

# THE STATE OF SMALL BUSINESS

Putting UK entrepreneurs on the map



## About Nesta

Nesta is a global innovation foundation that backs new ideas to tackle the big challenges of our time. Nesta uses its knowledge, networks, funding and skills - working in partnership with others, including governments, businesses and charities. It is a UK charity that works all over the world, supported by a financial endowment.

To find out more visit [www.nesta.org.uk](http://www.nesta.org.uk)



## About Sage

Sage (FTSE: SGE) is the global market leader for technology that helps businesses of all sizes manage everything from money to people - whether they're a start-up, scale-up or enterprise. We do this through Sage Business Cloud - the one and only business management solution that customers will ever need, comprising Accounting, Financials, Enterprise Management, People & Payroll and Payments & Banking. Our mission is to free business builders from the burden of admin, so they can spend more time doing what they love - and we do that every day for three million customers across 23 countries, through our 13000 colleagues and a network of accountants and partners. We are committed to doing business the right way, and giving back to our communities through Sage Foundation.

See more at: [www.sage.com](http://www.sage.com)

ISBN: 978-1-84875-161-3

Published under Creative Commons CC-BY-NC-SA licence

Revised November 2017

# Contents

<b>4</b>	<b>Forewords</b>
<b>6</b>	<b>1. Introduction</b>
<b>7</b>	<b>2. Summary of findings</b>
<b>14</b>	<b>3. Key facts about the UK SME landscape</b>
14	3.1 Size
15	3.2 Sector
17	3.3 Location
17	3.4 Business churn and survival
18	3.5 Structure and ownership
<b>24</b>	<b>4. SMEs and growth</b>
24	4.1 SME population growth
26	4.2 SME turnover growth
28	4.3 SME growth by sector
<b>32</b>	<b>5. SMEs and productivity</b>
32	5.1 Productivity by size and sector
35	5.2 Productivity by region
35	5.3 Productivity by local authority
37	5.4 Understanding the productivity gap
<b>40</b>	<b>6. Levers for growth and productivity</b>
40	6.1 Skills
42	6.2 Infrastructure
43	6.3 Exporting
43	6.4 Other levers
<b>48</b>	<b>7. Conclusions and recommendations for policymakers</b>
<b>52</b>	<b>Appendix 1: Useful resources for SMEs</b>
<b>54</b>	<b>Appendix 2: Glossary and definitions</b>
<b>56</b>	<b>Appendix 3: Methodology</b>
<b>59</b>	<b>Acknowledgements</b>
<b>59</b>	<b>Notes and references</b>



## Forewords

Small and medium-sized enterprises are vital for our economic growth and overall prosperity. At the start of 2016, 5.5 million (over 99 per cent) of UK businesses were SMEs, with a combined annual turnover of £1.8 trillion, and employing 60 per cent of total UK private sector employment.

The UK is a great place to start and grow a business. Over 400,000 new businesses started in the UK last year, and we are ranked in the global top ten for doing business by the World Economic Forum and World Bank, and considered amongst the very best in Europe.

The Government is committed to supporting small businesses to grow. We are making it easier for SMEs to access the finance they need to expand and continue to be the number one destination for foreign direct investment in Europe. The Government increased the Employment Allowance to cut the cost of employment, giving employers up to £3,000 off their National Insurance contributions bill, benefitting one million employers; and continue to build on the £10 billion of business savings already achieved since 2010, by reducing the burden of doing business and cutting red tape.

We will go further through our new, modern Industrial Strategy. Our Strategy will enable the UK to work more productively and boost the earning power of people, businesses, places and the nation as a whole. It is about driving an economy that works for everyone: improving living standards and creating good jobs for all, building the conditions for competitive, world-leading businesses to start and grow.

I hugely welcome this report by Nesta and Sage. The data and insights are a valuable addition to our own evidence base and enhance our understanding of the rich and complex SME landscape.

With reports such as this, combined with the Government's efforts to make the UK the best place in the world to start and grow a business, I'm confident the future looks bright for SMEs in our country.



**Rt Hon Damian Green MP**  
**Minister for the Cabinet Office**  
**and First Secretary of State**



## Forewords

Small and medium businesses are the backbone of the nation's economy. It's a phrase we hear often, but one that is well and truly brought to life in this report.

The data tells an exciting story of job creation and growth – there are nearly a third more small and medium businesses trading today than ten years ago, and these heroes have created 73 per cent of all new jobs since 2010. The UK's entrepreneurial spirit is alive and kicking.

I see this spirit of determination every day when I go to meet Sage's customers around the UK. From sole traders to growing businesses to large enterprises with complex supply chains, they all share the same unconquerable passion and drive. Whatever political backdrop they are confronted with, these business builders get up every day and get to work.

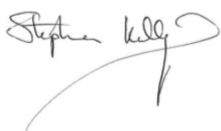
What this report also reveals, however, is the stark inequality of opportunity for small businesses. Not just between North and South or urban and rural, but between sectors, and within regions themselves – with an average 5 to 1 difference between the most and least productive local authority within any UK region. We seriously risk leaving parts of the country behind.

