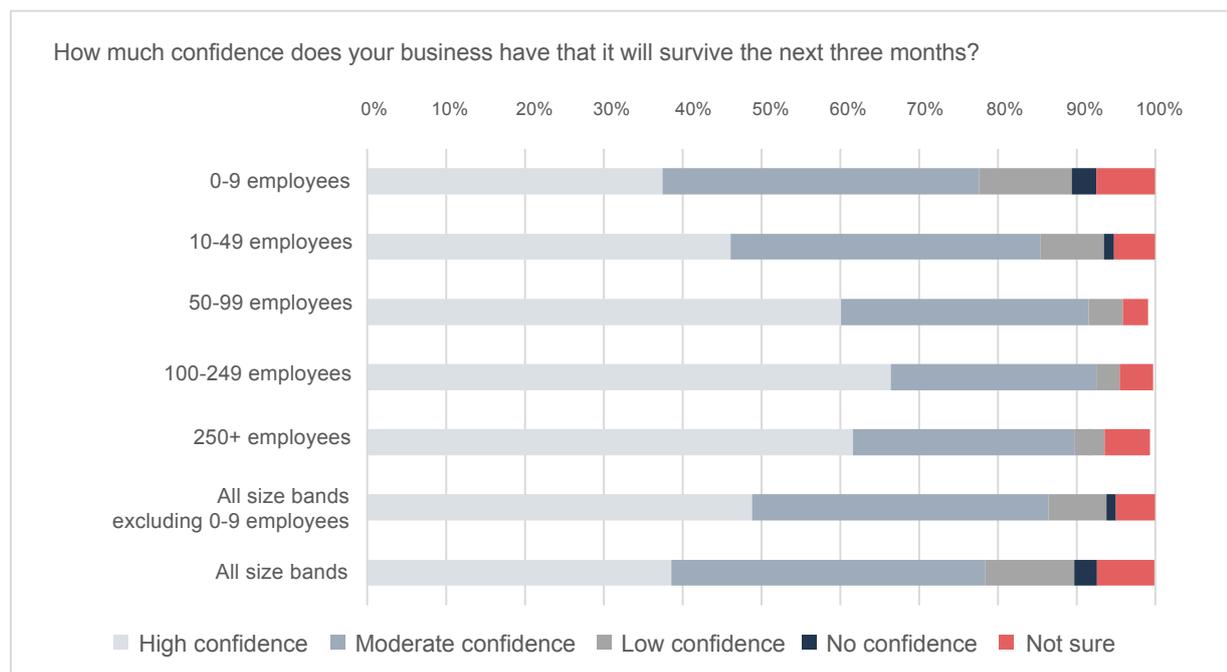


Figure 6 shows this by sector and both the accommodation and food service sector and other services sector show the least confidence in surviving, at below 21 per cent. The accommodation and food service sector also had the highest percentages, at 6 per cent, of those stating no confidence and 28 per cent of those stating low confidence in surviving in the next three months. The arts, entertainment and recreation sector shows a high level of uncertainty about survival, at 21.7 per cent. Real estate, human health and social work, manufacturing and construction sectors all showed the highest confidence levels.

Figure 7 shows the confidence of survival by size of firm and it is not surprising that larger firms have higher levels of confidence than smaller firms. Only 38 per cent of 0 to 9 employee firms expect to survive the next three months compared with over 60 per cent of 100 to 249 employees and 250+ employees sized firms. The smallest firms also showed the most uncertainty about survival at 7.5 per cent.

From the ONS BICS data, it is clear that the accommodation and food service sector has been greatly impacted by the pandemic, with low cash reserves and low confidence in survival. The arts, entertainment and recreation sector also shows high levels of uncertainty and low confidence in surviving. Small firms (0 to 9 employees) show the least confidence of surviving and low cash reserves, however, expected redundancies are much lower

than larger (250+ employee) firms.

Overall, when we combine the evidence on cash reserves with the fact that 14 per cent of firms reported that their operating costs are currently exceeding turnover, then it is no wonder confidence levels are low. Businesses trading insolvently with diminishing cash reserves are at a clear risk of insolvency and bankruptcy. Grossing these figures up using the BEIS Business Population estimates we can calculate that around 200,000 private sector firms could be at risk as we come out of the second national lockdown and prepare for exiting the Brexit transition period, with the prospect of a ‘no deal’ intensifying at the time of writing. Although the vast majority will be micro-enterprises, the job losses associated with this scale of business closure will be considerable.

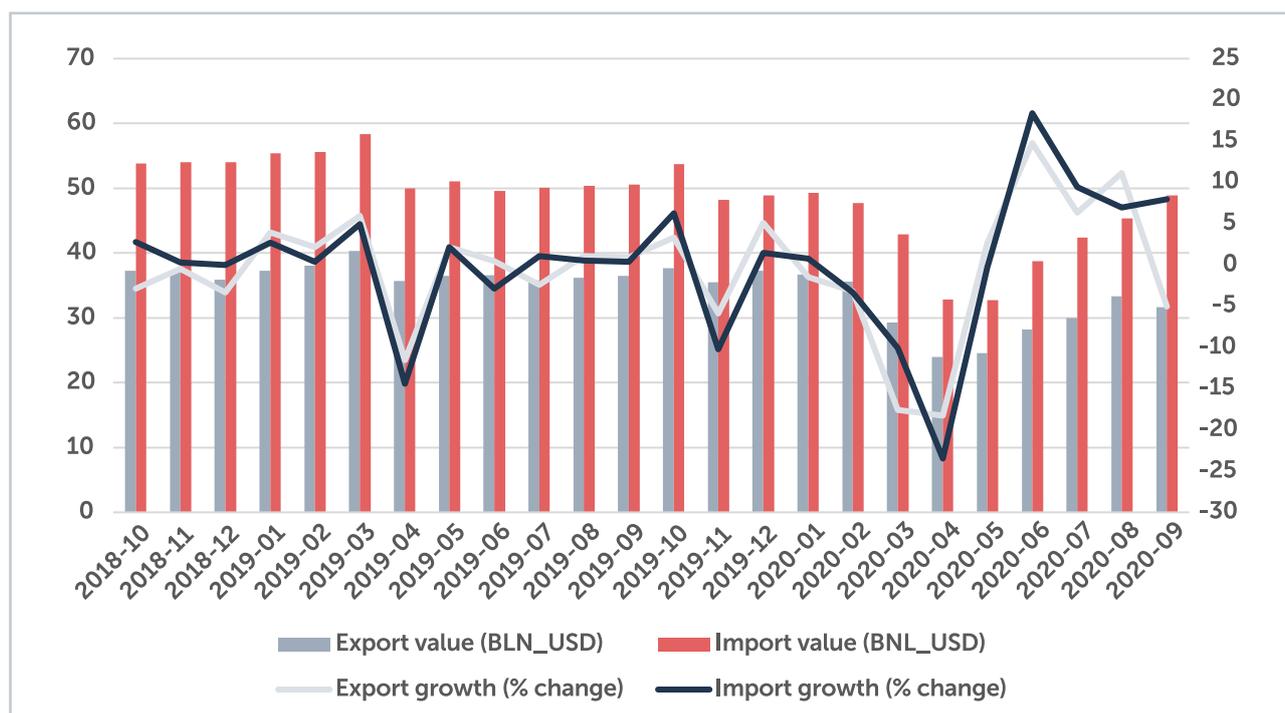
### 2.3 Trade responses to COVID-19

Access to global value chains is important for SMEs. UK SMEs trading internationally have encountered unprecedented challenges in 2020 associated with the COVID-19 pandemic, coupled with Brexit uncertainty.

Until late March, disruption was heavily clustered on importers due to frozen supply chains of some goods, following the virus outbreak in China. The most affected sectors included precision instruments, machinery, automotive and communication equipment. Since late March, lockdown measures and social distancing practices

**Figure 8: COVID-19 and UK trade**

Source: OECD International Trade Statistics



in the UK and globally brought a series of supply and demand shocks. Economic activities and the movement of people were restricted, impacting upon the trade of goods and services. The UK has been one of the most affected European countries,<sup>3</sup> experiencing the largest monthly falls in exports and imports in March and April ever recorded by the ONS<sup>4</sup>.

Figure 8 shows that disruption in exports and imports decreased sharply in the UK in March and April. They started to recover in May through the summer, before falling again in September when the second wave of COVID-19 infection occurred.

However, although it is still early to fully assess the impact of COVID-19 on global trade, the current predictions are that, unlike the contraction in GDP, the decline in trade will be much less than the one that occurred during the Global Financial Crisis<sup>5</sup>. This is because the traded goods affected in the current situation are not the same. Trade disruptions are mostly due to breakdowns of supply chains, which thaw as situations improve in production hubs (such as China and Germany).

Trade disruptions to businesses can be disproportionately more severe for SMEs, however, compared to larger businesses due to their size. FSB survey data from May 2020 showed that 41 per cent of UK SMEs had stopped operations and 35 per cent feared they would be unable to reopen again<sup>6</sup>. Given the more limited human, financial and technical resources of SMEs, delays in receiving and sending goods have been a major concern; and the need for stockpiling has had adverse implications on costs and profit. Many SMEs have faced new challenges to traditional trading, and have had to find ways to adapt quickly, for example working to find alternative sources of imports, and accelerating digitisation.

However, SMEs do also have the advantage of being flexible and adaptable to change due to their size, ownership, and relatively flat hierarchical structures<sup>7</sup>. Previous research has shown that smaller, younger SMEs, by being more agile and quick to respond, may be less affected by crises than larger, established businesses<sup>8</sup>.

3 UNCTAD, 2020, Global Trade Impact of Coronavirus (COVID-19) epidemic, Trade and Development Report Update, 3 March, 2020.

4 ONS, 2020, Impacts of the coronavirus on UK trade: July 2020.

5 By the end of 2009, the financial crisis saw 0.1% GDP contraction and 13% contraction in global trade. The IMF predicts that in 2020 the global GDP contracted nearly 5% but less than 10% fall in trade.

6 FSB. (2020). One in three closed small firms fear they will never reopen amid widespread redundancy

plans. National Federation of Self Employed and Small Businesses. <https://www.fsb.org.uk/resou/rcses-page/one-in-three-closed-small-firms-fear-they-ll-never-reopen-amid-widespread-redundancy-plans.html>

7 Juergensen, J., Guimón, J. and Narula, R., 2020. European SMEs amidst the COVID-19 crisis: assessing impact and policy responses. *Journal of Industrial and Business Economics*, 47(3), pp.499-510.

8 Cowling, M., Liu, W., & Zhang, N. (2018). Did firm age, experience, and access to finance count? SME performance after the global financial crisis. *Journal of Evolutionary Economics*, 28(1), 77–100.

Adverse effects may also be felt less strongly amongst knowledge-based SMEs, as they have experienced less severe supply shocks (except for those depending on laboratories and large equipment). While stand-alone businesses were more affected by demand shocks, specialist-supplier SMEs were severely hit both on their demand-side and their supply-side. Those integrated in global value chains, such as those in automotive industries, were hit by both demand shocks and supply shocks, and both domestically and internationally.

In addition to COVID-19, Brexit is also expected to have implications on trade for SMEs. Policy uncertainty around international trade since the 2016 Brexit referendum has reduced firms' export participation<sup>9</sup> and trade flows<sup>10</sup>. Some UK traders, especially smaller traders, have already responded to Brexit uncertainty by redirecting their trade away from close EU neighbouring markets to places further afield<sup>11</sup>. These trends are likely to weaken the exporter's productivity, especially among SME traders as they are vulnerable to increased trade costs and risks. Elsewhere, other evidence reports reduced international trading due to high dependence on European markets amid Brexit uncertainty<sup>12</sup>. In some cases, firms have been forced to pause all (international) activities<sup>13</sup>.

Looking ahead, UK SMEs will face major challenges in managing uncertainties and risks in international trading. Recent research has shown that UK firms are creating a new trading footprint around the world by exploring non-EU markets. One study has shown that nearly £50bn of exports have already been diverted from the EU since the referendum in June 2016, with additional research indicating that nearly one in five British exporters (18 per cent) have already changed trading partners to divert business outside the EU<sup>14</sup>. Research is needed to assess the success of these new exporting strategies, with lessons drawn about the resilience of SME traders.

Finally, there is also evidence that investments in technology and innovation have been delayed or reduced in SMEs during 2020 (as we will see later in this review).

This has implications for trading capacity and productivity. In the longer term, the survival and continuing competitiveness of SMEs depends on their capacity to be innovative. The new wave of Industry 4.0 technologies offers new opportunities for SMEs to explore more distant markets, but this is dependent on investment in skills and innovation<sup>15</sup>.

## 2.4 The COVID-19 pandemic and SMEs: Action and reaction

2020 saw the ERC launch a new major survey of UK SMEs - the Business Futures Survey. This survey, which was carried out during the Autumn of 2020, set out to understand the experiences of SMEs over the past 12 months and the impact of the COVID-19 pandemic. Data was collected from 1,000 SMEs across the UK.

### Turnover and employment

In line with a range of other data sources, such as the ONS's regular Business Impact of Coronavirus Survey (BICS), the Business Futures Survey finds that a balance of SMEs has seen a deterioration in both employment and turnover over the past year. Figure 9 shows that more businesses have experienced a decline in turnover than employment (likely a consequence of employment support provided through the Coronavirus Job Retention Scheme).

Across all the SMEs surveyed, more than four in ten (42 per cent) saw turnover fall in the past 12 months, with a slightly higher proportion of small businesses (43 per cent of businesses with up to 49 employees) seeing a decline compared with medium firms (41 per cent of businesses with 50 to 249 employees). Employment, in the past year, has fallen in 30 per cent of small businesses and 32 per cent of medium businesses.

However, while it is clear from figure 9 that the net effect of events in 2020 have been negative for SME employment and turnover, some businesses have achieved growth, either as their sectors remained somewhat untouched by the effects of the pandemic or new opportunities emerged.

9 Crowley, M., Exton, O. and Han, L., 2018, July. Renegotiation of trade agreements and firm exporting decisions: evidence from the impact of Brexit on UK exports. In Society of International Economic Law (SIEL), Sixth Biennial Global Conference.

10 Graziano, A., Handley, K. and Limao, N., 2018. Brexit uncertainty and trade disintegration (No. w25334). National Bureau of Economic Research.

11 Douch Mustapha, Du Jun, Vanino Enrico, 2019, Defying Gravity? Policy Uncertainty and Trade Diversion, 2019, with Mustapha Douch and Enrico Vanino, LBGCBP Research Paper No. 3.

12 <https://www.cityam.com/a-horror-story-brexit-and-covid-halt-international-trade-for-uk-smes/>. According to the survey by Currensea, six per cent of SMEs – nearly 300,000 firms – have had to stop trading this year due to Brexit. Eight per cent of the firms surveyed said they will have to pause trading internationally once Britain leaves the EU, while a further 11 per cent will have to stop entirely.

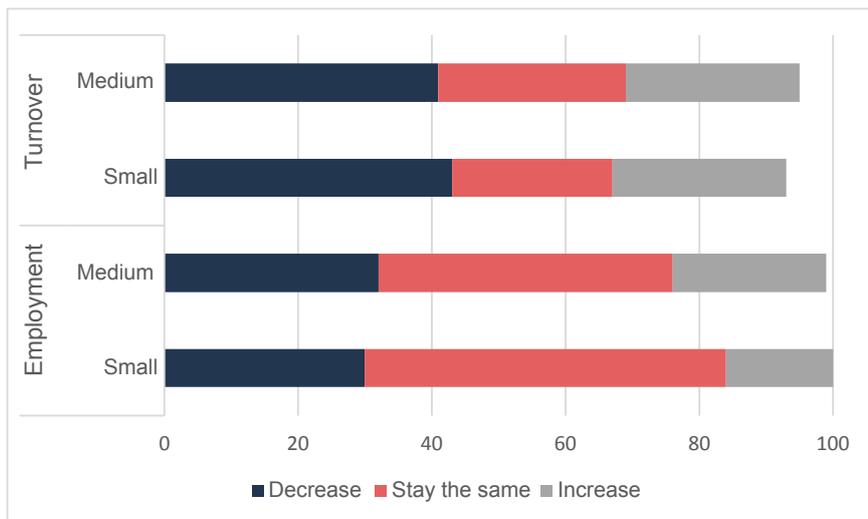
13 See for example <https://www.cityam.com/a-horror-story-brexit-and-covid-halt-international-trade-for-uk-smes/>

14 The Trade Campaign of Lloyds Banking Group, December 2020, "A New World for Global British Business". [https://www.lloydsbank.com/business/resource-centre/insight/british-trade-post-brexit.html?WT.ac=lloyds-bizhome-latestcontent-RH-RM-trade\\_rep](https://www.lloydsbank.com/business/resource-centre/insight/british-trade-post-brexit.html?WT.ac=lloyds-bizhome-latestcontent-RH-RM-trade_rep)

15 Bellandi, M., De Propriis, L., & Santini, E. (2019). Industry 4.0 + challenges to local productive systems and place-based integrated industrial policies. In P. Bianchi, C. R. Durán, & S. Labory (Eds.), *Transforming industrial policy for the digital age: Production, territories and structural change* (pp. 201–218). Cheltenham: Edward Elgar Publishing.

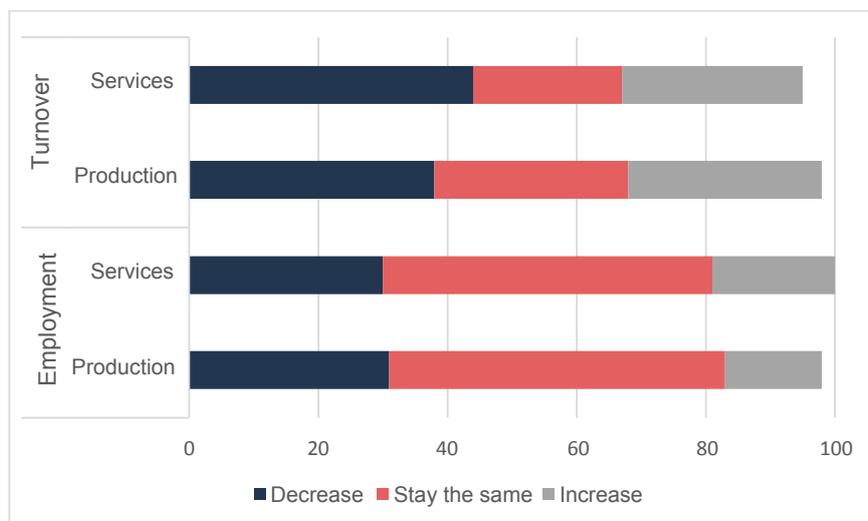
**Figure 9: Change in SME turnover and employment in the past 12 months (percentage of businesses by size)**

Source: ERC Business Futures Survey 2020



**Figure 10: Change in turnover and employment in the past 12 months (percentage of businesses by sector)**

Source: ERC Business Futures Survey 2020



While the survey reveals relatively small differences in the change in business metrics by size, figure 10 confirms the trends seen in other surveys of a somewhat larger impact on service sectors. The public health response to COVID-19 has had a larger effect on consumer-facing industries such as accommodation, food service and recreation as businesses have responded to social distancing requirements and, in some parts of the country,

prolonged shutdowns. In our survey, 44 per cent of service businesses had seen a fall in turnover compared with 38 per cent of production businesses. A more granular sector analysis shows the stark difference across sub-sectors, with a quarter of construction businesses, many of which have been operational for much of 2020, reporting declining turnover compared with over half (52 per cent) of retail and hospitality businesses.

## Perceptions of the COVID-19 crisis amongst SME leaders

Data on the changes to business performance tell us a lot about how UK businesses have fared over the past year, but perspectives from business owners on how they have been affected gives a more complete picture. The Business Futures Survey asked respondents about their reflections on how they have been affected by the pandemic and their expectations for the future. Figure 11 summarises those views, grouping responses into concerns primarily centred around the direct negative or positive impact on individual businesses, external challenges that have arisen, and concerns about the future viability of businesses.

Figure 11 illustrates the varied nature of responses from SMEs on the business impact of COVID-19. The most common response, representing 28 per cent of responses, was the 'direct negative impact' on business activity from the pandemic. For example, as one respondent stated:

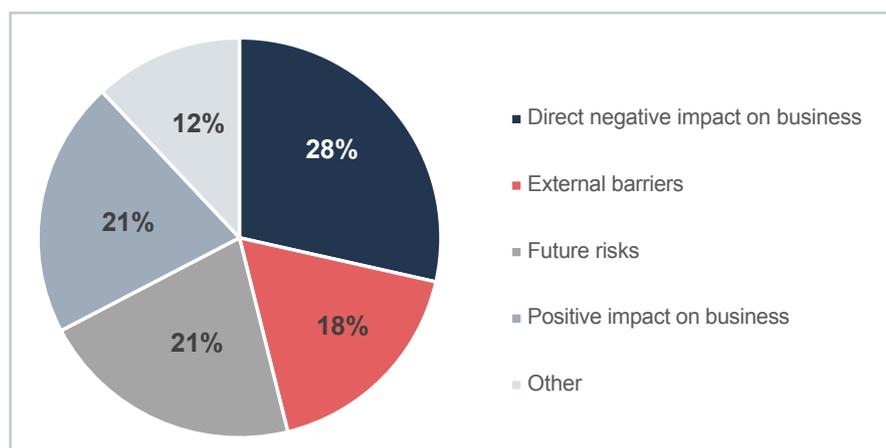
*"It's collapsed. At the beginning we lost 90 per cent of our work in the first week of the lockdown and then it got down to 60 per cent in the lifting of the restrictions. Now it's gone quiet again."*

*"Business has decreased slightly due to COVID-19. Initially after lockdown sales went up but has since then fallen. Christmas is where sales are normally high, however, there is a lot of uncertainty about the holiday period."*

However, it is also clear from the survey responses that it is not just the direct impact of a loss of sales and temporary closures that are affecting business owners. Almost a fifth of responses focused on external barriers to operating normally. This might include access to finance, problems in supply chains and requirements to invest in business premises to make them COVID-secure.