The UK's productivity problem – markedly worse than most OECD countries – continues to remain at the top of the government agenda, and clearly, there is no simple answer. But these new findings get to the heart of the factors at play. Rather than attempting to address the issue nationally or even regionally, the key to solving the productivity problem lies at a local level.

Neither central nor local government nor the businesses themselves can address this alone. Armed with this new data, I urge decision-makers to follow the recommendations laid out in this report, and create local-first strategies that will boost the output of small and medium businesses in each area.

Business builders will keep building on – but it is our local communities that will create the environment in which they can thrive.

Because 'one size fits all' fits no one.



**Stephen Kelly,**  
CEO, Sage

The world isn't short of economic statistics. But most of the statistics in the past were broad brush averages, showing growth rates, exchange rates and levels of output. It's only in recent years that we have benefitted from data that is far more fine-grained, and therefore far more useful for anyone needing to make decisions.

This report is a good example. It gathers together fresh, detailed, and useful data about small businesses that helps us understand differences as well as averages. One major focus is productivity. Smaller businesses have proven surprisingly resilient since the financial crisis. But that resilience has come alongside a seriously entrenched productivity problem – and one that statistical revisions show might be even worse than we thought. Average productivity is apparently stuck at the already weak levels of the late 2000s, and there's been very little sign of improvement since, despite a flood of new technologies. But as this report shows the differences are more important than the averages, in an economy that combines some firms and sectors that are every bit as productive as the world's best, and others that lag badly behind.

The study also shows some of the details of the changing shape of our economy, with strong growth in ICT and professional services, education and business administration, confirmation that almost every part of the country is now a knowledge economy. Interestingly too, this analysis of data also shows just how important analysis of data and broader digital skills are at the level of the firm: knowing in detail who your customers are and what they want; automating production and distribution, HR and finance, turn out to correlate strongly with growth.

I hope that this report will help local areas to have more sophisticated discussions about what can be done to help firms grow and create jobs. It's fine to talk about the broad brush questions of tax and trade. But often what matters most are more everyday questions – of planning or parking or procurement. That's where a live dialogue between local authorities and business can be so important. This report and its associated website provides tools to underpin that conversation and help many more businesses to realise their full potential.



**Geoff Mulgan,**  
CEO, Nesta

# 1.0 Introduction

Most businesses are small businesses. They are vital not only for the economic well-being of our nation, accounting for 60 per cent of all private sector employment and 47 per cent of all private sector turnover in the UK, but also as part of the social fabric of our towns, villages and rural communities. Yet how much do we really know about our local small businesses? How fast are they growing? How productive are they in our town or village compared to the next? Are we doing all we can to support them?

Across the UK, many of the broad factors which influence growth – such as exporting, innovation, investment in software and staff training, management, acquisition, and ambition – may be known. Likewise, many of the inhibitors of growth – such as the complexity of taxation, the challenges of staff recruitment, and shortages of specific skills – are also widely acknowledged. Yet substantial gaps in our knowledge exist, particularly at a local level. It is clear, not only that different businesses face different obstacles to growth, but also that local conditions can have a huge impact. The more that local policymakers understand their local environment, the better they can tailor their interventions.

This report, produced by the UK's innovation foundation Nesta in collaboration with the UK technology company Sage, is a data-led guide to the state of SMEs in the UK. We break down the SME landscape, looking at factors such as productivity, rates of growth, and business churn to provide a view of how small business is faring in our towns, cities, and rural areas across the UK. Our analysis then seeks to identify some of the environmental factors that support or hinder the strength of the UK's SMEs at a local level, from skills to infrastructure.

It is accompanied by a comprehensive data-guide to the SME landscape for every UK local authority, online at [stateofsmallbiz.com](http://stateofsmallbiz.com). We hope that this data tool, along with the findings of this report, give policymakers and elected representatives at every level of government, from Whitehall to Town Hall, the data they need to make informed and evidence-led policy decisions to support their local SMEs.

## 2.0 Summary of findings

It is a decade since the UK economy peaked ahead of one of the most severe recessions in recent history. Ten years on, we are in a relatively strong position despite the uncertainties of Brexit: employment is at record levels, growth has been steady, and business activity continues to rise.

However, while Britain may have record employment, wages have not kept up with inflation. The cumulative effect of inflation has pushed up prices by 33 per cent since 2007. Wages have only risen by 15 per cent. The economy is growing, but real wages are falling and living standards are not rising.

This is because productivity – the amount that firms produce per employee – is not rising. The IPPR's Commission on Economic Justice recently argued that too much economic growth has been put into profit rather than wages.<sup>1</sup> However, wages rise not when profit is curbed, but when that profit is invested in the technology, skills, or innovation that will lift the value creation of each worker. Economic growth and job creation are necessary but not sufficient to build a strong economy; a strong economy is one that is growing, and one that invests the proceeds of growth to secure rising productivity and living standards.

Small businesses will be critical to the UK's ability to turn growth into larger pay packets and a better standard of living. Over 99 per cent of businesses are SMEs, accounting for 60 per cent of private sector employment, and 47 per cent of turnover. The health of these 5.5 million enterprises has a significant impact on the health of the wider economy. They have done much to pull the UK economy out of recession and back into growth, but there is still more to do if wages are to rise. If we are to build a stronger economy with the help of small business, there are disparities in the SME landscape that we cannot ignore.

### SMEs are driving growth and employment

A striking feature of SMEs in the past decade has been their remarkable resilience. There are 29 per cent more SMEs trading now than in 2007, and their numbers have grown every year, even during the recession. Far from being a trend of necessity, driven by job losses in the wider economy, Britain has sustained a long-term rise in self-employment alongside rising full-time employment. Opportunity knocks.

This resilience has put SMEs at the heart of the UK's impressive job creation. Seventy-three per cent of private sector jobs created since 2010 – over two million – have

been created by SMEs, despite representing only 60 per cent of employment overall. SME turnover has risen by 17 per cent in the same period. Small business Britain is booming: in the last three years alone, the number of SMEs per working age adult (business density), has risen by 10 per cent across the UK, rising in every region but Scotland.

### 1. SMEs have disproportionately driven job creation

**Since 2010, SMEs have created 73 per cent of new private sector jobs, despite accounting for just 60 per cent of private sector employment. Of these 2.8 million new jobs, 34 per cent came from non-employers, and 40 per cent from SME employers. 27 per cent came from large businesses.<sup>2</sup> As discussed in Section 4.2, we believe that the increase in non-employers is more the result of people choosing to become self-employed rather than necessity.**

### But growth alone cannot lift living standards

Just as SMEs have been central to the UK's past economic recovery, so too will they be critical to building the strong economy needed for the future. Unfortunately, while SMEs may have secured impressive growth in turnover and employment to help lift the UK economy out of recession, there has been no corresponding rise in productivity: SME productivity has risen by around 2.5 per cent between 2007 and 2016 (on the measure we are using in this report), but has been largely flat since 2010. While SMEs have increased turnover by 17 per cent, SME employment has risen by 18 per cent. Greater wealth and job creation are good, but economic output needs to rise faster than employment if productivity is to grow.

The first challenge is that the basic success of SMEs reflects a persistent North-South divide. Consider business count. Nationally, this is rising, but while London has seen a 41 per cent increase since 2010, in the West Midlands this has been just 16 per cent. The devolved nations also perform comparatively poorly on this measure: growth in SME numbers in Northern Ireland, at 4 per cent, has been just a tenth of that seen in London since 2010.

## 2: UK business population is booming, but Northern Ireland faces a unique situation

The UK has seen sustained, positive growth in the number of SMEs, from 41 per cent in London to 16 per cent in the West Midlands. However, it is Northern Ireland that has seen the lowest rate of SME growth in the UK at just 4 per cent. While numbers are now recovering, the number of micro and small business employers in Northern Ireland are still lower than they were in 2010. Nevertheless, there are some positives: Northern Ireland, along with the South West, has seen the largest productivity gain of any UK region: 13 per cent since 2007.

At the centre of Northern Ireland's SME landscape is exporting, with 29 per cent exporting compared to 18 per cent across the UK (see Section 6.3). This trade is disproportionately dependent on the EU, with 53 per cent of exporting SMEs in Northern Ireland exporting only to the EU, compared to 27 per cent across the UK. The potential impact of Brexit may thus be felt more acutely by Northern Irish SMEs than in any other part of the UK.

However, the second, and larger, challenge is the significant geographical variation in productivity. While productivity growth since 2007 has reduced the North-South divide, with rising productivity in Northern Ireland and Scotland, and falling productivity in London, the UK's regional productivity gap (across all firm sizes) is well documented.<sup>3,4</sup> We find an equally significant and large disparity in the productivity of SMEs. By international standards, the UK's variation in productivity is amongst the largest observed.<sup>5</sup> Our most productive firms are among the best in the world but, as has been remarked before, we have a 'long tail' of low-productivity firms that are affecting the overall health of the economy.

However, a regional (or even LEP-level) view still masks significant differences, which are even more apparent at a local authority level. There are positives: even within regions of generally low productivity, there are some hotspots of productivity, such as Newport, Barnsley and

South Derbyshire which stand out against their surrounding areas

## 3: There is very significant local variation in productivity

The variation in key SME outcomes across UK local authorities is significant. With a regional view, London (the most productive part of the UK) is more than three and a half times as productive as Wales (the least productive part of the UK).<sup>3</sup> However, at a local authority level, the difference is even more stark. The most productive part of the UK, the City of London, is 26 times more productive than the least, West Somerset.

London itself is a microcosm of the variation seen across the country: the capital includes some of the most and least productive parts of the UK, presenting a paradoxical tale of growth and decline. Business count may be up, but the region has seen the biggest productivity loss in the UK since 2007.

## 4: London is a paradox of growth and decline

While the capital is king on many measures of SME activity, particularly growth, it has seen the largest decline in SME productivity of any UK region since 2007. There are also significant local disparities, with Westminster one of the most SME intense parts of the UK, and Lewisham the least.