**Figure 11: Business reflections on COVID-19 impact (percentage of responses)**

Source: ERC Business Futures Survey 2020



For example:

*"There have been costs in making the place COVID-secure - we have also minimised the number of people coming into store because of COVID-19."*

*"It had a massive effect on our supply chain. It has been hit hard. We are still getting the sales, but the supply chain is our issue."*

As noted above, depending on the nature of the crisis, some sectors are better positioned to weather downturns than others. Crises can also provide opportunities for businesses that are nimble and can pivot to take advantage of them. Just over a fifth of respondents said they had something positive to take away from their experience of 2020. For example:

*"The business has grown, and we've seen a massive increase in demand for products. It's essential products. With lockdown we had to adapt and go into a couple of markets that we didn't usually. Since then things have changed. It gave us an opportunity."*

There was, nevertheless, a strong message of uncertainty about the future from a further fifth of respondents:

*"We were shut down for four months and we've got no idea of how it will be impacted, we have completely no idea, and we been hit by local lockdown which impacts the continuity of business as you get started and then some customers can't travel out to you."*

*"We haven't had to close the business, but we have seen waves as we deal with Europe, a lot of activity has stopped so shipping has reduced. Demand has increased now but we don't know what will happen in the future."*

## Additional business challenges

Inevitably, the impact of the COVID-19 crisis has been the dominant headwind for many businesses in 2020. For almost three-quarters of businesses (73 per cent), the economic uncertainty stemming from the pandemic was regarded as an obstacle to running a successful business. This source of uncertainty was the most reported obstacle across businesses of all sizes and sectors. This is followed (though by some distance), by the practical challenges of dealing with the virus, such as social distancing regulations, which was cited as an obstacle by 46 per cent of businesses. This concern was somewhat more prominent in the devolved administrations (mentioned by 58 per cent of businesses in Scotland and Wales), but less so in sectors such as construction and manufacturing (33 per cent).

A slightly more frequently reported obstacle for manufacturers specifically is the uncertainty about the UK's future trading relationship with the European Union (47 per cent). Figure 12 shows that UK manufacturers are not alone in expressing concern about this, as over two-fifths of businesses overall (41 per cent) see Brexit uncertainty as a barrier to business success. At the time of data collection, trading arrangements beyond the end of transition period were still to be agreed and there was a material increase in the proportion of firms identifying this as an obstacle compared with that seen in Longitudinal Small Business Survey (LSBS) 2019. Notably, the survey findings see relatively little movement in proportion of businesses pointing to other growth obstacles, such as access to finance and taxation, compared with the LSBS 2019.

## Changing business priorities

The scale of disruption to business activities experienced by SMEs this year has led many to rethink business strategies and priorities. The Business Futures Survey investigated the strategic priorities of SMEs over the past 12 months. For SMEs, the most frequently cited priority in the past year was 'cost reduction' (77 per cent of businesses with up to 49 employees and 71 per cent of those with between 50 and 249 employees). For 64 per cent of small businesses, the 'introduction of new processes' was a business priority, with the 'introduction of new products and services' and 'reducing environmental impact' reported as a priority by just over half of small businesses (52 per cent). The priorities of medium-sized businesses, beyond 'cost-cutting', were focused on the 'introduction of digital technologies' and the 'development of new processes' (55 per cent and 53 per cent respectively).

Figure 13 shows the relative shift in importance of these priorities by businesses due to the COVID-19 pandemic. For almost three-quarters of businesses aiming to reduce costs this year, this had become more important due to the pandemic. While a focus on cost reduction is a necessary (but short-term) response to the crisis, new processes and technologies have also become higher priorities in 2020, where these can support efficiency improvements, aid the development of new business models or support entry into new markets. The survey also found that many SMEs had a focus on their environmental impact in the past year, despite the pandemic. However, the uncertainty and financial challenges presented by the pandemic is a frequently reported constraint on more action in this area, which is likely to mean that some opportunities to make more progress on environmental and net-zero goals have been missed as a result of COVID-19.

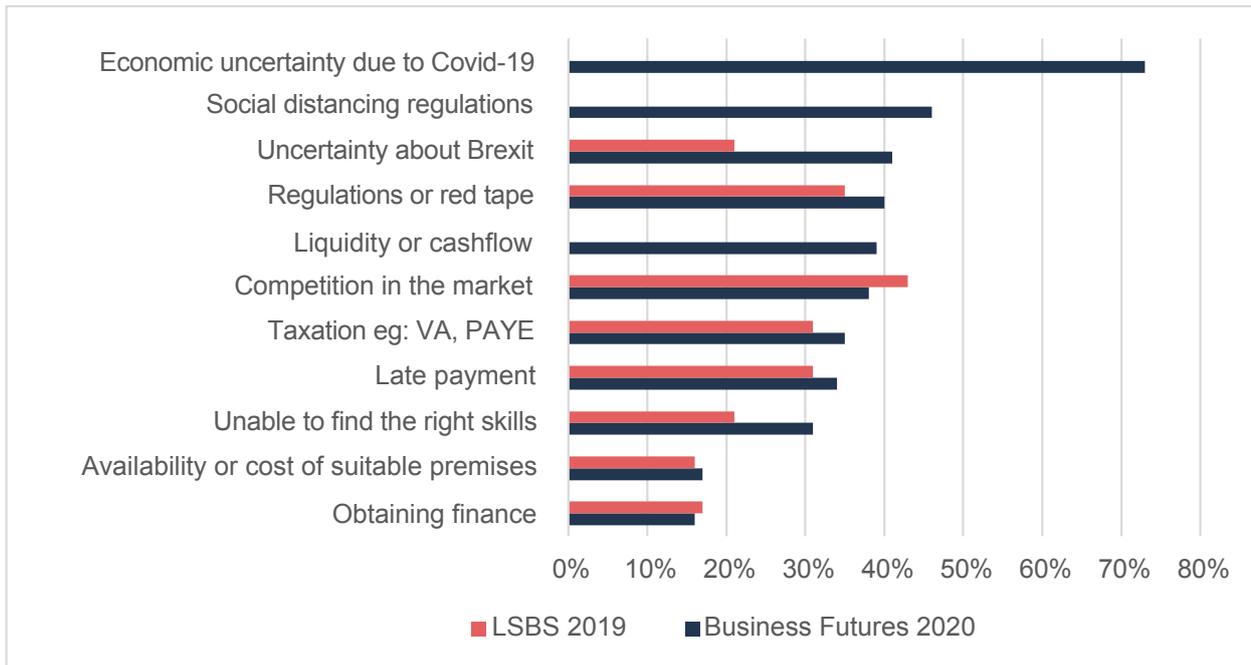
For just over three-fifths of businesses, introducing new digital technologies had become a higher priority as a result of the pandemic. The survey sought to explore which specific digital technologies have seen an acceleration in adoption. The most commonly used digital technologies amongst SMEs currently are accountancy and HR software, social media and websites for sales and marketing. However, the reported growth in adoption spurred by businesses' responses to the pandemic were concentrated in technologies such as videoconferencing, the internet of things (IoT) and connected devices, and online marketing and social media (further discussion on this can be found in section 2.4).

As businesses have responded quickly to the challenges and opportunities caused by COVID-19, digital technologies have played an important role in supporting new strategies. businesses have the appetite or need for further investment in these technologies,

Overall, the Business Futures survey of SME actions and reactions to the COVID-19 pandemic confirm the enormous challenges faced by the UK's diverse SME community. For a great many, the future remains far from certain with the virus and the necessary public health response presenting obstacle to business success into next year. In addition, many businesses have an eye on another key source of concern going into 2021 – progress on negotiations about future trading relationships with the EU. However, SME business leaders can be innovative and adaptable in the face of a crisis. Our survey shows that priorities pivoted to new processes and technologies, as well as 'batoning down the hatches', to meet customer needs and

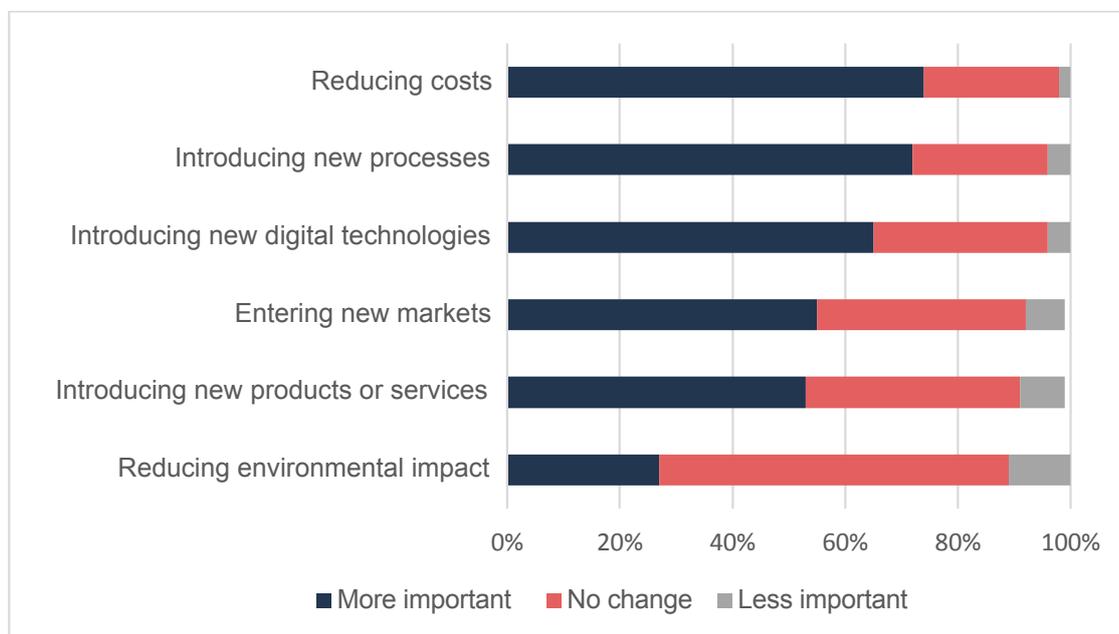
**Figure 12: Obstacles to business success (percentage of businesses)**

Source: ERC Business Futures Survey 2020



**Figure 13: Changing priorities as a result of the COVID-19 pandemic (percent of businesses identifying as business priority)**

Source: ERC Business Futures Survey 2020



find new ones. The introduction of new digital technologies will also help to lay the foundations of a thriving and more productive SME base in future.

## 2.5 Digital responses to COVID-19 in SMEs

The Fourth Industrial Revolution and new digital technologies are often seen as enablers of productivity growth. Prior to the COVID-19 pandemic, small businesses, because of their constrained resources - financial and human - were lagging behind their larger counterparts in the rates of adoption of digital technologies. There is little doubt, as we have indicated above, that the COVID-19 crisis has already had a significant impact on digital transformation of SMEs, with many businesses adopting digital technologies they have never used before or increasing the use of previously adopted technologies.

The decision to adopt a new, often disruptive, digital technology doesn't come easily for a business. It can involve risky investment that often implies serious organisational change and, sometimes, deep modifications to the business model itself. On the other hand, the benefits of adoption may open new opportunities. Analysis of LSBS<sup>16</sup> data shows that businesses that use digital technologies have, on average, higher productivity, and are more likely to export, invest in R&D, and innovate.

What are the other characteristics of digital adopters? From the analysis of the LSBS 2018 data, one factor we consistently find important in explaining the use of digital technologies by SMEs is their ambition to grow. Businesses using digital technologies are also more likely to have in place some efficiency-oriented management practices, such as employee and business performance tracking. We also find a positive association between the use of business support and advice by firms and their digital uptake.

### Patterns of digital adoption

In sum, businesses who use digital technologies can be characterised as ambitious, innovative businesses looking to improve efficiency and performance, making use of professional business advice and support when needed.

As we have indicated above, the Business Futures Survey reveals a positive dynamic in terms of digital adoption amongst UK SMEs. Only 1 per cent of firms responding to the survey reported that they did not use any digital technologies. Among ten specific digital technologies covered by the survey,

more than 95 per cent of SMEs used at least two technologies. Fifty per cent of firms surveyed said that they currently use between four and seven of the digital technologies covered by the survey.

Adoption rates differ greatly depending on type of technology, and between small and medium firms. As noted above, the most commonly used digital technologies amongst the SMEs surveyed were longer-existing digital technologies: 79 per cent of SMEs used accountancy or HR software, 76 per cent used online marketing and social media solutions, and 73 per cent used online sales via own website or another platform. Interestingly, for these technologies, adoption rates are slightly higher for small firms compared to medium-sized businesses (Figure 14).

In terms of more recent technologies, 59 per cent of small firms and 70 per cent of medium-sized businesses reported using cloud computing solutions. Video conferencing tools were used by 62 per cent of small and 75 per cent of medium-sized firms. Unsurprisingly, Customer Relationship Management (CRM) systems and Computer-Aided Design (CAD) software are better diffused among medium-sized firms (52 per cent and 44 per cent respectively) than small firms (46 per cent and 36 per cent). There are also encouraging signs regarding newer digital technologies: 73 per cent of SMEs surveyed reported using Internet of Things (IoT) technologies (73 per cent of small firms and 68 per cent of medium firms), 12 per cent used Artificial Intelligence (AI) and machine learning, and 11 per cent of businesses used Augmented Reality (AR) and Virtual Reality (VR) technologies.

Previous studies provide some reference data points that give an indication of how digitisation of UK SMEs has evolved during the last year<sup>17</sup>. According to the *Going Digital* report<sup>18</sup>, in 2019, only 53 per cent of UK SMEs undertook e-commerce activity, 56 per cent used collaborative software and 58 per cent used cloud computing. The Business Futures Survey findings indicate that there has been an improvement in adoption rates of these digital technologies in just one year. A positive dynamic is also observed regarding CRM software when compared with OECD 2019 data<sup>19</sup>: 26 per cent of small businesses and 31 per cent of medium firms were found using CRM systems in 2019. Data from the LSBS 2019 indicated that only about 3 per cent of small and 8 per cent of medium firms used AI, robotics and automation technologies; adoption

<sup>16</sup> Department for Business, Innovation and Skills. (2020). Longitudinal Small Business Survey, 2015-2018: Secure Access. [data collection]. 3rd Edition. UK Data Service. SN: 8261, <http://doi.org/10.5255/UKDA-SN-8261-3>

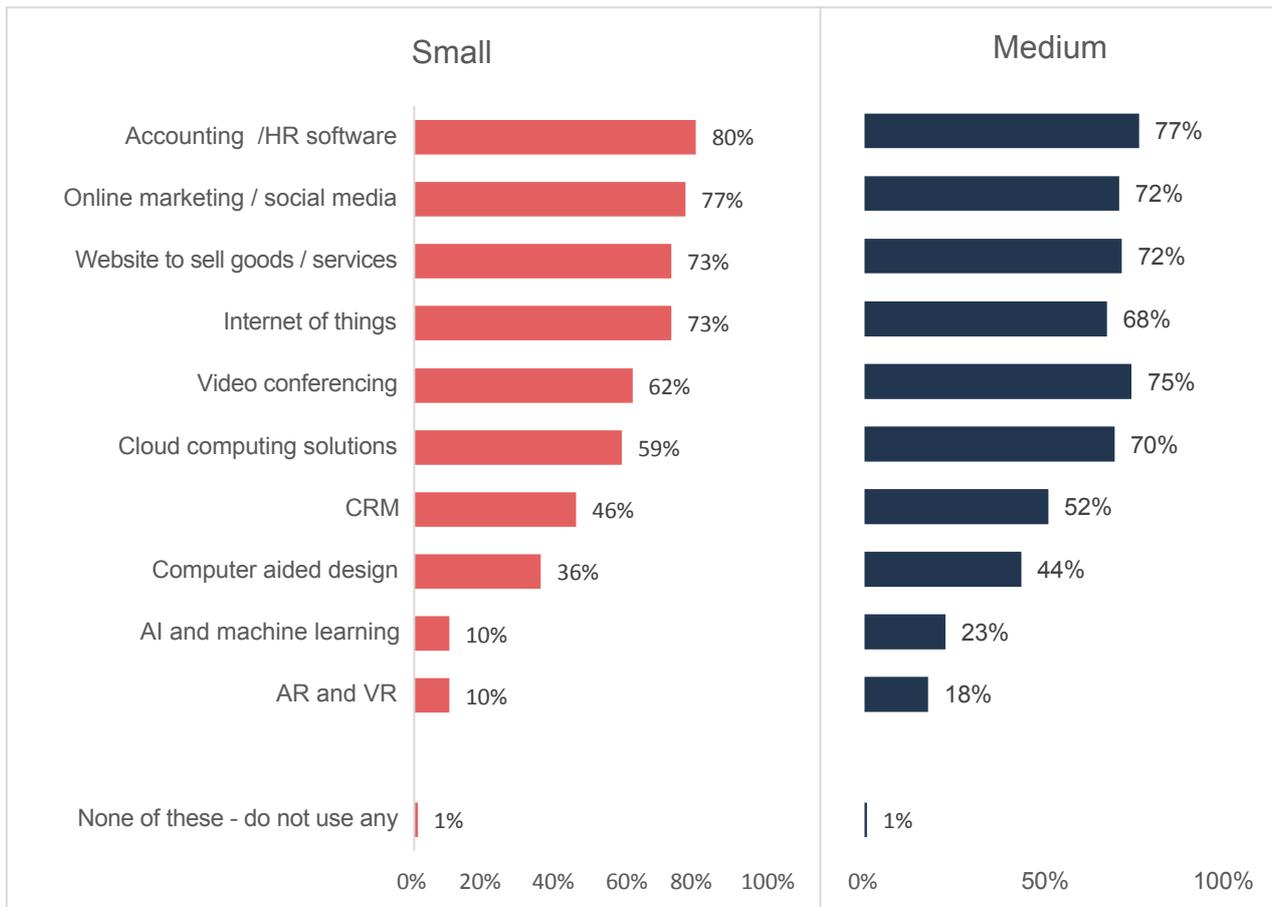
<sup>17</sup> This comparison is only indicative as different surveys use different methodology and focus on different technologies.

<sup>18</sup> Abel-Koch, J. et al. (2019). *Going Digital. The challenges Facing European SMEs*. European SME Survey 2019, published by Gospodarstwa Krajowego (BGK), Bpifrance, British Business Bank, Instituto de Crédito Oficial (ICO), KfW Bankengruppe (KfW). Retrieved from [https://www.british-business-bank.co.uk/wp-content/uploads/2019/11/going-digital-the-challenges-facing-european-smes-european-sme-survey-2019\\_2.pdf](https://www.british-business-bank.co.uk/wp-content/uploads/2019/11/going-digital-the-challenges-facing-european-smes-european-sme-survey-2019_2.pdf)

<sup>19</sup> [https://stats.oecd.org/Index.aspx?DataSetCode=ICT\\_BUS](https://stats.oecd.org/Index.aspx?DataSetCode=ICT_BUS)

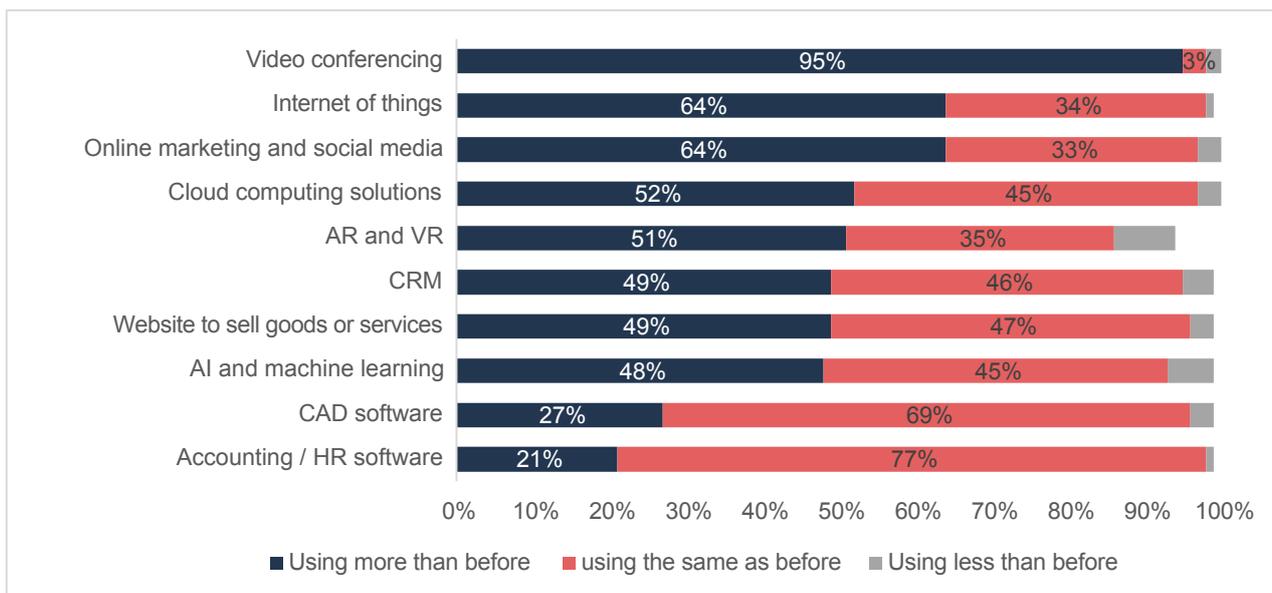
**Figure 14: Proportion of firms using digital technologies by size**

Source: ERC Business Futures Survey 2020



**Figure 15: Changes in the intensity of use of digital technologies (percentage of users)**

Source: ERC Business Futures Survey 2020



rates for AR and VR were respectively 1 per cent and 2 per cent for small and medium firms.