### Securing a strong economy

To secure a strong economy that addresses the challenges of stagnant wages and the demands of Brexit, we must look beyond just supporting the creation and scaling



of more businesses. Certainly, this is important. But we need more focus on lifting the productivity of the firms we already have. From broad productivity gains come rising living standards and greater competitiveness.<sup>5</sup>

The key question is how? What should we strive to do to support our SMEs and drive up productivity?

First, we need to reassess what we think 'success' looks like. Our analysis finds no link between an area having many high-growth firms and having highly productive firms, suggesting that although the 'scale-up' agenda is important in supporting innovation and job creation, it is not necessarily the answer to productivity.

Second, we need to be more accepting of business failure as a positive. This report shows business survival rates are negatively related to productivity, suggesting that 'creative destruction' is a critical force for productivity growth. Whilst this will not be news to economists, this should be borne in mind by policymakers. We need a shift in mindset away from the fear of failure.

## 5: Failure can be good

**The belief that firm survival is a sign of a strong SME environment is misplaced. This report shows a significant negative relationship between productivity and survival rates, showing that the dynamism of 'creative destruction' is good for the economy.**

Third, we need to address the external factors that impact SME productivity. It has been suggested that the UK's regional productivity gap is largely explainable by relatively few factors – including travel time from London (physical infrastructure), capital employment, industry mix, business ownership, and skills – although more needs to be done to understand these factors and to move from diagnosis to prescription.<sup>6</sup>

Our own analysis of local authority level SME productivity supports the case for attention to skills, finding that productivity is positively linked with the share of the local population with NVQ4+ level qualifications. The skills gap is particularly wide in the digital space, a concern raised by many interviewees. Although the tech sector has been

a standout source of growth, accounting for 14 per cent of all new SMEs since 2010, there have been multiple warnings that the UK faces a 'digital skills crisis' and one that disproportionately affects SMEs.<sup>7</sup>

Digital skills matter for productivity as they enable firms to automate and work more efficiently. Previous research from Nesta shows that greater use of online data is associated with an 8 per cent higher level of productivity, with firms in the top quartile of online data use being 13 per cent more productive (all else being equal) than those in the bottom quartile.<sup>8</sup> Unfortunately, the adoption by UK firms of many readily-available digital tools (e.g. websites, cloud computing, CRM, e-invoicing) remains well below the EU maximum.<sup>9,10</sup> This suggests that there is much more to be done to promote productivity-enhancing tools to businesses.

Our study is, however, less clear about the role of infrastructure. Evidence exists for the positive impact of both physical and digital connectivity on business performance: there is some firm-level evidence of the effects that superfast broadband<sup>11</sup> can have on SME productivity, as well as the benefit of transport links.<sup>12,13</sup> Our own analysis does not contradict that prior research, but finds that the picture is not clear-cut: as discussed in Section 6.2, digital infrastructure most likely needs to be combined with digital skills in order to generate clear benefits, while the benefits of transport infrastructure are difficult to disentangle from other regional effects.

## 6: Without digital skills and tools, advances in digital infrastructure will not boost productivity

**While broadband coverage is lower in rural areas and the devolved regions, there is not yet evidence for connection speeds having an impact on SME activity, growth, or productivity. However, the productivity impact of the SME deficit in digital skills is clear and estimated at £18.8 billion annually. Equipping SMEs with basic digital capabilities would result in a significant productivity gain.**

If anything, this underscores the importance of our fourth point: small business policy must be based on better use

of data to account for local factors. At its heart, this report finds that, while we may know broadly what SMEs need to flourish, we cannot underestimate the variation and importance of local factors. While there will always be a place for national legislation and spending decisions, the evidence suggests that a one-size-fits-all approach is likely to be limited in its impact. For example, Swindon has great infrastructure and connectivity, but low skills. Across the border, Cotswold District has high skills, but low churn. Gloucester and West Somerset may be in the same region, but the former is more than four times as productive as the latter. One-size-fits-all fits no-one. Until small business policy can reflect the local factors, the potential contribution of SMEs to the wider economy will be checked.

SMEs also report significant variations in attitudes towards business from local authorities, including the inclusion of local businesses in policy decisions. Instead of variation in how local policymakers view the importance of SMEs, we need variation in the policies they adopt to help their small businesses thrive. Alongside key issues like business rates, Brexit, and exporting, the SMEs we spoke with also raised down-to-earth issues like parking. The relevance of these practical local issues alongside the larger challenges cannot be discounted, and the voice of business is important in helping local authorities identify these obstacles.

### The importance of more SME-led policy

The answer is undoubtedly more local-led SME policy, reflecting the specific barriers to productivity growth in a particular area. Government is already moving in this direction through Local Enterprise Partnerships<sup>14</sup> and the proposed full devolution of business rates which is to be piloted in the near future. But local and national decision-makers must push for a devolution settlement that is a positive force for competition and productivity growth, not a market distortion that hampers SMEs and drives wealth destruction instead. In the detail of the local, we cannot lose sight of the broader national goal – a nation where small and medium-sized businesses drive prosperity for all.







## Aardvark Marketing Consultants

**Area of business:** Marketing

**Date of founding:** 2006

**Employees:** Two full-time employees.

**Local authority:** Birmingham

### About Aardvark Marketing Consultants

Aardvark Marketing Consultants provides marketing services, principally to SMEs. Chris Hutchinson founded the company 11 years ago, after he 'grew tired of office politics'. Spouse Gill Hutchinson joined him as joint owner of the business.

### Drivers of growth

Ninety per cent of Aardvark's business comes through recommendations. "We have a whole marketing plan based around referrals," says Gill. The company is pursuing growth by targeting smaller SMEs with a new, scaled-down offering. "My intention is not to turn people away because they can't afford our Marketing Director or Sales Generator service." says Gill.

### Barriers

Time and cash-flow are the two factors that Gill considers inhibitors to growth for typical SMEs: "Time is always an issue. You're busy delivering [projects], so your sales pipeline falls, then you have a dip and you pick up the sales again. We call it 'The Owner's Trap'". The uncertainty surrounding Brexit is another challenge: "Every time there

is political uncertainty, business people 'wait and see' and that's always bad for the economy."

### Sources of support

Aardvark had some limited support from government schemes, but many of their clients have received grants, and Aardvark sometimes provides support to help their clients obtain these. However, the company has struggled with the changing nature of business support schemes: "They're forever chopping and changing the criteria and processes - that we have to deal with," she says. "As advisers, we look unprofessional - if we don't keep up."

### What the firm would like from policymakers

Gill feels that, for a business her size, the reporting requirements are too onerous. "The time it takes me to deal with Government IT, accounting and reporting... it interrupts my business."

Gill would also like to see the payment terms between large and small companies addressed. Although the EU's Late Payment Directive is now in force, Gill says that late payment is still a major problem. "Big businesses sometimes wait 90 days before they even look at your invoice. A big business can kill a little one with the cash flow implications".



## Coaching Mums

**Area of business:** Business Coaching  
**Date of founding:** 2003  
**Employees:** None  
**Local authority:** Cheshire West and Chester

### About Coaching Mums

Coaching Mums provides business coaching, especially for working mothers. Founded 15 years ago by Amanda Alexander, her business delivers workshops, one-to-one training and online learning programmes.

### Drivers of growth

Amanda aims to grow the business in the coming years. To date, that growth has been uneven: *"The business has grown, had dips, and is now in a period of growth again"*, she says. To help her work more cost-effectively, she uses the internet to outsource internationally, working with a virtual assistant in South Africa and a technical team in India. Amanda says that networking with peers is also very helpful.

### Barriers

The domestic market is challenging, says Amanda. *"I feel that people in Europe, or Australia, or the Pan Pacific area are far more willing to invest in themselves than people in the UK."* The uncertainty surrounding Brexit has also had an effect: *"I have noticed a real change of mindset,"* she says, with individuals seeming less willing

“

Support for SMEs tends to be focused on those with employees. It would be great to see more interest in and acknowledgement of the many ‘hidden’ micro businesses being quietly run from home offices across the UK! The Government needs to support micro-businesses too, particularly women who are quietly boosting the UK economy while also raising kids.”

Amanda Alexander  
 Founder, Coaching Mums

to invest in themselves during a state of uncertainty. Personal attitude also matters: *"It's important to maintain a confident and positive outlook even when there are ups and downs in business"*, she adds.

### Sources of support

Amanda had some contact with the former Business Link, which she did not find very helpful. Other than that, she has not received any support from the government as a small business.

### What the firm would like from policymakers

Amanda thinks that VAT MOSS – the EU regulation whereby firms must register for VAT for any sales of digital products online, compared with the domestic offline threshold of £85,000 – was very poorly communicated by policymakers. And although the regulations have been reformed following protests from digital SMEs, Amanda believes that they have been devastating for many micro businesses trying to build an online business.

Amanda also believes that too much business support is aimed at large businesses, not micro businesses like hers. *"Support for SMEs tends to be focused on those with employees. It would be great to see more interest in and acknowledgement of the many ‘hidden’ micro businesses being quietly run from home offices across the UK! The Government needs to support micro-businesses too, particularly women who are quietly boosting the UK economy while also raising kids."*

## 3.0 Key facts about the UK SME landscape

It is surprisingly hard to capture just how many SMEs are operating in the UK. Business population data from the IDBR puts the number in 2016 at 2,536,395 – but this only includes businesses registered for VAT or PAYE, excluding around three million unregistered businesses with no employees. Estimates from the Department for Business, Energy, and Industrial Strategy (BEIS) puts the total at just under 5.5 million.

In 2016, SMEs accounted for over 99 per cent of enterprises, employed 15.7 million people (60 per cent total business employment), and achieved a turnover of £1.8 trillion (47 per cent of total UK business turnover).