### Impact of COVID-19 on SME digital adoption

What part of this emerging positive dynamic can be attributed to the digital responses of firms facing COVID-19 challenges? About half of the SMEs in the Business Futures Survey (55 per cent of medium-sized businesses and 49 per cent of small businesses) identified 'introducing new digital technologies as a priority' in the last 12 months. As noted above, 65 per cent of these firms estimated that the importance of this business priority had increased as a result of the COVID-19 pandemic. A majority of the firms surveyed (62 per cent) said that they had made some changes in their use of digital technologies in response to the pandemic.

New remote working practices had a large impact on the use of video conferencing and collaborative working tools, with 95 per cent of businesses reporting using these tools more than before (Figure 15). Interestingly, while about half of firms reported an increase in the intensity of their use of websites to sell goods and services, 64 per cent of firms said that they increased their use of online marketing and social media. Alongside these more expected changes, the evidence suggests a more surprising positive dynamic in the use of advanced digital technologies – IoT (64 per cent of firms report increased usage), AR and VR (49 per cent) and AI and machine learning (48 per cent). Only a small minority of firms reported a reduction in the use of digital technologies.

The survey findings indicate that businesses which had adopted digital technologies before COVID-19 struck were armed with appropriate tools that have helped them to overcome some of the challenges of lockdown. This is captured in the reflections of some of the respondents, who remarked that digital solutions were already part of their "working normal" before the pandemic, which made it easy for them to move to remote working practices, for example:

*"Different working practices from home, fortunately we were already on Microsoft teams for two years and we are still forecasting good work till April 2021."*

But at the same time, many SME leaders said that they had needed to further develop and reinforce their IT systems, which resulted in increased costs:

*"There has been a lot of expenditure with IT. We have continued at the same capacity."*

*"We have had to implement further IT systems, so people can work from home, hire IT team. Main consequence has been cost."*

Some businesses have continued to invest in IT in anticipation of further possible lockdowns:

*"Concerns are whether demand will be there from customers... will be largely impacted in case we have to close, so we are investing in home working as much as possible."*

And, for some businesses, there was a major digitally enabled shift in business orientation:

*"Moving forward, we are focusing on online selling, it is a big step change for us."*

*"We have decided to serve customers not face to face any more. We have started doing consultations digitally."*

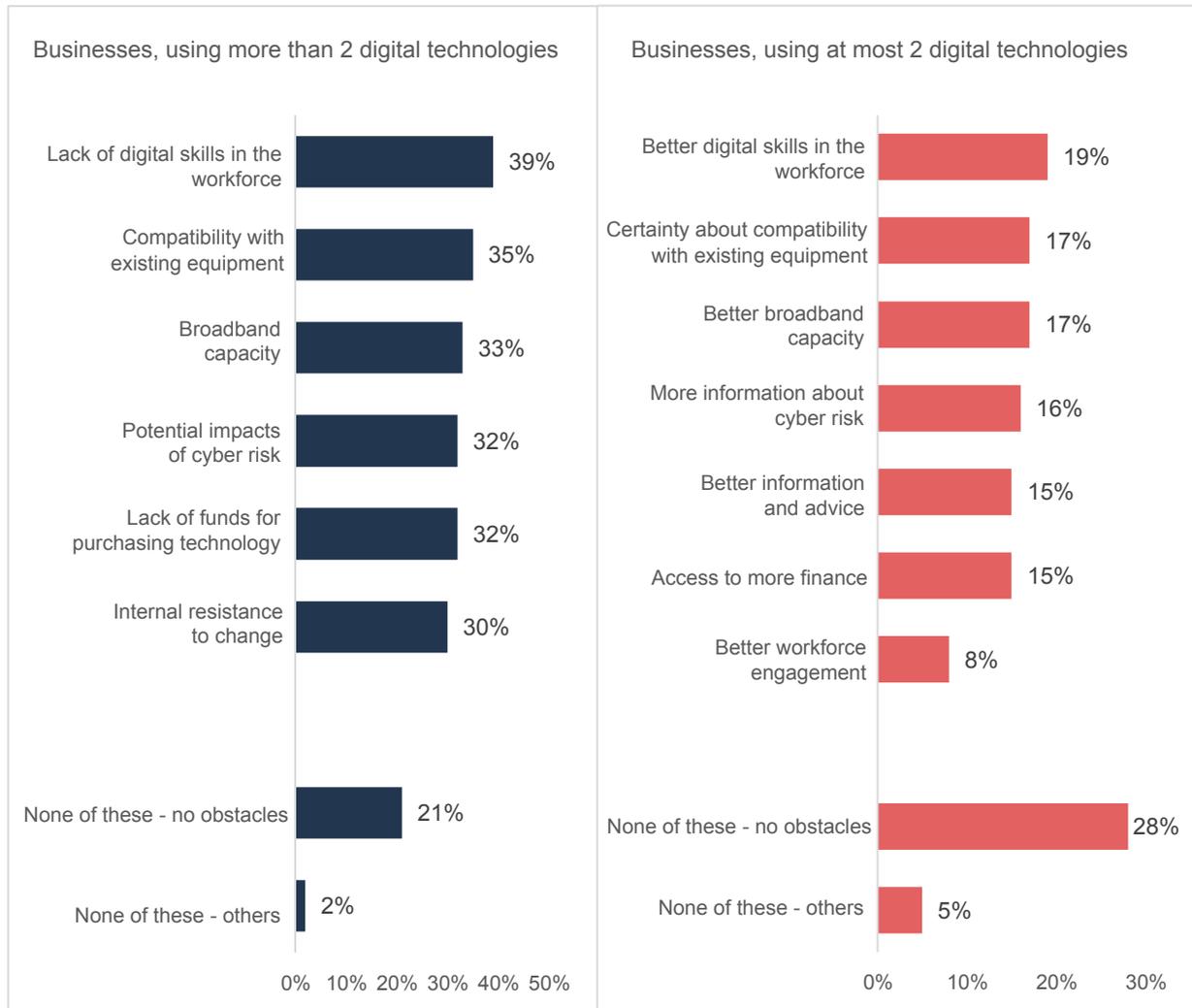
### Obstacles and outcomes

The Business Futures Survey also explored whether SMEs face any specific obstacles preventing them introducing digital solutions. Businesses implementing three or more digital technologies were asked which obstacles they had encountered in doing so. Those SMEs adopting two or fewer digital technologies were asked if there were factors that would encourage them to increase their digital use. The main concern for both groups of SMEs was digital skills: 39 per cent of more digitised businesses considered the lack of digital skills as an obstacle, and 19 per cent of less digitised businesses said that better digital skills in the workforce would encourage them to use more digital technologies (Figure 16). Compatibility with existing equipment, broadband capacity, cyber risk and access to finance were rated almost equally important in terms of obstacles. Interestingly, a significant proportion of firms did not see any obstacles to their digitisation journey.

When asked about the outcomes of their digital adoption, the majority of SMEs said that the technology they had adopted met their expectations (92 per cent of medium-sized firms and 84 per cent of small firms). Implementation of new technology comes at a cost and often requires additional spending on IT equipment and staff, as noted earlier (43 per cent of digitised SMEs mentioned an increase in costs as an outcome of adoption, as shown in Figure 17). However, a further increase in efficiency of operations can also reduce costs, an occurrence stated by 19 per cent of firms. Just over a third (34 per cent) of SMEs said that introduction of digital technologies in business operations resulted in increased sales and 38 per cent of respondents also said that digitalisation had had a positive impact on their innovation activity, a crucial element of future productivity growth. Moreover, more than half of SMEs responding to the survey reported that

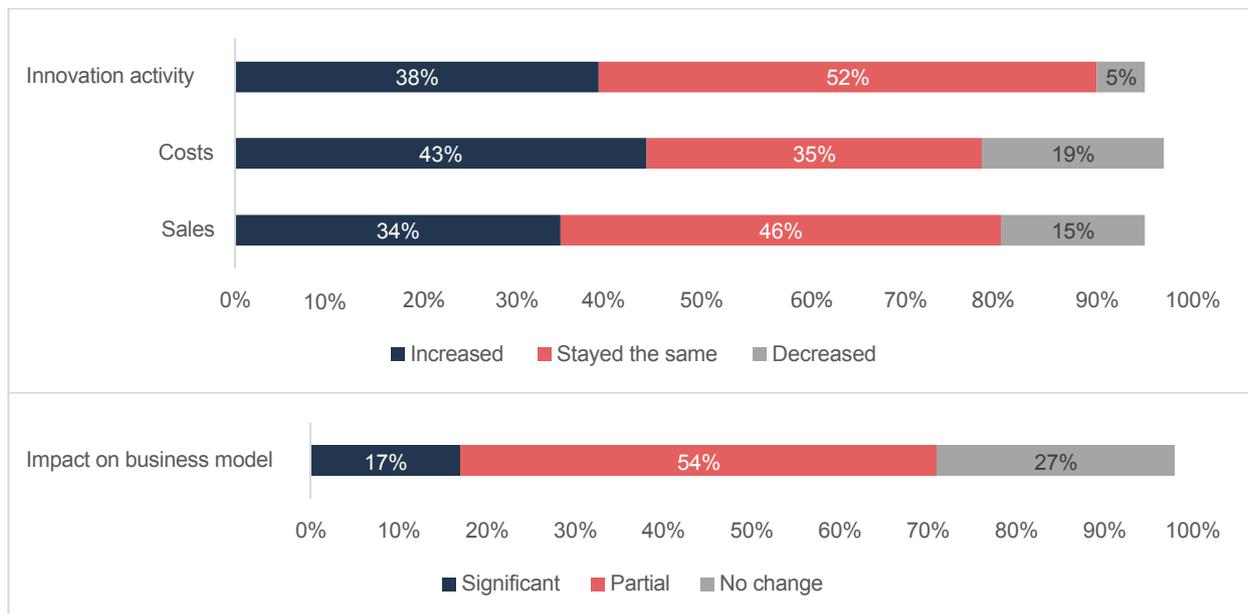
**Figure 16: Digitisation obstacles and enablers**

Source: ERC Business Futures Survey 2020



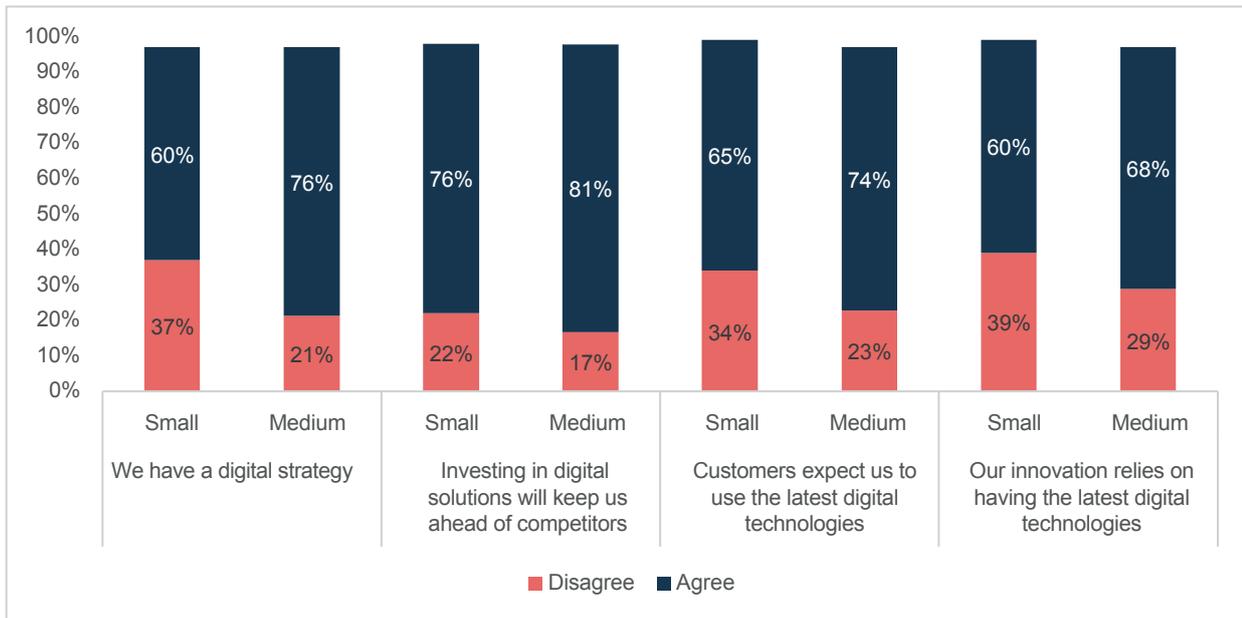
**Figure 17: Outcomes of the implementation of digital technologies (percentage of users)**

Source: ERC Business Futures Survey 2020



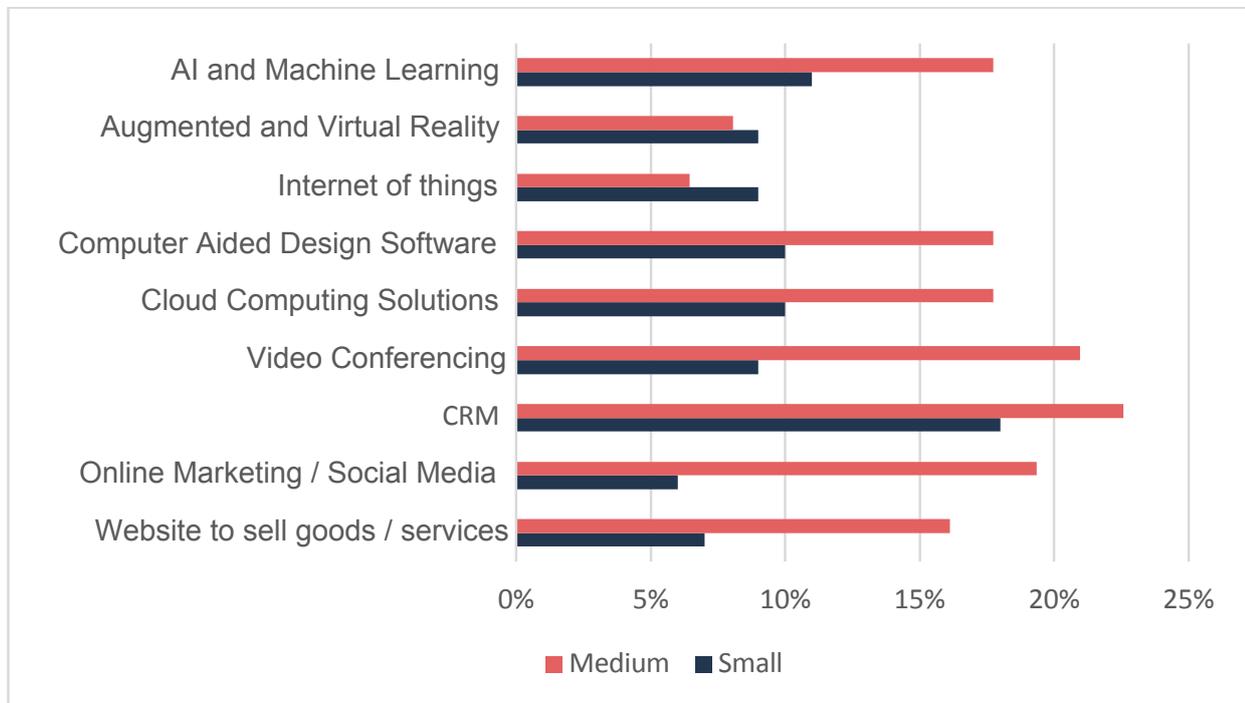
**Figure 18: External and internal drivers of digitisation (percentage of businesses)**

Source: ERC Business Futures Survey 2020



**Figure 19: Future plans to increase use of digital technologies (percentage of businesses by size)**

Source: ERC Business Futures Survey 2020



implementing new digital technologies affected, at least partially, their business model, and 17 per cent said that the impact was significant.

Previous research has demonstrated that attitudes towards technologies and perceptions of their benefits plays an essential role in adoption decision-making. External factors, such as competition and pressure from customers are important drivers of any organisational transformation along with internal factors, such as ambition and strategic leadership. Figure 18 shows that a majority of the SMEs replying to the Business Futures Survey see digital technologies as a way to remain competitive and sustain innovation. Medium-size businesses perceive greater pressure from customers to adopt the latest technologies, and they are more likely to have a digital strategy than smaller firms.

Overall, most of the SMEs surveyed recognised the benefits of introduction of digital technologies despite the time and effort it requires (93 per cent of medium and 91 per cent of small firms) and expected to be using digital technologies more in the future (95 per cent and 88 per cent respectively). However, in spite of these positive attitudes, and although many SMEs invested in digital technologies during the early phase of the pandemic, only a small proportion of SMEs stated that they had formed an intention to continue further along this route (Figure 19). Most SMEs said that they had no further plans to introduce new digital technologies. Businesses, spurred to accelerate technology adoption plans in response to a crisis, seem to be taking a pause. This is especially true of small businesses, two-thirds of which said they had no further plans to introduce new technologies compared with 46 per cent of medium-sized ones. There are likely to be a range of issues underpinning this decision – the uncertain outlook, already discussed, resources to explore new technologies and the capacity in the business to introduce new digital solutions.

For those companies that do have plans to continue their digitisation journey, the technologies where SMEs expect to focus efforts are shown in Figure 19. For both small and medium-sized businesses, new customer relation management systems are expected to be a priority. In addition, medium-sized businesses are looking to explore the adoption of computer-aided design software and machine learning.

Overall, the insights from the Business Futures Survey appear to indicate a major positive shift in

the adoption of advanced technologies and in overall attitudes towards digital technologies among SMEs. From policy perspective, to use the momentum and build on this positive shift, however, further support is needed in three key areas: leadership, innovation and skills.

## 2.6 COVID-19, SMEs and net-zero

A further major theme covered in the Business Futures Survey was SME approaches to 'net-zero'. The climate emergency is leading many countries to commit to various targets for reducing their carbon footprint<sup>20</sup>. In 2019, the UK passed a net-zero emissions law to be attained by 2050. Net-zero refers to deep reduction in emissions. In this scenario, any emission should be offset by removing CO<sub>2</sub> from the atmosphere. This means that net-emissions are reduced by 100 per cent, to zero. The UK government recently announced a plan for a 'green recovery' that will restore the economy from the COVID-19 crisis<sup>21</sup>. But what do we know about existing environmental attitudes and practices of SMEs in the UK? And what impact has the COVID-19 crisis had on SMEs' approaches to net-zero?

Emissions by SMEs vary widely depending on the industry in which they operate<sup>22</sup>. The majority of SMEs in the UK are operating in non-carbon intensive industries. This explains partly why most SMEs do not seem to actively manage and report their emissions and why prior research has not paid much attention to them. But SMEs will be called upon to comply with the net-zero policies and reduce their emissions. Data from the ERC's Business Futures Survey provides some valuable insights into SMEs' attitudes and activities related to net-zero, and the drivers and barriers of these practices during the COVID-19 crisis.

### Environmental attitudes and practices

SMEs have strategic priorities that guide their decision-making and, in turn, affect their approaches towards net-zero. The Business Futures Survey results show that, despite the COVID-19 crisis, sustainability is part of the strategic objectives of many UK SMEs, with 52 per cent reporting that 'reducing environmental impact' is their business priority. Also, just over a quarter of firms declared that 'reducing environmental impact' had become a more important priority since the COVID-19 crisis. Nearly two-fifths (39 per cent) of SMEs surveyed said they 'always consider the future environmental

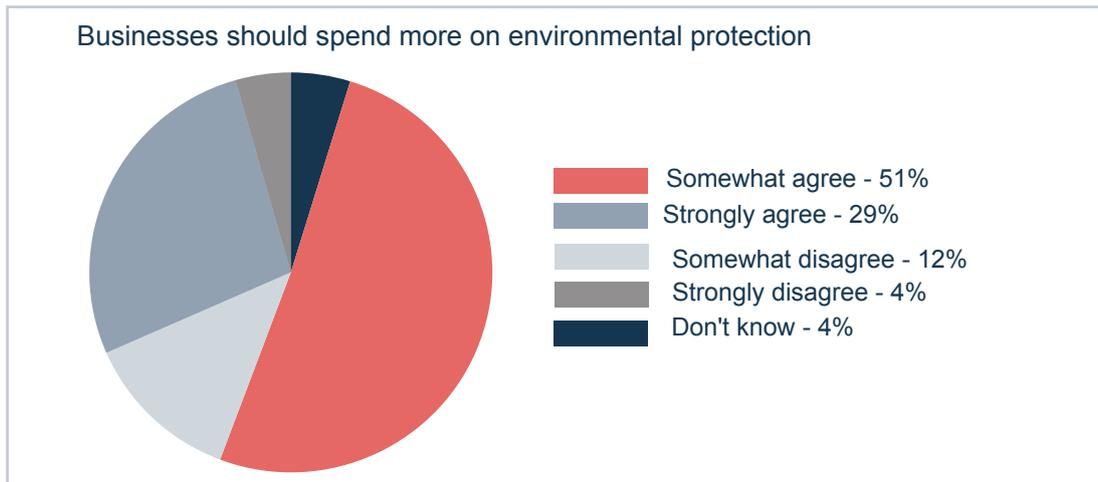
20 Carbon footprint refers to the total amount of greenhouse gases (GHG) produced directly and indirectly by human activities. It is calculated in tons, as the sum of all emissions of carbon dioxide (CO<sub>2</sub>).