### 3.1 Size

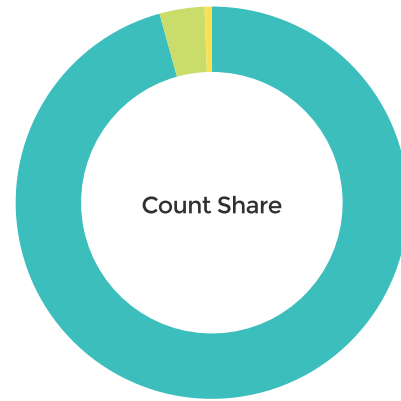
Of these SMEs, the overwhelming majority (95 per cent) are micro-businesses, employing 0-9 people. These businesses account for 54 per cent of SME employment and just under 40 per cent of turnover. Medium businesses represent less than 1 per cent of the SME population, but account for nearly a quarter of SME employment and 30 per cent of turnover.

#### Of the UK's 5,490,470 SMEs:

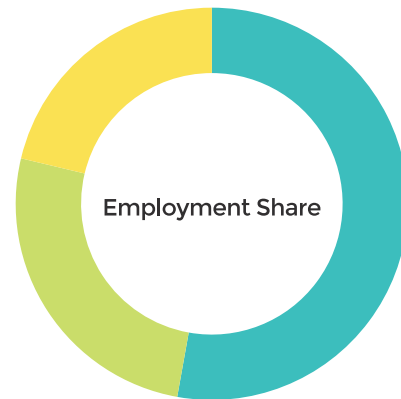
- 95.7 per cent are micro-businesses, employing fewer than 10 people, a total of 5,253,610.
- 3.7 per cent are small businesses, employing 10-49 people, a total of 203,550.
- 0.6 per cent are medium business, employing 50-249 people, a total of 33,310.
- 1.32 million are employers.
- 4.17 million have zero employees. These sole traders may or may not be VAT-registered.

Source: BEIS, Business Population Estimates 2016

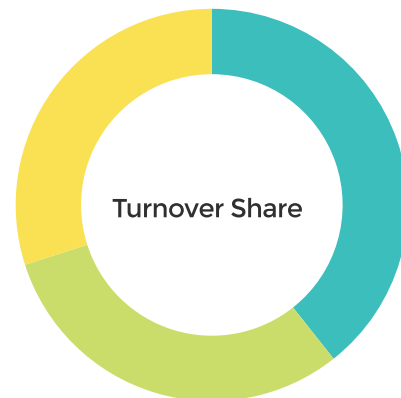
Breakdown of UK SMEs by Size



● Micro ● Small ● Medium



● Micro ● Small ● Medium



● Micro ● Small ● Medium

Figure 1: Source: BEIS, Business Population Estimates, 2016

## 3.2 Sector

If the UK's SMEs were 100 businesses, 18 would be in the professional and technical services sector. This includes everything from accountants to architectural practices, management consultancies to advertising firms. Twelve would be construction firms, eight would work in business administration, eight in ICT, and eight in retail.

Given the preponderance of micro-businesses in the SME landscape, the micro sector mix is broadly similar to that

of SMEs as a whole, but as business size grows, the sector mix changes. The health, education, and manufacturing sectors grow in share as business size increases, suggesting that these businesses are perhaps easier to scale, whilst sectors like agriculture and property see their share decline – possibly because they contain numbers of smallholdings that are geographically constrained.

Sector (with top-level 2007 SIC code)	Distribution of all SMEs across sectors	Distribution of Micro only	Distribution of Small only	Distribution of Medium only
1 : Agriculture, forestry & fishing (A)	6%	6%	2%	1%
2 : Mining, quarrying & utilities (B,D and E)	1%	0%	1%	1%
3 : Manufacturing (C)	5%	5%	10%	16%
4 : Construction (F)	12%	12%	7%	5%
5 : Motor trades (Part G)	3%	3%	3%	2%
6 : Wholesale (Part G)	4%	4%	7%	7%
7 : Retail (Part G)	8%	8%	8%	4%
8 : Transport & storage (inc postal) (H)	4%	4%	3%	4%
9 : Accommodation & food services (I)	6%	5%	14%	8%
10 : Information & communication (J)	8%	9%	4%	4%
11 : Financial & insurance (K)	2%	2%	1%	2%
12 : Property (L)	4%	4%	2%	1%
13 : Professional, scientific & technical (M)	18%	19%	10%	9%
14 : Business administration & support services (N)	8%	9%	7%	10%
15 : Public administration & defence (O)	0%	0%	0%	0%
16 : Education (P)	2%	1%	3%	11%
17 : Health (Q)	4%	3%	13%	13%
18 : Arts, entertainment, recreation & other services (R,S,T and U)	6%	7%	4%	5%
Total (does not sum to 100% per column due to rounding)	<b>101%</b>	<b>101%</b>	<b>99%</b>	<b>103%</b>