21 Johnson, B. (2020). 'Now it the time to plan our green recovery', Financial Times, 17 November. Available at: <https://www.ft.com/content/6c112691-fa2f-491a-85b2-b03fc2e38a30> (Accessed: 18 November 2020).

22 The most GHG intensive industries in the UK are energy supply, agriculture, water supply, mining, transport, and manufacturing (ONS,2019). Available at: <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/greenhousegasintensityprovisionalestimatesuk/2018provisionalestimates> (Accessed: 6 July 2020).

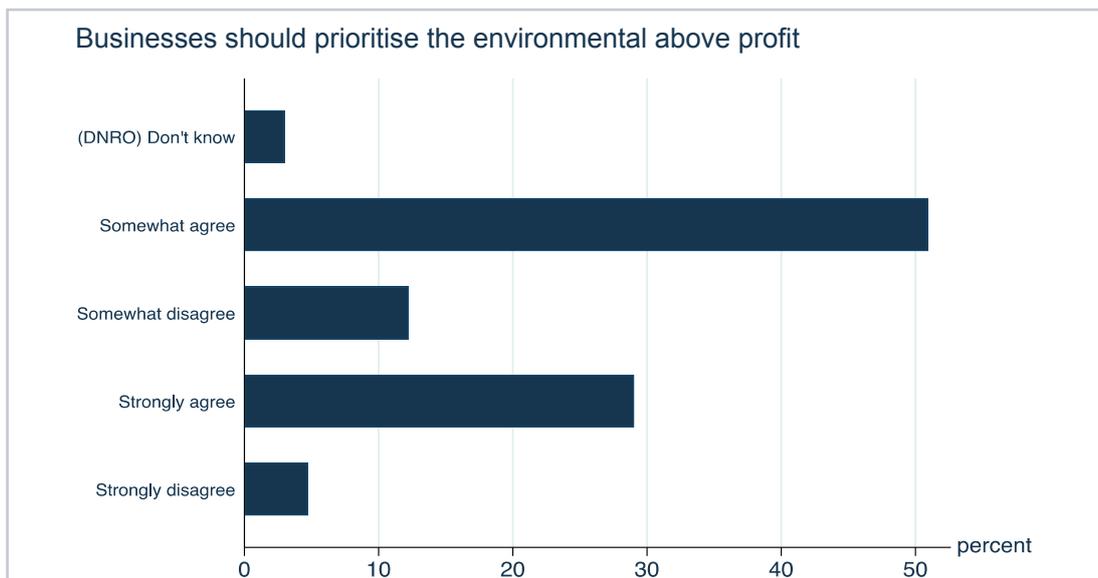
## Figure 20: Attitudes towards environmental spending

Source: ERC Business Futures Survey 2020



## Figure 21: Attitudes towards the environment vs. profit in SMEs

Source: ERC Business Futures Survey 2020



implications of their decisions', whilst 43 per cent think about this sometimes. Only a very small proportion of firms (5 per cent) said that they 'never consider the impact of their decisions upon the environment'.

Environmental attitudes can influence the adoption of net-zero practices<sup>23</sup>. Owners or managers of SMEs may hold positive attitudes – responding with pro-environmental intent – or they may hold negative attitudes – deprioritising or ignoring environmental problems. As shown in figure 20, 29 per cent of the firms surveyed said they 'strongly agreed' that businesses should 'spend more on environmental protection'; 51 per cent 'somewhat agreed'; 12 per cent 'somewhat disagreed'; 4 per cent 'strongly disagreed'.

Following on from this, 31 per cent of the firms surveyed said that they 'strongly agreed' with the statement that 'environmental protection should be part of the business bottom line', whilst 50 per cent 'somewhat agreed'. A minority (15 per cent) 'somewhat disagreed' or 'strongly disagreed' with this statement. When firms were asked whether they 'should prioritise the environment above profitability or growth', 16 per cent of the firms 'strongly agreed' and 43 per cent 'somewhat agreed', whilst 37 per cent 'somewhat disagreed' or 'strongly disagreed' (Figure 21). This evidence indicates generally positive environmental attitudes overall amongst the SMEs surveyed.

<sup>23</sup> Dibrell, C., Craig, J., & Hansen, E. (2011). How managerial attitudes toward the natural environment affect market orientation and innovation. *Journal of Business Research*, 64(A), 401-407.

## Net-zero practices in UK SMEs

Combating pollution requires firms to adopt a portfolio of environmental practices that span over different business domains - from production changes, to distribution systems, organisational changes, training, environmental R&D, and market research. Our results indicate that 72 per cent of firms took steps to minimise the environmental impact of their business over the past year, in the midst of the COVID-19 crisis.

Firms across all sectors often adopt Environmental Management Systems (EMSs)<sup>24</sup> to reduce their carbon emissions. EMS are management practices that improve environmental performance by changing organisational structures, and by introducing appropriate procedures and routines<sup>25</sup>. Thirty-two per cent of the firms we surveyed said that they had implemented an in-house EMS and 13 per cent of them had had their EMS certified externally. These rates are very similar to the pre-crisis levels as recorded in a DEFRA<sup>26</sup> survey in the UK in 2013, where 35 per cent of firms in the UK adopted an EMS and 18 per cent had a certified EMS<sup>27</sup>.

The firms in the Business Futures Survey were pursuing a variety of approaches to net-zero. Table 1 shows the most widely diffused environmental practices. More than half of the firms (54 per cent) reported that they had changed their production and/or distribution processes (i.e., transport/logistics) to reduce carbon emissions. The second most used practice is the use of renewable energy (41 per cent). Around a third of the firms surveyed provided training on environmental matters (36 per cent), introduced new low carbon products/services to the market (35 per cent), and undertook environmental reports (31 per cent). Twenty-seven per cent of the surveyed firms reported that they improved pollution filtering, 22 per cent conducted market research related to low carbon products/services, and 20 per cent were engaged in environmental R&D. Our results show that irrespective of sector, SMEs were undertaking a variety of management, organisational and technology-based practices to reduce carbon emissions.

**Table 1: Net-zero practices**

Source: ERC Business Futures Survey 2020

Changed processes or transport/logistics to reduce carbon emissions	54%
Moved to use more renewable energy	41%
Conducted training on environmental matters	36%
Introduced new low carbon products or services	35%
Undertaken environmental reports or audits	31%
Introduced improved pollution filtering for emissions	27%
Conducted market research related to low carbon products or services	22%
Invested in research and development related to the environment	20%

24 García-Quevedo, J., Kesidou, E., & Martínez-Ros, E. (2020) Driving sectoral sustainability via the diffusion of organizational eco-innovations. *Business Strategy and the Environment*, 29 (3), 1437-1447.

25 Ozusaglam, S., Kesidou, E., & Wong, C. Y. (2018). Performance effects of complementarity between environmental management systems and environmental technologies. *International Journal of Production Economics*, 197, 112–122. <https://doi.org/10.1016/j.ijpe.2017.12.026>.

26 Environmental Protection Expenditure by Industry <https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/surveyofenvironmental-protectionexpenditure>

27 Demirel, P., Iatridis, K., & Kesidou, E. (2018). The impact of regulatory complexity upon self-regulation: Evidence from the adoption and certification of environmental management systems. *Journal of environmental management* 207, 80-91.

**Table 2: Drivers of net-zero practices in SMEs***Source: ERC Business Futures Survey 2020*

	Extremely/ Very important	Somewhat / Moderately important	Not at all Important
Reducing costs	54%	36%	8%
Improving your image and reputation	49%	39%	10%
Government grants or subsidies	34%	32%	27%
Environmental regulations or taxes	29%	46%	19%
Voluntary agreements within your sector or supply chain	24%	40%	28%
Availability of external funding from banks	22%	32%	38%
Demand for low-carbon products or services	23%	40%	30%

**Table 3: Barriers to net-zero practices in SMEs***Source: ERC Business Futures Survey 2020*

The COVID-19 pandemic	46%
Lack of information on low carbon technologies	33%
Cost of meeting regulations or standards	32%
Uncertain demand for low carbon products or services	27%
Lack of relevant skills	24%
Administrative or legal procedures	18%
Difficulties in accessing finance	18%

**Drivers of net-zero practices**

Both external (e.g., environmental regulations) and internal (e.g., efficiency, corporate image and management capabilities) factors drive firms to commit to net-zero practices<sup>28</sup>. The configuration of internal and external factors that stimulate the adoption of carbon-reducing practices may change during times of crisis. Table 2 indicates that in the context of the COVID-19 crisis, firms were committing to reducing their carbon emissions largely due to internal factors. Specifically, firms said they were adopting net-zero practices to reduce their costs (52.5 per cent) and to improve their image and reputation (45.5 per cent). Government policies, especially grants or subsidies (31 per cent) as well as environmental regulations and taxes (28 per cent), were the key external drivers of adoption

of net-zero practices amongst firms in the UK. This is in line with prior research. Sectoral pressures to comply with voluntary agreements (20 per cent), availability of external funding (20 per cent), as well as demand for low carbon products and services (19 per cent) are also important in driving firms to adopt environmental practices.

**Barriers to net-zero practices**

Several factors may prevent SMEs committing to net-zero targets. Our survey findings show that the COVID-19 pandemic plays a dual role here; it has driven the adoption of net-zero practices as firms have sought to reduce costs in times of crisis but has also constrained the diffusion of net-zero practices. 46 per cent of firms stated that COVID-19 was a barrier to their net-zero practices

<sup>28</sup> Kesidou, E., & Demirel, P., (2012). On the drivers of eco-innovations: Empirical evidence from the UK, *Research Policy* 41 (5), 862-870.

(Table 3). Furthermore, our results show that lack of information on low carbon technology was a key constraint for many firms (33 per cent). Complying with regulations, whilst also being identified as a driver of adoption, was also cited as a barrier by 32 per cent of firms. Uncertain demand for low carbon products and services (27 per cent) and lack of relevant skills (24 per cent) also acted as barriers to the adoption of net-zero practices. Finally, 18 per cent of the firms said that they faced barriers related to perceived complex administrative or legal procedures and difficulties in accessing finance. Overall, the Business Futures Survey found that most SMEs had positive environmental attitudes and said that they were willing to invest in net-zero practices. However, the COVID-19 pandemic was cited by nearly half of all firms as a barrier to implementation. The current context provides an opportunity to introduce a mix of policies that will support businesses to make the transition towards net-zero, embracing innovation support, regulation, and improved information and advice.

## 2.7 COVID-19 effects on R&D and innovation

Innovation, or the introduction of new products, services and ways of doing business, will be a critical element of the recovery beyond the worst of the COVID-19 crisis. Undertaking R&D and innovation is always risky, however, with the proportion of innovation projects that fail, wholly or in part, said to be between 40 per cent and 90 per cent<sup>29</sup>. Are firms willing to make this type of risky innovation investment in uncertain times?

### Innovation and the Great Financial Crisis

What does the early evidence suggest about how firms have adjusted their innovation behaviour in response to the COVID-19 crisis?

International evidence from the Great Financial Crisis (GFC) suggests the strong pro-cyclicality of R&D and innovation activity – falling during recessions and rising during periods of growth. This may reflect perceived market opportunities which look less promising and more uncertain in recessionary periods. It may also be due to financial constraints on firms and the diversion of funds which would have been used for innovation to meet other short-term needs. These financial constraints may be more severe in smaller firms which tend reduce

their R&D and innovation activity more sharply in recessions than larger firms<sup>30</sup> (Schmitz, 2014).

Data from the UK Innovation Survey (UKIS) provides a good picture of what happened to innovation activity in UK firms after the GFC<sup>31</sup>. This survey is conducted every two years and one wave of the UKIS covered the period 2008-10, with the previous wave covering the pre-recession 2006-08 period. Subsequent waves of the survey provide an overview of post-crisis behaviour. The percentage of innovation-active firms – those either innovating or investing in innovation – fell sharply from 2006-08 (58.2 per cent) to the recession period (36.8 per cent) (Figure 22). In 2014-16 aggregate levels of innovation activity on this metric had not recovered their pre-recession levels (49.0 per cent). UK firms reporting product or service innovation fell by 26.6 per cent during the GFC and had only recovered pre-recession levels of activity by 2014-16, 6 years later. Levels of process innovation activity fell by around a fifth between 2006-08 and 2008-10 and recovered steadily thereafter (Figure 22).

The experience of the GFC suggests that when crisis hits, levels of R&D and innovation activity can fall quickly and sharply and then recover slowly. Other analysis we have done also suggests that recessionary impacts differed sharply between sectors and regions and that recovery was more uneven in the UK than in other large European economies<sup>32</sup>.

### Innovation and COVID-19

But what do we know about how UK firms have changed their R&D and innovation behaviour in response to COVID-19? Definitive data is not yet available on this, but we do have some short-term data based on surveys we have done this year with innovating firms which have had support from Innovate UK<sup>33</sup>. Surveys were conducted in June and October 2020 with around 250 innovating firms. Both surveys emphasised the seriousness of the COVID-19 pandemic. In the three months to October, revenues fell in 58 per cent of firms surveyed with 30 per cent of firms experiencing a halving of turnover (36 per cent in June). As in the GFC, the impacts of the crisis on R&D and innovation were also significant. 1 in 3 firms reduced their R&D and innovation spending in the three months to October (1 in 2 in June) with a further 1

29 Rhaïem, K. and Amara, N. (2019). Learning from innovation failures: A systematic review of the literature and research agenda. *Review of Managerial Science*, <https://doi.org/10.1007/s11846-019-00339-2>.

30 Schmitz, T. (2014). Fluctuations in R&D investment and long-run growth: The role of the size distribution of innovating firms, manuscript, Bocconi University.

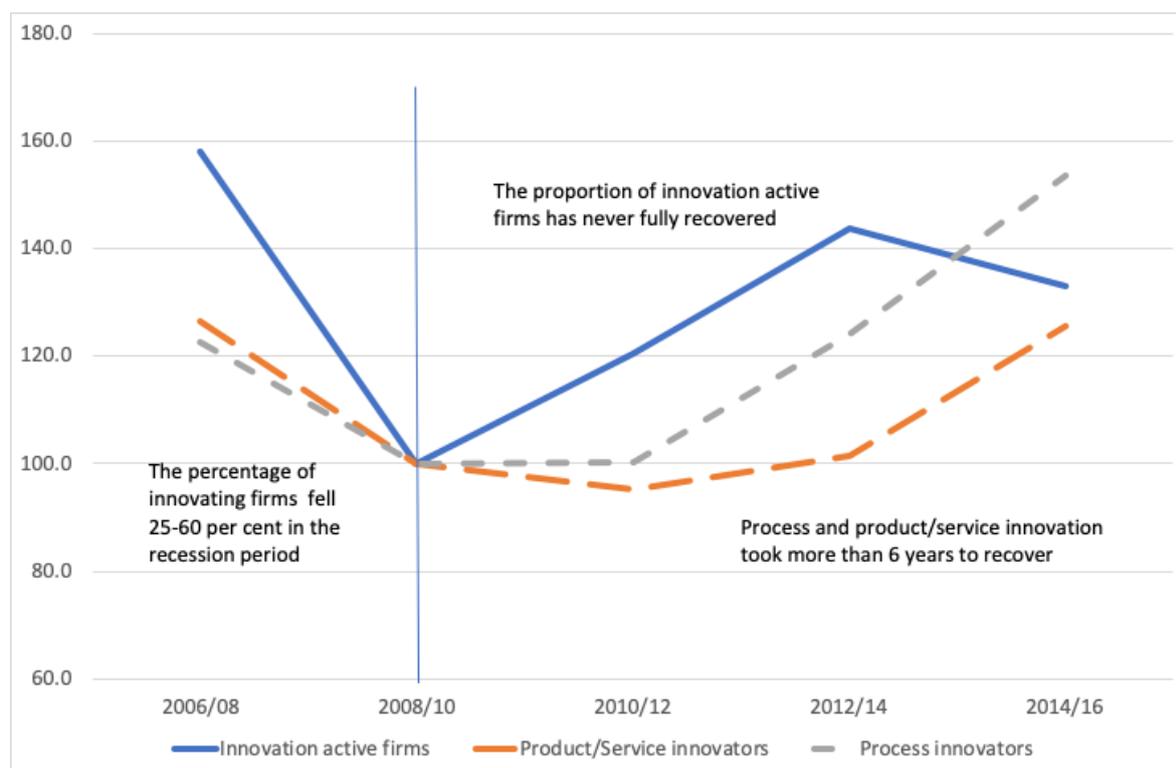
31 Roper, S. and J. Turner (2020). "R&D and innovation after COVID-19: What can we expect? A review of prior research and data trends after the great financial crisis." *International Small Business Journal-Researching Entrepreneurship* 38(6): 504-514.

32 Roper, S (2020) 'International sectoral R&D trends after the global financial crisis: What can we learn for current policy?' ERC Insight Paper, May 2020.

33 Roper, S and Vorley, T (2020) 'Assessing the impact of COVID-19 on Innovate UK award holders Survey and case-study evidence Wave 1 – June/July 2020', ERC Insight Paper, September.

**Figure 22: The percentage of innovating firms in the UK**

Sources: *Statistical Annexes for the UK Innovation Surveys, 2009, 2011, 2013, 2015 and 2017.*



in 18 firms stopping all R&D activity (1 in 9 in June). Looking forward, further short-term reductions in R&D and innovation spending were also planned. In October, around 1 in 8 firms planned to reduce R&D and innovation investment by more than 50 per cent over the next three months. Sample sizes are small but, as in the GFC, sharper reductions in R&D and innovation spending were evident among smaller firms.

These figures suggest that the COVID-19 pandemic has had, and is having, a significant short-term negative impact on R&D and innovation in the UK. UK government policy support for R&D and innovation has, however, developed significantly since the GFC. This may help to accelerate a recovery in R&D and innovation after the worst of the COVID-19 crisis. For example, the rapid development of the Catapult network of technology intermediaries over the last decade may help firms to re-activate their innovation activity. Other measures such as R&D tax credits have also become significantly more important in the UK since the GFC. Support provided through the various elements of the Industrial Strategy Challenge Fund are also supporting innovative activity in many sectors. Offsetting these positives, EU withdrawal has created uncertainty about future access to

EU research collaborations and funding for both UK firms and university researchers. As a result, the government's target of reaching 2.4 per cent of GDP devoted to R&D by 2027 looks ever more challenging to achieve.

## 2.8 COVID-19 and workplace mental health

The impact of the COVID-19 crisis on mental health has understandably become a major cause of concern, with significant attention being paid to the implications of the significant changes to working lives that the pandemic has brought. In early 2020, just before the COVID-19 pandemic hit the UK, the ERC carried out a study<sup>34</sup> which aimed to investigate the experiences of employers, based in the Midlands, of dealing with mental health issues, and the associated impacts on business performance and productivity<sup>35</sup>. The study comprised a survey of around 1,900 private and voluntary sector employers in the Midlands from a range of sectors, and twenty in-depth interviews with managers from participating organisations. We then followed up some of the firms later to ascertain the impact of the pandemic.

Workplace mental health issues can be complex and costly. A recent report put the annual (pre-COVID-19) cost to UK businesses of mental health issues at between £42bn and £44.7bn<sup>36</sup>.

<sup>34</sup> ERC. (2020). A baseline study for the Mental Health and Productivity Pilot project Retrieved from <https://www.enterpriseresearch.ac.uk/wp-content/uploads/2020/05/Employee-Wellbeing-Mental-Health-and-Productivity-in-Midlands-Firms-May-2020.pdf>

<sup>35</sup> The study was carried out as part of the Midlands Engine's Mental Health and Productivity Pilot programme: <https://mhpp.me/>

<sup>36</sup> Deloitte (2020) *Mental health and employers*

This includes the cost of absenteeism due to mental health sickness, but also the impact of presenteeism, in which employees are at work but not performing as expected due to mental health issues, and of staff turnover related to these issues. Previous research shows that employers have tended to significantly under-estimate the prevalence of mental health issues in the workplace<sup>37</sup>, which raises concerns about the potential magnitude of the impact of the COVID-19 pandemic.

### Prevalence, causes and impacts of mental health absence

In our Mental Health and Productivity Survey, 30 per cent of firms reported mental health sickness absence. This varied by sector and size of firms, with larger firms and those in the other services sector most likely to report mental health related absence. Thirty-seven per cent of firms reporting mental health absence said that at least some of the absence was long term, and 39 per cent said that at least some was repeated. 56 per cent of firms said that half or more of the mental health sickness absence in their firms was attributable to 'external factors', while only 10 per cent reported that half or more of the mental health sickness absence in their firms was due to issues in work. Nineteen per cent attributed half or more to physical illness.

In terms of the impacts of mental health absence, regression analysis of the survey data found that sickness related to mental health across our sample was associated with productivity which was lower

by 18.3 per cent. For those firms which reported an impact, it was associated with productivity which was lower by 24.5 per cent. However, the study suggested that these significant associations between mental health sickness and productivity may not be known to many employers, who tended to focus more on other impacts of mental health sickness absence.

Fifty-five per cent of firms in our survey that reported mental health sickness absence said that it had had an impact on their business, while a higher proportion (67 per cent) of firms reporting general sickness absence claimed an impact on their business. However, as shown in figure 23, mental health absence was more likely to be associated with impacts on colleagues, whereas general sickness absence was more likely to be associated with impacts on the operational aspects of the business.