Table 1: Source: ONS Interdepartmental Business Register, 2016

## Number of SMEs per region and per 1,000 working age population

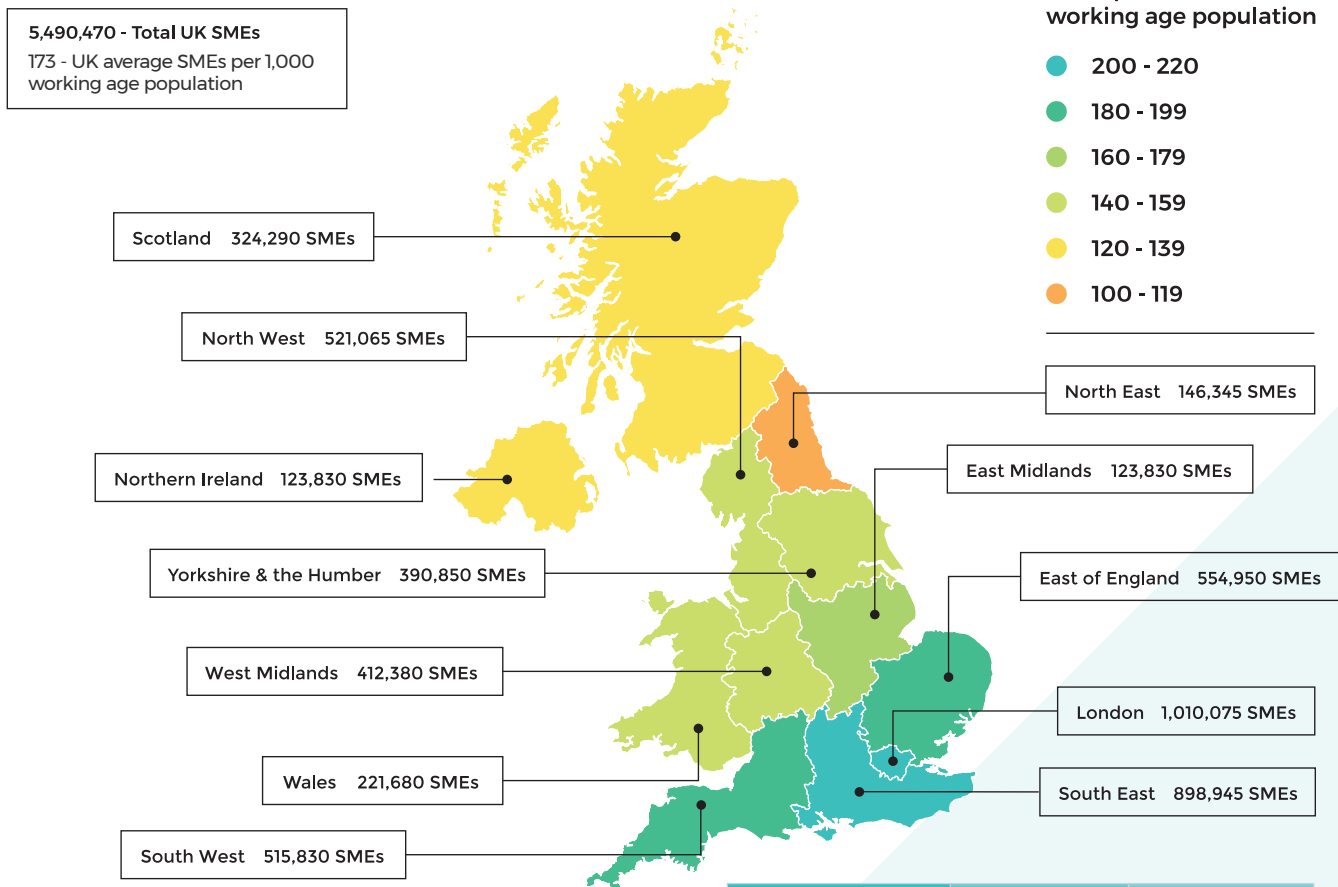


Figure 2: Source: Business population estimates, BEIS. Population data from the ONS

	Local authorities with highest rates of SME employment		Local authorities with lowest rates of SME employment
1	Westminster (279%)	1	Lewisham (20%)
2	Camden (142%)	2	Newham (23%)
3	South Buckinghamshire (90%)	3	Gosport (23%)
4	Kensington and Chelsea (87%)	4	Blaenau Gwent (24%)
5	Islington (80%)	5	Greenwich (25%)
6	South Lakeland (77%)	6	East Dunbartonshire (26%)
7	Ryedale (73%)	7	East Renfrewshire (26%)
8	Cotswold (72%)	8	Clackmannanshire (27%)
9	South Hams (72%)	9	North Lanarkshire (27%)
10	Eden (71%)	10	West Dunbartonshire (28%)

Table 2: Source: ONS, Inter-Departmental Business Register. 2015 Business Demography Tables

Region	Firm births per 1,000 Working Age Population	Firm deaths per 1,000 Working Age Population
UK	10.5	6.8
North East	6	4.2
North West	7.6	5.6
Yorkshire & the Humber	7.6	5.4
East Midlands	8.9	5.5
West Midlands	7.9	5.4
East	9.4	6.4
London	37.6	18.9
South East	10.1	6.9
South West	7.7	5.8
Wales	5.8	4.5
Scotland	5.7	4.4
Northern Ireland	4.6	3.4

Table 3: Source: ONS, IDBR



### 3.3 Location

London and the South East are home to over one-third of all SMEs in the UK. Even accounting for population, these regions still have a significantly higher SME density than other regions. London is no doubt distorted by the registration of shell companies, but even so, there is a clear North-South divide, which is not simply explained by proximity to the capital; for example, the South West has nearly two-thirds more SMEs relative to its population than the North East, even though travel times may be similar. (See Figure 2.)