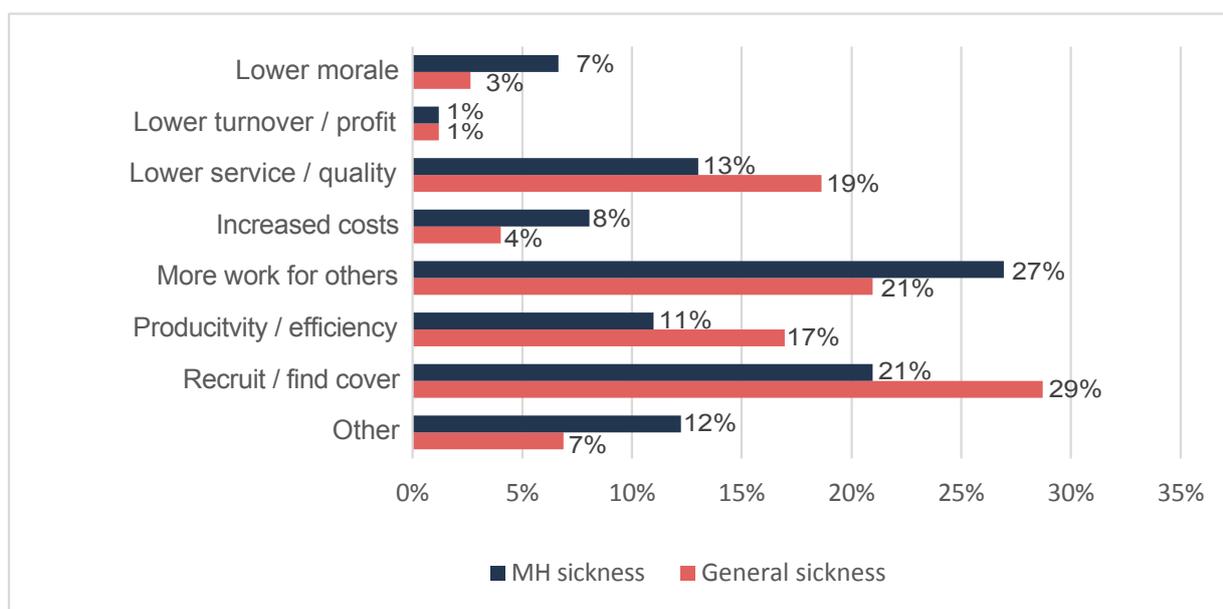
### Dealing with mental health issues in the workplace

In terms of dealing with mental health issues, a minority (36 per cent) of firms in the sample had a mental health lead at board level and only 22 per cent had a mental health plan. Forty-four per cent of firms said they offered mental health support activities, although organisational practices were more prevalent than specific activities designed to address mental health issues.

Our study also found that while employers recognise their responsibility with regard to mental

**Figure 23: Claimed impact of mental health versus general sickness absence**

Source: ERC Mental Health and Productivity Survey 2020



37 Seymour, L. (2010) Common mental health problems at work: What we know about successful interventions. A progress review London: Sainsbury Centre for Mental Health

health issues – 80 per cent of survey respondents ‘disagreed’ or ‘disagreed strongly’ with the statement ‘mental health is a personal issue and not one which should be addressed at work’ - at the same time employers appeared not to know the best places to get help and were often more likely to seek advice from sector/professional bodies than from mental health charities or government bodies. Awareness of, and uptake of, external initiatives to help employers in dealing with mental health issues in the workplace was very low. In addition to this, the qualitative research undertaken as part of the study indicated an over-reliance on relatively informal methods, and in particular on the observations and interactions of line managers who were often un-trained in these issues, to identify the behaviour changes associated with mental health problems in employees.

### **COVID-19 and workplace mental health**

During July and August 2020, we followed up our original study with further qualitative research into the effects of the pandemic on employee mental health, and four key findings emerged. Firstly, the crisis has meant significant changes to the ways that many people experience the workplace, and this has led to new triggers for mental health issues, including the experience of furlough and increased remote working. Secondly, mental health issues during and post-lockdown affected some groups of employees more, or in different ways, than others. Often, those affected were different from those who had experienced mental health issues pre-COVID-19. Thirdly, while stigma has long known to discourage people from disclosing mental health issues, employees may be even less likely to admit to mental health issues during and following the crisis and lockdown than before. Fourthly, with increased remote working, and dispersed teams, it may be more difficult to identify the changes in behaviour that can signal that someone is struggling with mental health issues.

Our evidence also suggests that employers view mental health absence differently to general health absence, and that they are often unaware of the prevalence and impacts on mental health issues in their businesses. They are also unfamiliar with the considerable range of initiatives available to help them in managing these issues. Given the major effects of the COVID-19 crisis on workplace mental health issues, finding ways to identify and engage with employees who are struggling will continue to be an imperative, for employers, practitioners and policymakers alike. Given the evidence on the link between mental health at work and productivity, this will be important to economic recovery as well as personal well-being.



# 3. Looking to the future - where next for UK SMEs?

In the previous sections of this review, we used our research insights to highlight a range of ways in which the COVID-19 pandemic has affected SMEs in the UK. In this section of the review, we turn to look at what the future might hold, drawing on some insights from some of our other research. We then finish by reflecting on the implications our research this year has for policymakers.

## 3.1 Learning from the past: The business effects of pandemics

A key question ERC research has explored this year has been whether there are insights from previous crises that can shed light on what the future may hold for the UK's SMEs. Shortly after the impact of the COVID-19 crisis struck in the UK, we carried out a literature review exploring the evidence on the business effects of previous pandemics<sup>38</sup>.

SMEs, typically having fewer financial resources than larger firms, are less able than larger firms to withstand an 'environmental jolt'<sup>39</sup> such as a pandemic. Such an unforeseen event exposes SMEs to higher levels of strategic uncertainty, impacting on their everyday activities and threatening their survival. Given their importance within the economy<sup>40</sup> and the broad range of sectors within which SMEs operate, failures amongst SMEs have wide-reaching implications, be it via the disruption of the many supply-chain networks which exist or through employment effects.

### Evidence from previous pandemics

Evidence from the 1918 'Spanish Flu' pandemic<sup>41</sup> suggests lockdowns and quarantines will hurt businesses, although the impact will not be uniform across regions and sectors. Some businesses, especially those in the service, hospitality and entertainment industries, will suffer large revenue losses, whilst other businesses, such as those that specialise in health-care products or online delivery,

may experience an increase in revenues. The H1N1 influenza 'Swine Flu' pandemic in 2009 had a large impact on the tourist and pork industries in Mexico<sup>42</sup>, suggesting that COVID-19 travel restrictions will impact heavily on the UK's travel and tourism industry. However, in Mexico the effects of the H1N1 pandemic were short-lived as demand recovered quickly once consumer confidence was restored.

The economic impact of the 'Avian flu' in East Asia<sup>43</sup> saw control measures aimed at halting the spread of infection result in a severe contraction in demand within service sectors such as tourism, retail sales, hospitality and mass transportation. Emergency measures, such as quarantines and restrictions on travel and trade, imposed by governing authorities to slow or mitigate the pandemic, led to supply-chain disruptions and a temporary breakdown of local and international trade and logistic services. Only resilient firms within vulnerable sectors survived the downturn in demand i.e., firms in a position of strong growth, with strong balance sheets and with a six-month to two-year available cash flow.

### Early impacts of COVID-19

Early studies of the COVID-19 pandemic in China suggest that many sectors experienced a fall in demand, most notably the automotive and smartphone industries<sup>44</sup>. Travel/tourism, hospitality, entertainment, and the financial industries also suffered considerably during the initial phase of the outbreak<sup>45</sup>. In February 2020, a survey of 761 business owners in China suggested that, due to a shortage of cash, 30 per cent would be able to sustain their business for no more than three months, and 30 per cent would be able to sustain their business for six to twelve months<sup>46</sup>. At the same time, another survey of 995 SMEs in China indicated that 30 per cent of firms saw their income fall by more than 50 per cent, with almost a third reporting a 20 to 50 per cent reduction<sup>47</sup>.

38 Turner, J. and Akinremi, T. (2020). The business effects of pandemics – a rapid literature review. ERC Insight Paper, April 2020.

39 Meyer, A.D. (1982). Adapting to environmental jolts. *Administrative Science Quarterly*, 27, 515-537.

40 <https://www.fsb.org.uk/uk-small-business-statistics.html>

41 Garrett, T. A. (2007). Economic effects of the 1918 influenza pandemic: Implications for a modern-day pandemic. Federal Reserve Bank of St. Louis.

42 Rassy, D. and Smith, R. D. (2013). The economic impact of H1N1 on Mexico's tourist and pork sectors. *Health Economics*, 22, 824-834.

43 Brahmhatt, M. (2005). Avian influenza: Economic and social impacts. 23 September. World Bank, Washington DC.

44 McKinsey Global Institute. (2019b). What Can We Expect in China in 2020? <https://www.mckinsey.com/featured-insights/china/what-can-we-expect-in-china-in-2020>

45 Han, W., Harris, K. and Luedi, T. (2020). How much will Coronavirus hurt China's Economy? Bain & Company, February 8, 2020

<https://www.bain.com/insights/coronavirus-impact-china-gdp-snap-chart/>

46 Long, H. W. and Feng, W. J. (2020). Research report on companies' survival and development strategy during a novel coronavirus epidemic, Beijing: UIBE Press, February 2020.

47 Bouey, J. (2020). Assessment of COVID-19's impact on small and medium-sized enterprises. Implications from China. Testimony presented before the House, Small Business Committee on March 10, 2020. <https://www.rand.org/pubs/testimonies/CT524.html>

More than one third of firms reported that they would be able to stay open for one month with their current cash flow, one third would be able to sustain two months, and less than 10 per cent would be able to stay open for more than six months. Firms indicated that they felt financial pressure from salary, rent and loan-payment demands. A further study<sup>48</sup> showed that 20 per cent of surveyed firms would survive past a month on a cash-flow basis, and only 64 per cent of surveyed firms would survive beyond three months. Three months after the COVID-19 outbreak in China, many small businesses were not working at full capacity. Many employees continued to work from home, business owners attempted to fix broken supply chains and looked for new domestic and overseas contracts<sup>49</sup>.

Although SMEs suffer most during times of crises, they are the least prepared of all organisations when a pandemic occurs. Business continuity management (BCM) – preventative measures and preparedness arrangements (both of which need to be in place prior to the pandemic) and response options (which need to be in place when the pandemic occurs)<sup>50</sup> – enable SMEs to more easily deal with a pandemic and address occupational health policies (e.g., paid sick leave for staff, enabling employees to work from home and having personal protective equipment (PPE) available to health care personnel). However, among SMEs, preparation and planning for a crisis is constrained by the perception that the risk of such an event occurring is low, their inability to identify effective responses to a crisis and the limited resources available for preparedness planning<sup>51</sup>. Looking forward, campaigns that utilise existing business networks to promote the relevance of a threat from an unexpected crisis such as a pandemic would help SME managers take effective steps towards protecting themselves against such events in the future. In addition, financial help, implemented through policy, as well as technical guidance can help SMEs restructure their business operations and continue to operate.

### 3.2 Productivity and the Great Financial Crisis

We can also learn a great deal from productivity trends in the Financial Crisis (GFC). This year we have also undertaken analysis here which provides valuable insights into what could happen after the current COVID-19 pandemic.

Noting differences between the pandemic and the GFC, we might expect sectors to be impacted slightly differently. Those firms in sectors where remote working is possible may not be as impacted as those relying on in-office work and footfall from the public, for example. We might also expect to see different opportunities and challenges for firms at different points in the productivity distribution. Pre-pandemic high performing firms may survive but their productivity might suffer if employment is sustained better than turnover. For those firms at the bottom of the productivity distribution survival will require innovation with the potential to improve productivity and make up some ground on better performing firms.

#### Analysis of the Business Structure Database

In our analysis using the longitudinal version of the ONS Business Structure Database (BSD), we looked at the performance of firms depending on their productivity level prior to the GFC. We were particularly interested in firms at the Top 25 per cent and Bottom 25 per cent of the productivity distribution, defined as turnover per employee, in 2007. We tracked these cohorts over the GFC and up to 2018.

Initially, we addressed the following questions in order to have a better understanding of the impact of a major shock of demand<sup>52</sup> on high productivity and low productivity firms, and how this might guide our current thinking about the short-term and medium-term effects of the COVID-19 crisis:

- What proportion of these firms survived the GFC?
- What can be said about the productivity of these firms during and post the GFC?
- What happens to the employment levels of these firms during the GFC?

48 Dai, R., Hu, J. and Zhang, X. (2020). The impact of coronavirus on China's SMEs: Findings from the Enterprise Survey for Innovation and Entrepreneurship in China <https://www.cgdev.org/publication/impact-coronavirus-chinas-smes-findingsfrom-esiec>

49 Bouey, J. (2020). *op. cit.*

50 Kato, M. and Charoenrat, T. (2018). Business continuity management of small and medium sized enterprises: Evidence from Thailand. *International Journal of Disaster Risk Reduction*, 27, 577-587.

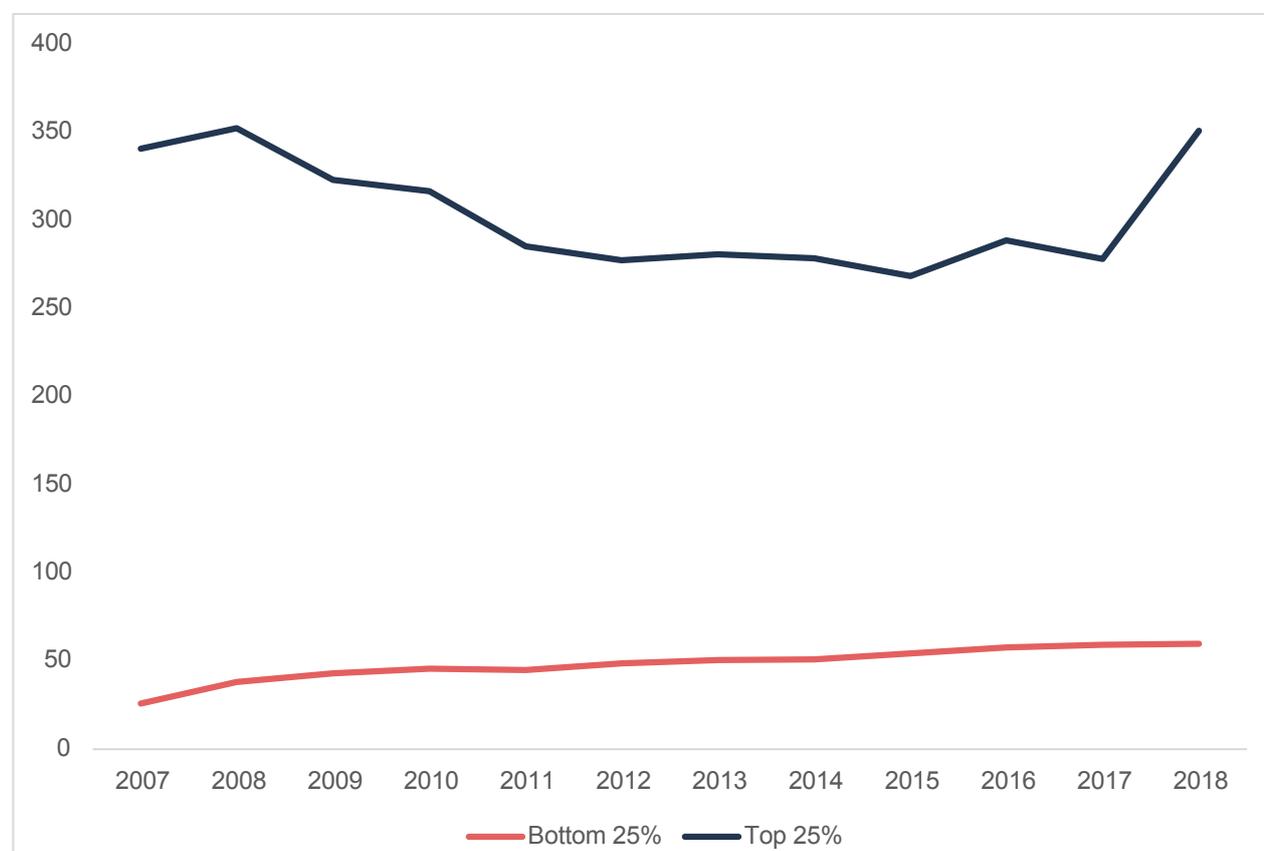
51 Watkins, R. E., Cooke, F. C., Donovan, R.J., MacIntyre, R., Itzwerth, R. and Plant, A. J. (2008). Tackle the problem when it gets here: Pandemic preparedness among small and medium businesses. *Qualitative Health Research*, 18, 7, 902-912.

52 While we use the GFC to provide some indication of what might happen during and after the current COVID-19 crisis the circumstances are completely different with concomitant collapse in demand and supply.

- The key findings can be summarised as follows (the relevant tables are included in Annex 1):
- The Top 25 per cent of productivity distribution in 2007 appeared to be better insulated and more resilient to the crisis compared to the Bottom 25 per cent, as they demonstrated higher survival rates:
  - Out of 387,105 firms at the Top 25 per cent of productivity distribution in 2007 (high productivity firms), 152,732 firms (i.e., 39 per cent) had disappeared by the end of 2011<sup>53</sup>. 148,945 or 38 per cent survived and were still active by the end of 2018.
  - Out of 398,265 firms at the Bottom 25 per cent of productivity distribution in 2007 (low productivity firms), 184,524 firms (i.e., 46 per cent) had disappeared by the end of 2011. 123,440 or 31 per cent survived and were still active by the end of 2018.
- The Top 25 per cent group of firms experienced some decrease in average productivity during and after the crisis<sup>54</sup>. In some of the regions, such as North East, North West, Yorkshire and Humber, South West and Wales, nominal average productivity of these firms in 2018 was still lower than it was in 2007. In others, for example, the West Midlands, average productivity of Top 25 per cent had just recovered to the prior crisis level in 2018 - see figure 24.
- This productivity dynamic seems to have been driven by the following:
  - Average nominal turnover decreased in 2011–012 in North East, East and West Midlands, Wales and Northern Ireland and was increasing - but only slightly - in other regions<sup>55</sup>.
  - Average employment level of Top 25 per cent however remained remarkably stable and even growing over the crisis with exception of North East and Northern Ireland where average number of employees of Top 25 per cent firms slightly dropped in 2011<sup>56</sup>.

**Figure 24: West Midlands: average productivity of Top 25 per cent and Bottom 25 per cent, during and after the GFC**

Source: ONS BSD



<sup>53</sup> In the ONS BSD there is a lag in the employment and turnover data and as a result we use the 2009-11 period as coinciding with the GFC.

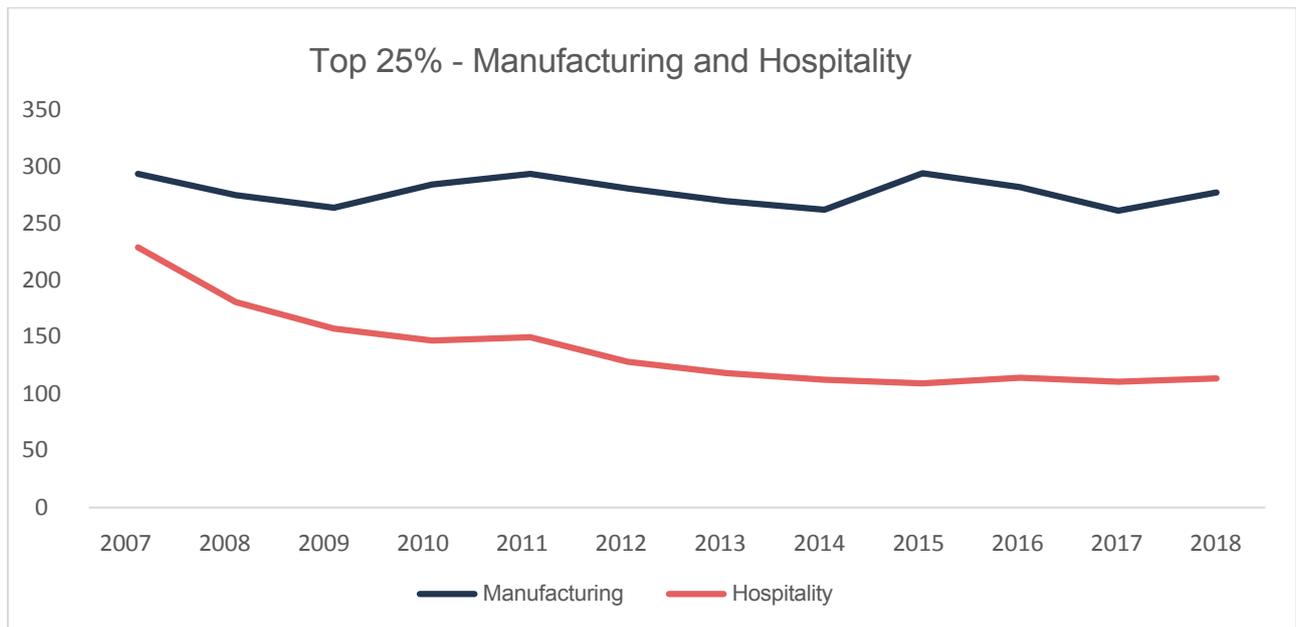
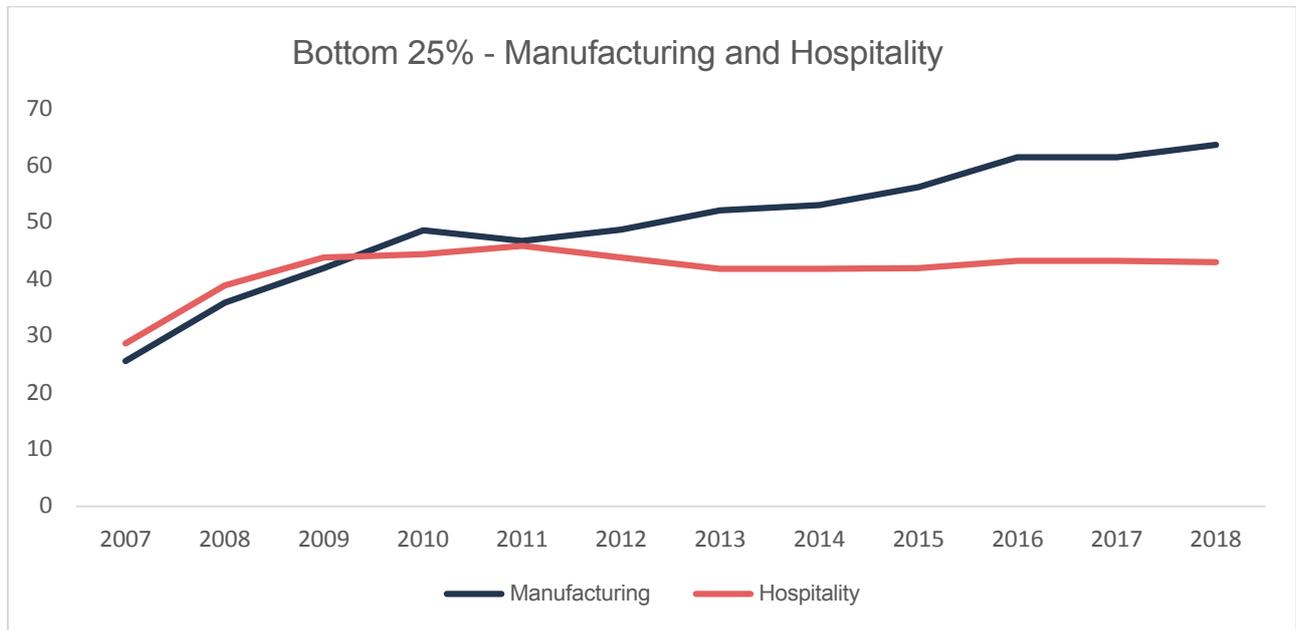
<sup>54</sup> See table 4, Annex 1

<sup>55</sup> See table 5, Annex 1

<sup>56</sup> See table 6, Annex 1

**Figure 25: Manufacturing and Hospitality sectors: average productivity of Top 25 per cent and Bottom 25 per cent, during and after the GFC**

Source: ONS BSD



- Thus, firms at the top of productivity distribution appear to have retained employees even when turnover was stagnating or decreasing.
- These findings are in line with previous research on labour market dynamics during the GFC. Despite the fact that the GFC recession was deeper and more prolonged compared to previous recessions in the United Kingdom, the increase in unemployment was less important and fell back more rapidly. This came at a price of a fall in real wages and productivity<sup>57</sup>.
- The Bottom 25 per cent group, on the contrary, experienced an increase in labour productivity across the UK, despite a slight fall in some of the regions in 2011<sup>58</sup>. This fact supports the hypothesis that an exit of more productive firms from the market could provide some space for lower performers to improve their productivity.
  - This productivity boost was driven by a rise in turnover<sup>59</sup> and was accompanied by an increase in the average number of employees<sup>60</sup>.
- There are also important differences across sectors. Manufacturing firms demonstrate higher rates of survival both in the Bottom 25 per cent and Top 25 per cent than firms in other sectors:
  - 69 per cent of manufacturing firms of the Top 25 per cent group survived by the end of 2011 and 50 per cent by the end of 2018 - to compare, for example, with only 49 per cent and 25 per cent of hospitality firms respectively.
  - 62 per cent of manufacturing firms of the Bottom 25 per cent group survived by the end of 2011 and 38 per cent by the end of 2018.
- Average productivity of the Top 25 per cent was hit during the crisis and afterwards in all sectors but in different ways<sup>61</sup>. The hospitality sector registered the most important decline in average productivity - see figure 25.
- Average productivity of the Bottom 25 per cent improved across all sectors in the UK<sup>62</sup>.

### 3.3 Management and leadership skills and productivity

Insights from ERC research published this year on what drives productivity growth in firms 'behind the frontier' are also useful when looking to future policy priorities for economic recovery. International evidence suggests productivity growth is most rapid among 'frontier' firms, i.e., those at the top of the productivity distribution<sup>63</sup>, and that slow aggregate productivity growth stems from non-frontier, 'laggard' or low performing firms. How can we ensure that firms behind the frontier are able to bounce back after the COVID-19 crisis? Earlier this year we sought to explore just what drives productivity growth 'behind the frontier', which is of course where most SMEs operate, with some useful findings for policy.

The research investigated, for a large sample of UK SMEs across twelve manufacturing and services sectors, whether a previously high level of productivity was necessary for high future productivity growth. Across sectors, the study found no such relationship: there was little consistent correlation between productivity decile and subsequent productivity growth. This result is depicted in figure 26 which shows value-added per employee and turnover per employee levels and growth for manufacturing SMEs. The same result applies to services firms and in a range of specific sectors<sup>64</sup>. The research also found no evidence that other observable firm characteristics, such as the size of the firm, its age, its number of subsidiaries or its investment levels, predicted future productivity growth.

One important implication of these findings is that any SME, irrespective of its past productivity, stands a chance of experiencing high-growth. The implication here for post-COVID recovery is that businesses hard-hit by the crisis need not inevitably experience slow growth after the crisis.

57 See, for instance, Coulter S. (2016), The UK labour market and the 'great recession', LSE Research Online, available at: <http://eprints.lse.ac.uk/65615/>

58 See table 7, Annex 1

59 See table 8, Annex 1

60 See table 9, Annex 1

61 See table 10, Annex 1

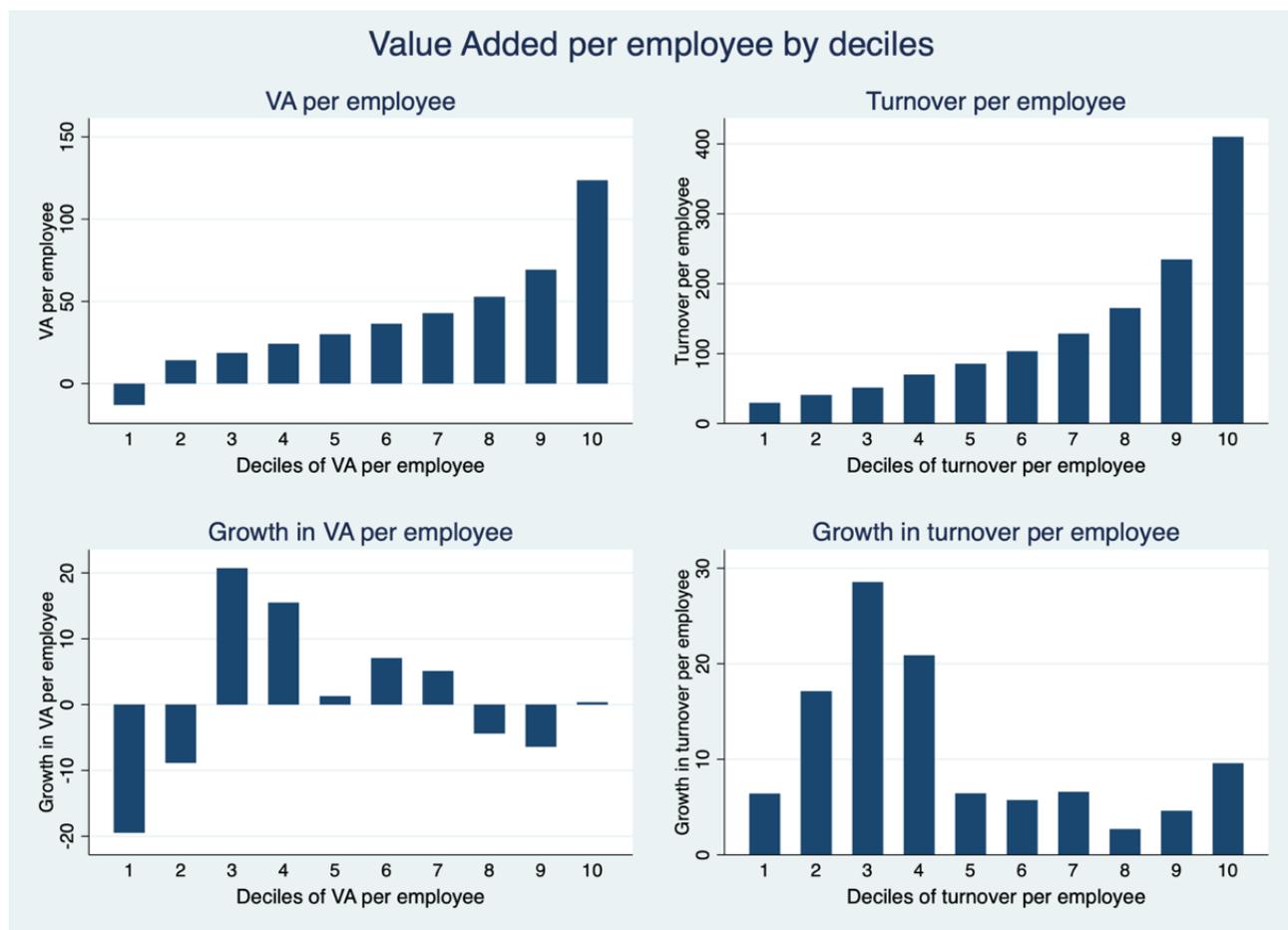
62 See table 11, Annex 1

63 Andrews, D., Criscuolo, C. and Gal, P., 2015. Frontier Firms, Technology Diffusion and Public Policy: Micro Evidence from OECD Countries (No. 2). OECD Publishing.

64 See Jibril, H., Stanfield, C., and Roper, S., 2020. What drives productivity growth behind the frontier? A mixed methods investigation into UK SMEs. ERC Research Paper No.89. [Online] ERC. Available: <https://www.enterpriseresearch.ac.uk/our-work/publications/?type=research-paper> [Accessed 26/11/20]

**Figure 26: Levels and growth in value-added per employee among manufacturing firms: 2016-2018**

Source: Author calculations using data from the Financial Analysis Made Easy (FAME) database



### Factors associated with productivity growth

How then can firms grow despite having initially low productivity? And, if observable factors are poor predictors of growth, are there other unobservable organisational factors that are more strongly associated with growth?

The research explored this question through in-depth interviews with leaders of high growth businesses across the manufacturing and services sectors. The results revealed that, irrespective of sector, an important characteristic of high-growth firms is transformational and inspirational leadership, necessarily combined with people-oriented Human Resource Management practices. There was a strong tendency for managers of these high-performing firms to adopt leadership styles that are participative, consultative, and supportive towards their employees. Other important factors that emerged, consistent across sectors, are innovation, data-driven operations management, and strategic investments. Our findings highlight the need to

support SME owner-managers with the skills they need to be effective leaders of transformational change.

Of course, post-COVID, if firms are to develop stronger leadership and management capabilities, become innovative and engage in strategic investments, they will need the 'strategic space' to do so<sup>65</sup>. The lockdown response to COVID-19 potentially affords managers an important thinking space within which they can re-strategise and plan for growth post-COVID. However, this strategic space can only be effective if managers are not preoccupied with the immediate survival of their businesses. Indeed, the most recent SME Finance Monitor report showed that the proportion of SMEs planning to grow halved from 52 per cent in 2019 to 24 per cent in the second quarter of 2020<sup>66</sup>. Therefore, it is crucial that government support programs such as loans and the furlough scheme effectively protect basic business survival. Only then can managers re-strategise while focusing on future

<sup>65</sup> Deciles of productivity levels in 2016 and subsequent growth in 2017-2018

<sup>65</sup> Mole, K. 2020. Could Covid-19 give SMEs strategic space to improve productivity? ERC Blog, June 2020.

Available online: <https://www.enterpriseresearch.ac.uk/could-covid-19-give-smes-strategic-space-to-improve-productivity/>

<sup>66</sup> BVA BDRC Small and Medium Enterprises Finance Monitor Q2 2020 Summary Chart Pack. August, 2020.

Available at: <https://www.bva-bdrc.com/wp-content/uploads/2020/08/SME-charts-Q2-2020.pdf> [Accesses 26/11/2020].

growth; only then can they reflect on their business processes, identify new business-specific needs, seek appropriate external advice, and invest time and resources towards building effective leadership and management capabilities.

### 3.4 Learning from failure

The COVID-19 pandemic has threatened the viability of many smaller firms and, as finance has become tighter, we know that many firms will have backed off more expansive investments in innovation or new marketing campaigns. However, there is still some evidence that firms can 'learn from failure'.

New ERC research conducted this year suggests what happens when innovation projects are abandoned or come to nothing. Is there any positive legacy? The evidence shows that it seems there is. The study looked at what happened when around 30,000 firms in Spain were forced to abandon innovation projects. Controlling for a range of other factors we found strong positive learning effects – learning from failure. In other words, firms which took a risk and innovated, performed more strongly in the longer-term even when the initial project failed. In some cases, firms probably learnt more about the technologies or materials they were using. In other cases, the abandoned innovation probably led to a better understanding of their customers' needs. This was not the whole story, however. The research also found that firms that tried innovations repeatedly became better at capturing the learning from each innovation project which didn't work.

The COVID-19 pandemic has forced us all to adopt new ways of working, with digital technologies in particular very much to the fore. Our study also suggests there may be a positive legacy from any initiatives which firms were forced to abandon due to COVID-19 as firms take on board the lessons and re-shape their activities in the future. Other studies have made a similar point, finding a strong link between firms' pre-crisis activities and resilience during a crisis period<sup>67</sup>. Surviving a crisis, it seems, enables firms to come back more strongly and more resiliently than before.

### 3.5 Building entrepreneur and small business resilience

Business resilience - the ability of a firm to rebound, strengthened, from adversity - has understandably risen to the top of the research agenda in the wake of the COVID-19 crisis. A literature review carried out by the ERC in 2018 found that although prior

research in this area had identified a range of firm- and individual-level antecedents to resilience, including leader and employee characteristics, business models and processes, much of the focus in prior studies had been on large organisations, with SMEs largely neglected<sup>68</sup>. In 2020 the ERC published the findings of a major two-year study addressing this evidence gap and exploring resilience in small firms, conducted in collaboration with colleagues from four other European universities, and funded by the JP Morgan Chase foundation. The study focused on SMEs led by two groups of underrepresented entrepreneurs in particular – females and those from ethnic minority groups<sup>69</sup>.

Fieldwork was conducted during late 2018 and 2019 in five European cities - London, Paris, Frankfurt, Madrid and Milan. In each city, the leaders of around 600 small firms with between 3 and 99 employees were surveyed. Quotas ensured that respondents of different genders and from different ethnic groups were included, and the survey was carried out in both low- and middle-income boroughs in all five cities to try and control for the wider environmental context in which the business were operating. Depth interviews with firm leaders allowed for a more detailed exploration of the issues emerging from the survey.

#### Seeking external advice

In terms of business advice, the study found that female and male-led firms were equally likely to seek external advice for their businesses, and there was little difference in the sources of advice that they consulted. However, ethnic leaders were less likely than non-ethnic leaders to take external advice in four out of the five cities (see figure 27). Overall, when they did seek business advice, ethnic leaders were more likely to consult informal sources such as family members than their non-ethnic counterparts.

#### Leader and firm-level resilience

The study also measured the individual resilience scores of respondents using the ten-item Connor Davidson scale of individual resilience (CD-10)<sup>70</sup>. CD-10 is the most widely used instrument for individual resilience measurement, with proved statistical validity in a range of populations. We also asked our sample how they thought about business risks, giving them the choice of four possible responses (see Table 12).

67 Amore, M. D. (2015). Companies learning to innovate in recessions. *Research Policy*, 44, 8, 1574-1583.

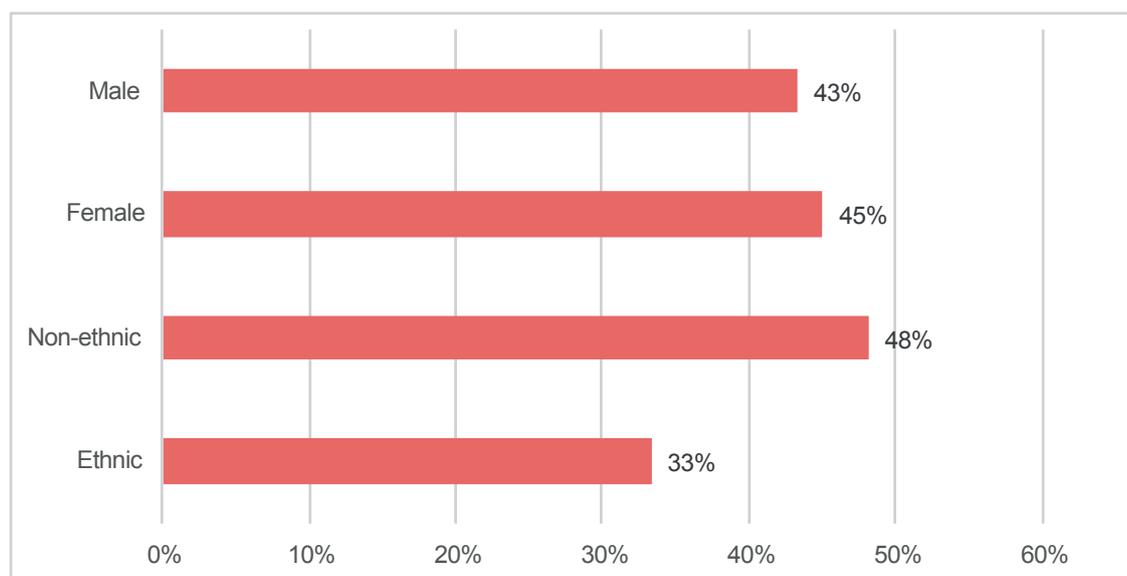
68 Wishart, M. (2018) Business resilience in an SME context: A literature review. <https://www.enterpriseresearch.ac.uk/wp-content/uploads/2018/07/Resilience-review-Final.pdf>

69 Wishart, M. and Hopley, L. (2020) Business resilience in underrepresented entrepreneurs: A European comparative study. <https://www.enterprisere-search.ac.uk/wp-content/uploads/2020/02/BBBR-REPORT-FINAL.pdf>

70 <http://www.connordavidson-resiliencescale.com/>

**Figure 27: Proportion of firms seeking external advice in the preceding 12 months**

Source: ERC Business Resilience Survey



**Table 12: Approach to risk by city (percentage of SME leaders)**

Source: ERC Business Resilience Survey

	Don't think about risks	Sometimes think about risks	Regularly think about risks	Formal risk register
<b>Frankfurt</b>	13%	29%	49%	9%
<b>London</b>	8%	27%	49%	15%
<b>Madrid</b>	13%	23%	51%	12%
<b>Milan</b>	20%	31%	35%	14%
<b>Paris</b>	14%	25%	45%	16%

Grouping respondents who said that their firms undertook some resilience planning activities (i.e., those who answered that they *regularly think about risks* and those who said they had a *formal risk register*) and using regression analysis, we found a significant positive association between leaders' CD-10 (individual resilience) scores and the presence of planning activities in their firms. For the average firm in our sample, a unit increase in the business leader's CD10 score was associated with a 0.8 per cent higher likelihood of planning for adversity. This is non-trivial: a four-point increase (for example moving from a score of zero to four on one of the ten items on the scale) is associated with a 3.2 per cent higher chance of resilience planning. Prior research has identified a link between the individual resilience of firm leaders and the *performance* of their firms, but this is the first time that a link between leader resilience and firm planning activities has been established.

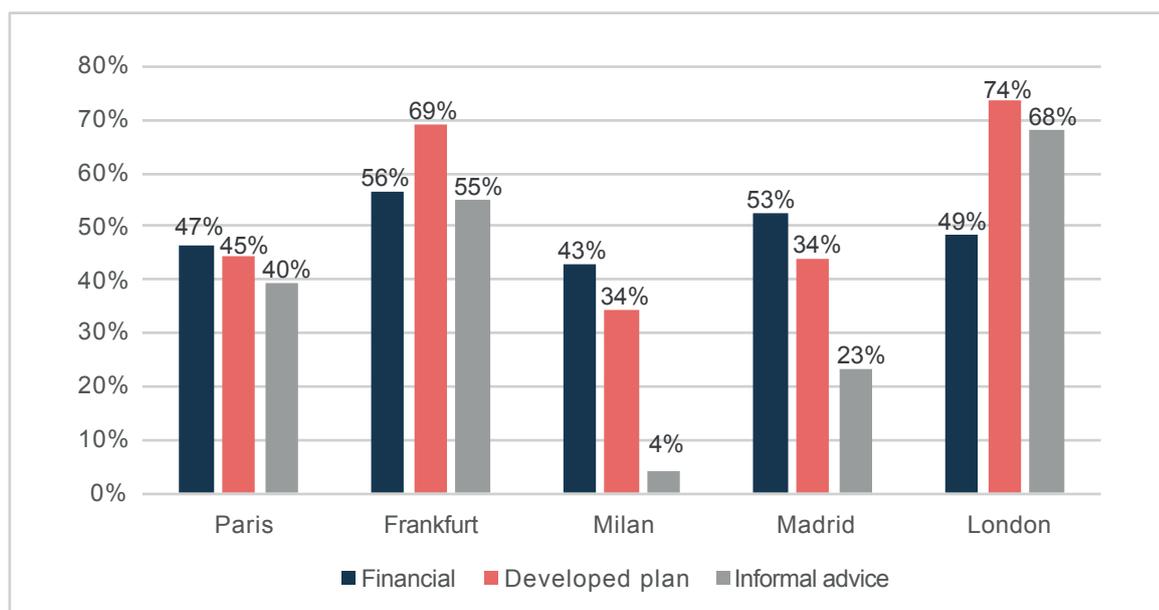
### Experiencing crisis and dealing with adversity

Overall, 31 per cent of the sample of 2,975 firms across the five cities said that they had experienced a crisis (the survey was undertaken before the COVID-19 pandemic hit) which threatened the survival of their business in the preceding five years. Firms in manufacturing, construction and business services were significantly more likely than those in other sectors to have done so. Female and male-led firms were equally likely to have experienced a crisis, but we observed differences between ethnic-led and non-ethnic-led firms. In London, ethnic-led firms were considerably more likely to have experienced a crisis (48 per cent of ethnic-led firms had experienced crisis compared to 33 per cent of non-ethnic-led firms).

The survey also asked firm leaders what they considered to be the main future threats to their

**Figure 28: Top three responses to a crisis (percentage of SME leaders experiencing a crisis)**

Source: ERC Business Resilience Survey



Base: 1,034 firms that had experienced a crisis in the preceding 12 months

businesses. We compared these answers with the actual causes of crisis in those that had experienced one. In all cities, the actual causes of crises differed from the top risks that firm leaders had identified earlier, suggesting that leaders of SMEs in the sample struggled to identify the most potent risks to their firms. Also, whereas most risks identified tended to be internal to the firm, most of the crisis causes could be characterised as external factors, such as loss or failure of a major customer and cost rises in materials, services or labour. Insights from the depth interviews also indicated that firm leaders lack the time, resources and skills to plan for crisis, because they are preoccupied with day-to-day running of their businesses, which is consistent with their predominantly internal focus in identifying potential future threats.

The survey also asked the firms that had experienced a crisis how they had responded to it, and the top three answers were that they developed a plan in response to the crisis, used financial reserves, or sought advice from colleagues or informal networks. This pattern was evident in all five countries (see figure 28) and indicates that for this sample, firms reacted to crises as they happened rather than implementing pre-established contingency plans.

Overall, the study highlighted differences in the ways in which different leaders run their businesses, and variations in the ways that firms anticipate and experience adversity by city and firm type, implying that initiatives to build resilience should take account

of local environmental, regulatory and cultural factors. Differences between perceived threats and actual causes of crisis suggests that firm leaders lack skills and resources to distinguish and prioritise threats, and the responses of those who had experienced adversity indicate that crisis planning is not widespread. This study was undertaken before the COVID-19 crisis hit, but the findings highlight that many small firms would not have had crisis plans in place when it did. In addition, the positive association between leader resilience and the presence of firm-level resilience planning activities suggests that developing resilience in leaders may well be a route to developing more resilient practices in their companies – a point that could be addressed in future policy responses to the COVID-19 pandemic.

The findings of the study also underline the connection between location and the resilience of firms and indicate that bespoke initiatives rather than one-size-fits-all solutions are needed to address regional variations. The research concluded that entrepreneurs would benefit from more effective systems for accessing support and that responsive, locally informed approaches were required.

It also concluded business resilience support should also appropriately tailored for different social groups, particularly ethnic entrepreneurs. Ethnic entrepreneurs were less likely to use formal training and advice networks, and much more likely to rely on family and friends and informal advice. These findings echo recent research carried out for

the FSB by CREME and the ERC<sup>71</sup>, and present a challenge for those involved in the designing business support services, particularly given that the pandemic has hit ethnic communities very hard, both in terms of health and in employment given the industries in which many ethnic-led firms operate (e.g., food/hospitality, transport and retail).

### 3.6 Insights from ERC SOTA Reviews

This year the ERC has continued to publish its successful State of the Art (SOTA) Reviews, each of which provides a short summary of key evidence on a tightly defined topic. A range of themes have been covered in the 14 Reviews published in 2020, and some of these have useful insights going forward for policymakers responding to the COVID-19 crisis.

We published a series of five SOTA Reviews this year on the theme of women and enterprise, which drew attention to the sizeable gap in rates of self-employment and business ownership between men and women in the UK<sup>72</sup>. Of the nearly 5 million self-employed people in the UK, just 1.6 million are women (ONS, 2019)<sup>73</sup>. The reviews highlighted the need for an enhanced and deeper focus on this problem from policymakers. It also identified a need to focus on the quality of women's self-employment, and to reshape enterprise ecosystems that better support women to develop successful and sustainable businesses and redress gender inequalities.

These issues have been made more urgent by the COVID-19 pandemic as it has disproportionately affected women-led businesses for several reasons. First, women are over-represented in sectors most affected by COVID-19 restrictions around social distancing, such as retail, personal care and hospitality for example (see Henley et al., 2020)<sup>74</sup>. Second, many women have been excluded from income protection due to the gaps in coverage in government schemes, as noted in another ERC research report published in April 2020 (Rouse et al., 2020)<sup>75</sup>. As noted earlier, on the eve of the pandemic, entrepreneurship in Britain was continuing to rise despite the wider economy showing only modest growth, and the gender enterprise gap was narrowing. But that progress is

now in serious jeopardy. Third, during some of the lockdown periods in 2020 the government closed nurseries, schools and other childcare facilities, with women undertaking most of the associated home education and childcare work (Institute of Fiscal Studies, 2020)<sup>76</sup>. As a consequence of all these factors, it is highly likely that women-led SMEs have been harder hit overall by the pandemic.

Another theme covered in this year's SOTA Reviews which offers useful insights was family business, which formed the subject of two Reviews<sup>77</sup>. The Reviews demonstrated that there is much we can learn from family businesses when it comes to survival through adversity – clearly a major theme in the COVID-19 context. Family business is the most prevalent form of business around the world, and the evidence suggests that they are better survivors than other types of companies, with many ensuring their continuity through several generations. Family businesses in the UK were more likely than other firms to survive the last recession in 2008. The SOTA Reviews highlighted that family firms, because they look towards passing the business into future generations, tend to have a long-term perspective and 'stewardship' mindset. The longevity of these firms involves performing a 'balancing act' between continuity and change. When a shock or a crisis such as a pandemic occurs, family businesses, because they have a long-term perspective, are more likely to retain a commitment to continuity of the business. At the same time, the SOTA Reviews noted that some family businesses place a strong emphasis on their social contributions. In this sense they also offer valuable lessons on how businesses can contribute to building sustainable and prosperous communities and contribute to the current 'levelling up' agenda.

A final theme with relevance to the future of UK SMEs picked up in the SOTA Review series this year was youth entrepreneurship<sup>78</sup>. Support for youth entrepreneurship and self-employment is particularly important in times of crisis and rising unemployment. There is concern that the COVID-19 crisis has particularly affected young people in the labour market. The SOTA Review highlighted evidence that young people have a different set of motivations, barriers, and business support needs compared to

71 See: <https://www.fsb.org.uk/resource-report/unlock.html>

72 See: ERC SOTA Reviews no. 34-38 <https://www.enterpriseresearch.ac.uk/our-work/publications/?type=sota-review>

73 ONS (2019) Dataset – Emp14: Employees and self-employed by industry.

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/employeesandselfemployedbyindustryemp14>

74 Henley, A., Reuschke, D and Daniel, E. (2020) First findings on the impact of COVID-19 on self-employment in the UK – evidence from the Understanding Society household survey, ERC Insight Paper. <https://www.enterpriseresearch.ac.uk/wp-content/uploads/2020/08/ERC-Insight-First-findings-on-the-impact-of-COVID-19-on-self-employment-in-the-UK.pdf>

75 Rouse, J. et al (2020) Covid19: Critique and Proposals to Develop More Comprehensive and Inclusive Support for the Self-Employed, ERC Research Report. [https://www.enterpriseresearch.ac.uk/wp-content/uploads/2020/04/ERC-ResReport-Covid-19-Developing-More-Comprehensive-and-Inclusive-Policy-for-the-Self-Employed\\_final.pdf](https://www.enterpriseresearch.ac.uk/wp-content/uploads/2020/04/ERC-ResReport-Covid-19-Developing-More-Comprehensive-and-Inclusive-Policy-for-the-Self-Employed_final.pdf)

76 Institute of Fiscal Studies (2020) How Are Mothers and Fathers Balancing Work and Family Under Lockdown? IFS Briefing Note BN290. IFS, London.

77 See ERC SOTA Reviews no. 45 and 46 <https://www.enterpriseresearch.ac.uk/our-work/publications/?type=sota-review>

78 See ERC SOTA Review no. 44 <https://www.enterpriseresearch.ac.uk/our-work/publications/?type=sota-review>

older entrepreneurs. Language for example is very important in encouraging the uptake of business support amongst young people, and specially targeted packages of financial and mentoring support can lead to positive business and personal outcomes. These are useful insights for those developing future initiatives to encourage young people into entrepreneurship and self-employment after the COVID-19 crisis.



# 4. Summary and Policy Implications

**In this review we have covered the wide and diverse range of research and analysis on SMEs conducted and/or published by the ERC in 2020.**

The events of the last year have clearly had a huge, and often distressing, effect on individuals, families, communities and businesses in the UK. Overall, our research insights and analysis has confirmed the enormous challenges and hardship that have been faced by the UK's small business community in relation to the COVID-19 pandemic. It has also highlighted Brexit as a key and growing source of concern for many UK businesses alongside these challenges. At the time of writing, the future is far from certain on both fronts, despite recent positive developments with COVID-19 vaccines. It is clear that the virus itself and the necessary public health response associated with it will continue to act as an obstacle success well into next year, and Brexit uncertainties continue.

However, we have also seen plenty of evidence this year that SME leaders can be innovative and adaptable in the face of a crisis. Our Business Futures Survey clearly showed that a significant proportion of businesses have pivoted and introduced new processes and technologies in 2020, under pressure and at pace, leading to major changes in ways of working and doing business. New working arrangements and business models introduced in response to the pandemic will have strengthened the business case for such investment in many SMEs. Going forward it will be important to support SMEs in maintaining and building on these positive developments. In the longer term, the sustainability and continuing competitiveness of SMEs will depend on their capacity to innovate and adapt to change. This of course raises concerns about the overall decline in investment in R&D and innovation we have seen during 2020, which it will be crucial to address.

In early 2021 major decisions will be being made around investment priorities for the UK as the Government sets out a strategy that will support the UK's economy as it moves out of the pandemic, with a Budget to take place in March and a multi-year Comprehensive Spending Review later in the year.

Our research insights indicate the following areas as priorities for action for policymakers in paving the way for a successful enterprise-led recovery:

## **Business advice**

It is vital now more than ever that SMEs get the advice they need and, as our recently published evaluation of the 'Business Boost' programme shows, business advice can help firms to improve their productivity<sup>79</sup>. It is widely recognised that the business support landscape in England is overly complex and lacks the coherence evident in other parts of the UK, particularly Scotland. There is also evidence that shows that support needs to be tailored more effectively to ensure take-up by underrepresented groups. Our resilience research showed that the routes SMEs take to advice and support varies and is driven by the location and background of the entrepreneur. Female- and ethnic minority-led businesses, for example, are more likely to seek out advice from informal networks and mentors when running their businesses, and those in lower-income areas are less likely to seek support. Providing clearer signposting and routes to business support will be crucial.

As we look towards a post-COVID-19 economic recovery, and with an aspiration to support growth in all parts of the country, we will need to consider how we can simplify and strengthen the public support offer to growing companies. This is an active theme for research within ERC and we aim to publish new research early in 2021 with a focus specifically on support for rural enterprises.

## **Digitisation**

The introduction of new digital technologies can help to lay the foundations of a thriving and more productive SME base in future. Our previous research has shown that growth ambition is positively associated with digital adoption. Business leadership support programmes could play a key role in maintaining the digital shift the COVID-19 crisis has prompted. There is a strong inherent relationship between digital technologies and innovation, and support for R&D and innovation is key to paving the way for digitisation.

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<sup>79</sup> ERC Evaluation of the Cavendish Business Boost Project - <https://www.enterpriseresearch.ac.uk/publications/evaluation-of-the-cavendish-enterprise-business-boost-project/>

A lack of digital skills emerges as a main obstacle to digital adoption in the ERC Business Futures survey, a challenge which will need to be addressed at all levels of education. ERC will have a strong focus on building digital capacity in 2021 as we are working with the Cavendish Consortium on a randomised control trial related to digital adoption in family firms. Digitisation and its positive and negative effects will also be a key theme for other ERC research in 2021 with a particular focus on spatial variations in the adoption and use of digital technologies.

### **Net-zero**

The COVID-19 pandemic combined with Brexit have diverted public and business attention away from the climate crisis. As the ERC's Business Futures Survey shows, however, there are grounds to be optimistic as climate impacts remain high up the agenda of many smaller firms. Looking forward, it will be important to maintain a policy mix in the UK which supports firms as they implement net-zero and broader sustainability practices. Innovation will be key to decarbonising production processes and systems. Our research shows that grants and subsidies can drive innovation and the adoption of net-zero practices. Evidence from the ERC Business Futures Survey also shows that environmental regulations and taxes, as well as voluntary agreements (e.g., EMS or ISO14001), induce investments on net-zero practices. The diffusion of environmental technologies and practices is constrained, however, due to the lack of information about production process or low emission technologies as well as uncertainty related to the demand for low carbon products and services. ERC research during 2021 will aim to identify these barriers to the adoption of sustainable practices among SMEs and identify relevant policy responses.

### **Innovation**

Innovation will be critical to future growth and productivity, but our research suggests that during 2020 around a third of innovating firms significantly reduced their R&D and innovation investments. Other elements of the UK's innovation eco-system such as the universities have also been impacted significantly by COVID-19 and Brexit raising questions about their ability to effectively support firms' future innovation. Significant sectoral and spatial disparities in innovation also seem likely in the aftermath of the COVID-19 pandemic. Sustaining the strength of local innovation ecosystems during the recovery period will need to be a key policy objective, and one which may require spatially differentiated R&D and innovation policies. Understanding these spatial disparities and potential

policy responses will be a key theme of ERC innovation research in 2021.

ERC research during 2020 has also emphasised the importance of collaboration in innovation, a theme which seems likely to be more important in future as firms seek to de-risk and reduce the costs of innovating. Future ERC research will consider the potential for collaborative innovation to help firms address the grand challenges as well as its ability to drive knowledge sharing, exporting and productivity.

### **Management and leadership**

During 2020 our research has highlighted that transformational and inspirational leadership, combined with people-oriented Human Resource Management practices is associated with productivity growth in SMEs. There is a tendency for high-performing firms to adopt leadership styles that are participative, consultative, and supportive towards their employees. Our findings highlight the need to support SME owner-managers with the skills they need to be effective leaders of transformational change. They thus provide support for management skills interventions such as the recently announced Small Business Leadership Programme. Extending the reach of this type of programme to reach more firms seems a key priority for the future if firms across the country are to develop stronger leadership and management capabilities. Through our research with the J P Morgan Foundation and their international partners working with SMEs, ERC research in this area in 2021 will focus on understanding 'what works' to support management and leadership development in smaller companies.

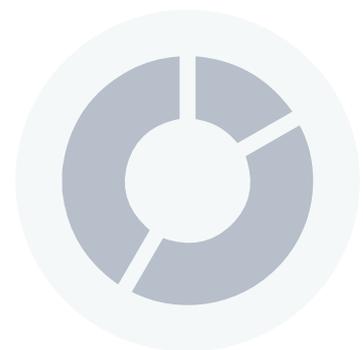
### **Mental health and well-being at work**

Changes in working practices and the management challenges associated with COVID-19 have focused attention on the mental health and well-being of both firms' workforces and business leaders themselves. Both have potentially significant impacts on business performance. Our research conducted immediately pre-COVID (2020q1) emphasised the lack of engagement of most employers with mental health issues and uncertainty over where external support could be found. Revisiting some of the same firms in later 2020 highlighted increased concerns about mental health issues as well as increased reticence by employees to seek support due to concerns about job security. Looking forwards this suggests a need for policy thinking around employee and employer well-being as part of policy for sustainable business performance. Financial difficulties (including those excluded from financial support schemes) and job losses associated with COVID-19 closures and retrenchment are also likely to increase

the need for mental health support for the newly unemployed. Through 2021 ERC will continue to work with a consortium of partners in the Midlands in developing and testing a range of mental health interventions with employers.

### **Business resilience**

2020 has truly brought the importance of business resilience to the fore. Our research conducted just prior to the pandemic showed that anticipating adversity and undertaking crisis planning are associated with increased resilience in businesses, and with more resilient business leaders. However, many small firms struggle to identify their most potent future threats, and when crisis hit most have no contingency plans, resorting to depleting their financial resources to tackle problems as they arise. As we look towards a post-COVID-19 economic recovery phase, it is vital that effective support and advice networks are in place dedicated to support SMEs with resilience planning. The business community needs to learn lessons from the crisis to help protect SMEs against future shocks, and business leaders will have important experiences and insights to share that could inform others. It is important that this resilience support is properly tailored to the needs of entrepreneurs, depending on their location and social group if it is to be delivered effectively. In 2021 ERC research will focus specifically on the resilience needs of SMEs in rural areas (a neglected area of research), and we will further develop and digitise our business resilience toolkit for a wider roll-out to rural businesses.



# Annex 1:

## Tables from section 3.2 – Productivity and the Great Financial Crisis

**Table 4: Average productivity of Top 25 per cent, during and after the GFC, by region**

	2007	2008	2009	2010	2011	2012	2013
North East	315	↘314.5	↘300	↘288.8	↘275.9	↗279	↘276.9
North West	325.7	↘318.4	↘311.7	↘304.5	↘282.1	↘273.3	↘270.7
Yorkshire and the Humber	334.2	↘304	↘291.9	↗299.8	↘261.5	↘253.5	↗259.8
East Midlands	341.7	↗343.4	↘334.5	334.5	↘289.8	↘245.5	↗272.5
West Midlands	340.7	↗352.4	↘323.1	↘316.7	↘285.3	↘277.6	↗280.9
East of England	334.7	↗373.2	↘328.2	↘315	↘297.6	↗300.9	↘293.9
London	667.2	↗740.6	↘735.1	↗887.7	↘855	↘844.2	↗873.3
South East	355.1	↗365.5	↘364.4	↗409.4	↘383	↘366.7	↗379.7
South West	287.7	↘285.4	↘285.5	↘273.2	↘243.4	↘247.9	↘243.5
Wales	275.1	↘253	↘246.6	↗262.4	↗268.8	↘268.1	↘243.9
Scotland	375.6	↗416.5	↗479.1	↘395	↗400.6	↘399	↗427.8
Northern Ireland	359.9	↗365.8	↘337.3	↗346.3	↗349.5	↗369.6	↗380.7
<b>UK</b>	<b>398.7</b>	<b>419.7</b>	<b>412.5</b>	<b>443.1</b>	<b>418.7</b>	<b>410.7</b>	<b>421.4</b>

Source: ONS BSD

**Table 5: Average turnover of Top 25 per cent, during and after the GFC, by region**

	2007	2008	2009	2010	2011	2012	2013
North East	4,247	↗4,969	↗6,596	↗6,766	↘5,362	↗5,880	↗6,799
North West	3,414	↗3,948	↗4,913	↗5,527	↗5,878	↗6,700	↗7,578
Yorkshire and the Humber	6,512	↗7,781	↗9,450	↗10,216	↗11,114	↗12,808	↗14,375
East Midlands	3,668	↗4,635	↗5,574	↗5,899	↘5,655	↗5,932	↗6,872
West Midlands	4,119	↗5,304	↗6,016	↗6,544	↘6,478	↗6,765	↗8,073
East of England	4,579	↗6,097	↗7,026	↗7,938	↗8,798	↘7,585	↗8,606
London	16,779	↗19,246	↗19,551	↗25,124	↗25,531	↗28,424	↗33,100
South East	5,583	↗6,863	↗7,962	↗9,527	↗9,877	↘9,674	↗10,761
South West	4,067	↗6,561	↗7,573	↗10,528	↗11,312	↘9,137	↗9,878
Wales	2,847	↗3,224	↗3,853	↗4,283	↘4,266	↗4,788	↗5,473
Scotland	8,013	↗9,582	↗13,721	↗16,356	↗16,901	↗21,787	21,034
Northern Ireland	2,960	↗3,379	↗4,146	↗4,148	↘3,919	↗4,122	↗4,519
<b>UK</b>	<b>7,062</b>	<b>8,578</b>	<b>9,670</b>	<b>11,728</b>	<b>12,099</b>	<b>12,938</b>	<b>14,604</b>

Source: ONS BSD

**Table 6: Average number of employees of Top 25 per cent, during and after the GFC, by region**

	2007	2008	2009	2010	2011	2012	2013
North East	13.6	↗17.1	↗19.8	↗20.6	↘19.6	↗20.4	↗23.2
North West	13.8	↗16.6	↗20.2	↗21.8	↗23.1	↗24.8	↗26.8
Yorkshire and the Humber	17.2	↗21.1	↗24.5	↗27.1	↗28.8	↗30.9	↗32.8
East Midlands	12.9	↗15.7	↗18.1	↗18.4	↗19.1	↗20.6	↗22.7
West Midlands	12.9	↗15.4	↗17.2	↗18.6	↗19.5	↗20.8	↗23.1
East of England	14.3	↗17.2	↗19.3	↗20.2	↗21.9	↗23.6	↗25
London	17.7	↗21	↗24.2	↗26.2	↗28.2	↗30.4	↗33.5
South East	15.9	↗18.5	↗21.1	↗23.5	↗24.4	↗26.5	↗28.6
South West	13	↗15.6	↗16	↗17.6	↗18.5	↗17.3	↗19.3
Wales	10.1	↗12.6	↗14.4	↗15.4	↗17	↗17.9	↗18.8
Scotland	20.9	↗24.6	↗27.9	↗30.3	↗31.5	↗37.1	↗39.6
Northern Ireland	9.4	↗11.1	↗13.1	↗13.2	↘13	↗13.4	↗14.8
<b>UK</b>	<b>15.2</b>	<b>18.1</b>	<b>20.7</b>	<b>22.4</b>	<b>23.6</b>	<b>25.4</b>	<b>27.6</b>

Source: ONS BSD

**Table 7: Average productivity of Bottom 25 per cent, during and after the GFC, by region**

	2007	2008	2009	2010	2011	2012	2013
North East	26.8	↗39.7	↗42.3	↗44.8	↗45.1	↗45.5	↘44.8
North West	26.3	↗40.6	↗57.1	↘49.4	↘46.1	↗48.2	↗50.6
Yorkshire and the Humber	25.9	↗38	↗43.3	↗46.8	↘45.9	↗46.8	↗48
East Midlands	25.7	↗37.6	↗42.1	↗45.2	↘43.5	↗45.8	↗49.1
West Midlands	25.9	↗38.2	↗43.1	↗45.8	↘45	↗48.8	↗50.5
East of England	25.3	↗38.9	↗45.2	↗46.6	↘45.5	↗48.6	↗51
London	23.3	↗46.9	↗59.4	↗68.2	↗68.3	↗70.7	↗78.2
South East	24.9	↗35.6	↗42.6	↗52.6	↘50.3	↗54.2	↗58.2
South West	25.8	↗38.4	↗43.5	↗45.4	↘44.8	↗45.7	↗47.7
Wales	26.1	↗37.1	↗39.9	↗42.9	↘42	↗43.4	↗43.8
Scotland	26.3	↗38.3	↗49.4	↗50.9	↗51.1	↗51.4	↘48.5
Northern Ireland	25.8	↗36.9	↗47.4	↗47.5	↗51.8	51.8	↘51.6
<b>UK</b>	<b>25.3</b>	<b>39</b>	<b>47.1</b>	<b>50.4</b>	<b>49.4</b>	<b>51.5</b>	<b>54</b>

Source: ONS BSD

**Table 8: Average turnover of Bottom 25 per cent, during and after the GFC, by region**

	2007	2008	2009	2010	2011	2012	2013
North East	345	↗419	↗511	↗571	↗589	↗626	↗661
North West	290	↗389	↗488	↗557	↗585	↗645	↗695
Yorkshire and the Humber	264	↗406	↗601	↗628	↗655	↗675	↗768
East Midlands	563	↗721	↗793	↗870	↗936	↗1,020	↗1,151
West Midlands	407	↗530	↗580	↗633	↗670	↗707	↗819
East of England	285	↗417	↗517	↗618	↗715	↗800	↗925
London	372	↗608	↗853	↗1,044	↗1,220	↗1,460	↗1,676
South East	155	↗252	↗353	↗450	↗494	↗559	↗619
South West	212	↗286	↗340	↗361	↗391	↗423	↗494
Wales	229	↗305	↗354	↗395	↗408	↗432	↗453
Scotland	328	↗424	↗517	↗584	↗603	↗639	↗695
Northern Ireland	284	382	461	488	584	526	555
<b>UK</b>	<b>288</b>	<b>415</b>	<b>533</b>	<b>616</b>	<b>675</b>	<b>747</b>	<b>841</b>

Source: ONS BSD

**Table 9: Average number of employees of Bottom 25 per cent, during and after the GFC, by region**

	2007	2008	2009	2010	2011	2012	2013
North East	14.4	↗14.7	↗16.2	↗16.9	↗17.2	↗17.5	↗18.6
North West	12.3	↗12.7	↗14.3	↗15.7	↗16.4	↗17.8	↗18.8
Yorkshire and the Humber	11.6	↗13.1	↗15.3	↗16.4	↗17.2	↗18.1	↗20.2
East Midlands	18.9	↗20.5	↗21.9	↗22.9	↗25.1	↗27.1	↗28.2
West Midlands	17	↗18.7	↗19.6	↘19.1	↗20.1	↘19.1	↗20.6
East of England	13	↗14.5	↗15.3	↗16.6	↗17.2	↗17.6	↗19
London	16.2	↗19.6	↗21.7	↗23.7	↗25.9	↗28.2	↗30.7
South East	7.3	↗8.9	↗11.2	↗13.6	↗14.9	↗15.7	↗16.9
South West	9.5	↗10.1	↗10.6	↗11	↗11.8	↗12.5	↗13.7
Wales	10.1	↗10.8	↗11.9	↗12	↗12.9	↗13.4	↗14.4
Scotland	13.9	↗14.4	↗15.8	↗16.7	↗17.2	↗17.9	↗18.8
Northern Ireland	12.8	↗12.9	↗14.6	↗15.1	↘14.8	↗15.5	↗16.5
<b>UK</b>	<b>12.3</b>	<b>13.8</b>	<b>15.6</b>	<b>16.8</b>	<b>17.8</b>	<b>18.7</b>	<b>20.1</b>

Source: ONS BSD

**Table 10: Average productivity of Top 25 per cent, during and after the GFC, by sector**

	2007	2008	2009	2010	2011	2012	2013
Manufacturing	294	↘275	↘264	↗285	↗294	↘281	↘270
Wholesale and Retail	265	↘250	↗252	↗253	↘225	↘219	↗219
Construction	437	↗487	↘474	↗569	↘523	↘495	↘463
Hospitality	229	↘181	↘158	↘147	↗150	↘128	↘118
Transport	482	↗592	↘444	↗493	↘437	↘378	↗394
Financial Intermediation	1571	↗1841	2090	↘1879	↗2185	↗2542	↗3383
Real Estate	383	↘373	↘375	↘366	↘331	↗331	↗350

Source: ONS BSD

**Table 11: Average productivity of Bottom 25 per cent, during and after the GFC, by sector**

	2007	2008	2009	2010	2011	2012	2013
Manufacturing	25.6	↗35.9	↗42	↗48.6	↘46.8	↗48.8	↗52.1
Wholesale and Retail	26.7	↗45.5	↗57	↗59.6	↘57.8	↗60.9	↗65.9
Construction	25	↗37.7	↗47.2	↗54.9	↗57.4	↗61.4	↗70
Hospitality	28.7	↗38.9	↗43.9	↗44.4	↗45.9	↘43.9	↘41.9
Transport	24.9	↗36.1	↗46	↗53.1	↘51.9	↗75.2	↘72.3
Financial Intermediation	20.9	↗72.8	↗83.6	↘75.9	↗89.6	↗95.9	↘95.7
Real Estate	24.1	↗40.7	↗50.4	↗53.7	↘51.4	↗53.7	↗56.4

Source: ONS BSD

# Annex 2:

## List of research papers and policy papers 2019-2020

All publications are available at: [www.enterpriseresearch.ac.uk/our-work/publications/](http://www.enterpriseresearch.ac.uk/our-work/publications/)

Our COVID-19 related publications can be viewed here:

[www.enterpriseresearch.ac.uk/covid-19-resource-directory/](http://www.enterpriseresearch.ac.uk/covid-19-resource-directory/)

89	<b>What drives productivity growth behind the frontier? A mixed-methods investigation into UK SMEs</b> Halima Jibril, Carol Stanfield and Stephen Roper, 2020
88	<b>Do firms really learn from failure? The dynamics of abandoned innovation</b> James H Love, Stephen Roper and Priit Vahter, 2020
87	<b>Consumer Spending Responses to the COVID-19 Pandemic: An Assessment of Great Britain</b> Dimitris K. Chronopoulos, Marcel Lukas and John Wilson, 2020
86	<b>What's in a name? The impact of Geographical Indications of Origin on producer growth and food heritage</b> Akunna Oledinma and Stephen Roper, 2020
85	<b>Small firms and patenting revisited</b> Suma Athreye, Claudio Fassio and Stephen Roper, 2020
84	<b>Spatial disparities in SMEs productivity in England</b> Sara Maioli, Pattanapong Tiwasing, Matthew Gorton, Jeremy Phillipson and Robert Newbery, 2020
83	<b>Pathways to efficiency, pathways to growth: Evidence from the UK Innovation Survey</b> Joanne Turner, Stephen Roper and Nola Hewitt-Dundas, 2020
82	<b>The Role of Innovation in Small Business Performance: A Regional Perspective</b> Catherine Robinson, Marian Garcia, Jeremy Howells and Guihan Ko, 2020
81	<b>The Collaboration Paradox: Understanding the Barriers to Innovation Collaboration in Foundries and Metal-Forming Firms</b> Temitope Akinremi and Stephen Roper, 2019
80	<b>Exploring the link between training and innovation using the Longitudinal Small Business Survey</b> Marion Frenz and Ray Lambert, 2019
79	<b>An Investigation of UK SME Access to Finance, Growth and Productivity, 2015-2017</b> Robyn Owen, Theresia Harrer, Tiago Botelho, Osman Anwar and Suman Lodh, 2019
78	<b>University Engagement and Productivity in Innovative SMEs: An Empirical Assessment</b> Andrew Johnston and Daniel Prokop, 2019
77	<b>Getting the right recipe: collaboration strategies for radical and incremental innovators in services</b> Halima Jibril, Stephen Roper and Jane Bourke, 2019
76	<b>Innovating into trouble: When innovation leads to customer complaints</b> Stephen Roper and Jane Bourke, 2019
75	<b>Innovating into trouble: When innovation leads to customer complaints</b> Stephen Roper and Jane Bourke, 2019
74	<b>Fecundity, fertility, survival and growth: high-growth firms in the UK and their contribution to job creation, a demographic perspective</b> Michael Anyadike-Danes and Mark Hart, 2019
73	<b>Fast-growth firms and their wider economic impact: the UK evidence</b> Jun Du and Enrico Vanino, 2019

# Annex 3:

## List of research reports 2019-2020

### **Evaluation of the Cavendish Enterprise ‘Business Boost’ Project.**

Stephen Roper, Ian Drummond, Halima Jibril, Doug Scott, 2020

### **Spillovers from inward investment – a comparison of Northern Ireland with the rest of the UK.**

Nigel Driffield and Katuscia Lavorator, 2020

### **The interrelationship between R&D, Innovation and Productivity: Evidence for micro-enterprises**

Hoang Minh Luong and Nola Hewitt-Dundas, 2020

### **Productivity in the ICT sector in Northern Ireland: A Pilot Study**

Karen Bonner and Nola Hewitt-Dundas, 2020

### **Employee well-being, mental health and productivity in Midlands firms: The employer perspective**

Carol Stanfield, Maria Wishart, Paul Sissons, Jennifer Ferreira, Stephen Roper and Vicki Belt, 2020

### **COVID-19: Critique and proposals to develop more comprehensive and inclusive support for the self-employed**

Julia Rouse, Mark Hart, Neha Prashar and Ashwin Kumar, 2020

### **Northern Powerhouse Local Growth Dashboard**

ERC 2020

### **Building resilience in under-represented entrepreneurs: A European comparative study.**

ERC 2020

### **Understanding value added per employee in six UK sectors: The insiders’ view: Summary report – Executive Summary**

Stephen Roper, Katherine Hathaway and Nigel Driffield

### **UK Local Growth Dashboard 2019**

ERC 2019

# Annex 4:

## List of insight papers 2019-2020

30	<b>Talking about workplace mental health: How do employers in the Midlands understand and experience mental health issues?</b> Maria Wishart, 2020
29	<b>Workplace mental health and COVID-19: experiences of firms in the Midlands</b> Maria Wishart and Vicki Belt, 2020
28	<b>Understanding Disparities in Local Productivity in the UK: Are we using the right measure?</b> Neha Prashar, Mark Hart and Michael Anyadike-Danes, 2020
27	<b>Assessing the impact of COVID-19 on Innovate UK award holders Survey and case-study evidence Wave 1 – June/July 2020</b> Stephen Roper and Tim Vorley, 2020
26	<b>First findings on the impact of COVID-19 on self-employment in the UK – evidence from the Understanding Society household survey</b> Darja Reuschke, Andrew Henley and Elizabeth Daniel, 2020
25	<b>International sectoral R&amp;D trends after the global financial crisis: What can we learn for current policy?</b> Stephen Roper, 2020
24	<b>R&amp;D and innovation after COVID-19: What can we expect? A review of trends after the financial crisis</b> Stephen Roper, 2020
23	<b>Online Peer-to-Peer lending to finance business growth: Evidence from Funding Circle</b> Victor Ekpu, Mike Wright, Neha Prashar and Anastasia Ri, 2020
22	<b>COVID-19 and self-employment in the UK</b> Andrew Henley and Darja Reuschke, 2020
21	<b>Business Dynamism and COVID-19 – an early assessment</b> Neha Prashar, Anastasia Ri, Mark Hart and Stephen Roper, 2020
20	<b>The business effects of pandemics – a rapid literature review</b> Temitope Akinremi and Joanne Turner, 2020
19	<b>Determinants of demand and participation in cultural events</b> Marta Zieba, 2019
18	<b>Does the City of Culture (COC) create long-term benefits? Comparing the performance of Derry-Londonderry to other short-listed cities</b> Jae-Yeon Kim and Stephen Roper, 2019
17	<b>Job Creation and Destruction</b> Neha Prashar and Mark Hart, 2019

# Annex 5:

## SOTA reviews 2019-2020

46	<b>Stewardship and Survival: What can we learn from longstanding family businesses?</b> Carole Howorth, 2020
45	<b>What is the social-economic contribution of family firms in the UK?</b> <b>A review of the evidence</b> Jane Glover and Kiran Trehan 2020
44	<b>What do we know about Youth Entrepreneurship in the UK?</b> <b>A Review of Evidence</b> Kelly Smith, 2020
43	<b>Forms of self-employment: What do we know about the gig economy?</b> Andrew Henley, 2020
42	<b>Collaboration and Knowledge Transfer between SMEs and Universities</b> Andrew Johnston, 2020
41	<b>University-Industry Collaboration: Are SMEs Different?</b> Andrew Johnston, 2020
40	<b>What are the main barriers to entrepreneurship in under-represented groups?</b> Maria Wishart, 2020
39	<b>Online Peer-to-Peer lending – what do we know, and where are the gaps?</b> Anastasia Ri, 2020
38	<b>A Review of Assumptions Underlying Women’s Enterprise Policy Initiatives</b> Julia Rouse and Kiran Trehan, 2020
37	<b>Is Expanding Women’s Self-employment A Good Thing?</b> Angela Martinez Dy, Dilani Jayawarna and Susan Marlow, 2020
36	<b>What Do We Know About Ethnic and Migrant Women Entrepreneurs?</b> <b>A Review of Evidence</b> Haya Al-Dajani, Maria Vilares Varela and Natalia Vershinina, 2020
35	<b>How Does Gender Shape Entrepreneurial Resources and Practice?</b> <b>A Review of Evidence</b> Julia Rouse, 2020
34	<b>Is Time Up for The Hero Male Entrepreneur?</b> <b>A Review of Enterprise Discourse and its Effects</b> Lorna Treanor, Sally Jones and Susan Marlow, 2020
33	<b>Measuring the Impact of Entrepreneurship Education within Higher Education</b> Kelly Smith, 2020
32	<b>From Cooperative Principles to Performance</b> Carmen Guzmán and Francisco J. Santos, 2019

31	<b>FDI and local productivity</b> Nigel Driffield, Guus Hendriks and Katuscia Lavoratori, 2019
30	<b>Are Social Enterprises Different?</b> Catherine Robinson, 2019
29	<b>Entrepreneurial Health and Wellbeing</b> Shivani Mehta, Sarah Dodd and Alec Morton, 2019
28	<b>Loan guarantee schemes in the UK: What have we learnt?</b> Marc Cowling, 2019
27	<b>The Biology of Entrepreneurship</b> Ahmed M. Nofal and Nicos Nicolaou, 2019
26	<b>What is 'Good Work' and why does it matter?</b> Anne Green, 2019
25	<b>University research and regional development</b> Paul Benneworth, 2019
24	<b>Who benefits from apprenticeships? The English experience</b> Anne Green, 2019
23	<b>Self-employment and Local Growth</b> Andrew Henley, 2019
22	<b>Employee Engagement and Business Performance - A Review of quantitative evidence</b> Cai-Hui (Veronica) Lin, 2019
21	<b>Innovation, open innovation and intellectual property rights: firm size differences</b> Alexander Brem and Petra A. Nylund, 2019
20	<b>Unregistered IP rights and innovation: What is the evidence?</b> Muthu De Silva, 2019
19	<b>Trademarks and registered designs: Evidence on the links to innovation and business performance</b> Joanne Turner, 2019
18	<b>Value of patents for the innovating firm</b> Suma Athreye, 2019
17	<b>The impact of policy support on firms' innovation outcomes and business performance</b> Bettina Becker, 2019
16	<b>Access to Venture Capital Amongst Female-led Firms</b> Aloña Martiarena and Mark Hart, 2019

# Annex 6:

## Blogs 2019-2020

### **What works for improving small business productivity?**

Stephen Roper and Halima Jibril, December 2020

### **Business resilience: Location, location, location!**

Maria Wishart, November 2020

### **The second lockdown risks an insolvency tsunami**

Mark Hart, November 2020

### **What do we ‘mean’ by productivity anyway?**

Neha Prashar and Mark Hart, October 2020

### **Productivity in SMEs: A tale of the tortoise and the hare?**

Carol Stanfield, September 2020

### **One size doesn't fit all in terms of R&D and innovation**

Stephen Roper, September 2020

### **Diversity and Entrepreneurial Activity – changing fortunes?**

Richard Roberts, August 2020

### **Growth and Diversity – an Opportunity?**

Richard Roberts, August 2020

### **Diversity and Innovation – the new evidence**

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# Annex 7:

## ERC Team

### Directors

Professor Stephen Roper, Director

Professor Mark Hart, Deputy Director

Dr Vicki Belt, Deputy Director

Lee Hopley, Deputy Director

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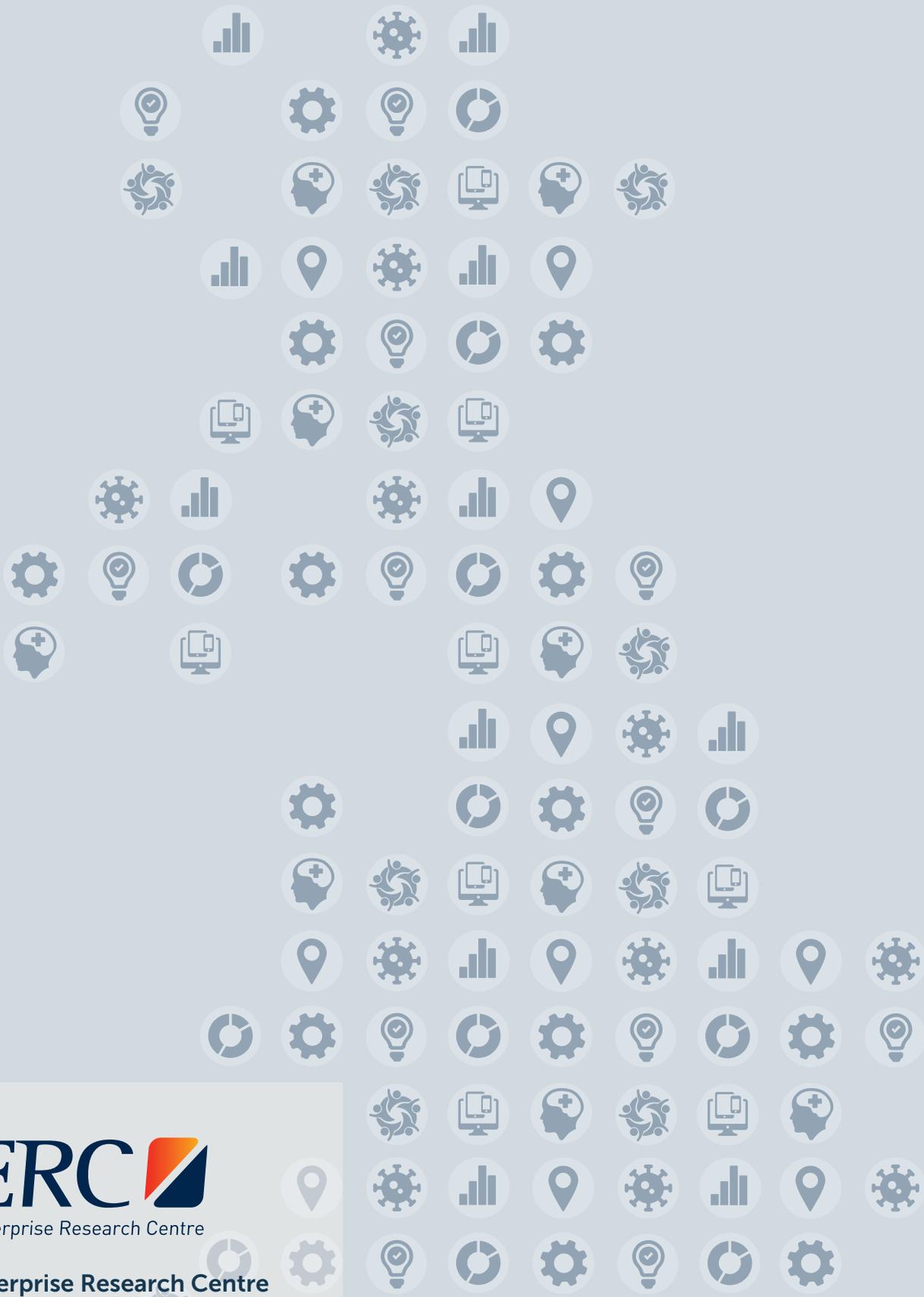
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Carol Stanfield, ERC Research Associate

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