#### Business activity is affected by commuting patterns

Business activity is not only distorted by a North-South divide. Closely linked to population-adjusted business count is the SME employment share, another measure of density. Here, there seems to be something of a commuter effect visible: the high SME employment share in central London boroughs like Westminster and Camden reflect the large influx of workers employed by SMEs in the local authority who are not part of the resident workforce, distorting the employment share figures. The corresponding outflow of workers is reflected in low employment shares for outer London boroughs like Lewisham, Newham, and Greenwich. This 'intra-city commuter effect' challenges the ability of SMEs to help diffuse the concentration of economic activity in key urban hubs, allowing wealth creation to be more evenly spread. (See Table 2.)

### 3.4 Business churn and survival

The average lifespan of a firm is surprisingly short: a study by the Enterprise Research Centre of UK firms born in 1998 showed that 90 per cent of the cohort were dead by the age of 15, with those surviving beyond 2013 still having approximately a 10 per cent chance of death per year.<sup>15</sup> This process of business birth and business death – or churn – is an important part of the creative destruction that drives wealth creation.

#### Churn: a clear London effect and a North-South divide

The regional effects on business birth is apparent in our analysis. While we are not saying that region causes different rates of business birth, region is a strong predictor of the rate of business birth, the result of other factors that vary by region. There is a clear North-South divide, and much lower churn in Scotland, Wales, Northern Ireland, and the North East of England. London is a clear outlier,

benefitting from both a commuter effect and being a hub for business registration (without necessarily any business operation). (See Table 3.)

#### Business survival

Closely linked to business birth and death is the question of business survival. How many of the UK's registered enterprises survive longer than five years? If one looks at regional survival rates, there is relatively little difference, with rates ranging from 39.3 per cent in London to 44.2 per cent in the South West – both fairly close to the UK average of 41.4 per cent. However, at local authority level there is much greater variation: of the businesses started in 2010, the number still trading in 2015 varies from a high of around 55 per cent down to a low of 19 per cent. (This is if one ignores the Isles of Scilly and the Shetlands as outliers, since their low absolute numbers of SMEs distort survival rates. Included, as per the chart below, then the variation is even starker). (Figure 3.)

Five-year business survival rate  
highest and lowest performing Local Authorities

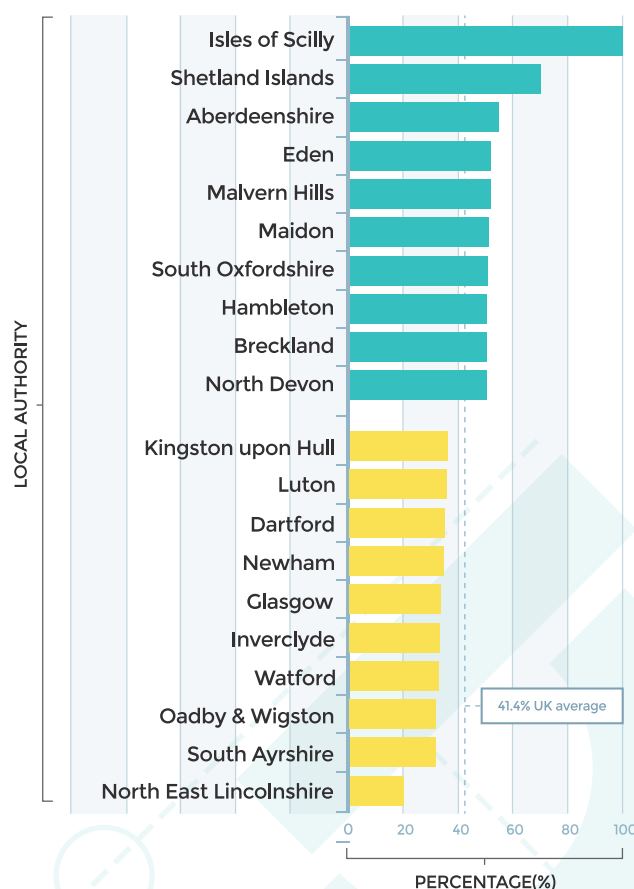


Figure 3: Source: ONS, Inter-departmental Business Register 2015

### 3.5 Structure and ownership

Sixty-one per cent of the UK's SMEs are sole proprietorships, with 32 per cent registered as companies<sup>16</sup>, and 8 per cent as partnerships. However, the legal status of SMEs changes significantly with size. Seventy-three per cent of zero-employee businesses are sole proprietorships and 20 per cent are registered as companies. Among medium businesses, however, 96 per cent are companies. This reflects the different regulatory and tax treatment given to different legal structures, as well as the different sector mix among different sizes of business. For some SMEs, starting as a limited company may make business sense. For others, legal status changes as the business grows, usually reflecting the tax treatment of turnover and profit.<sup>17</sup> (See Figure 4.)

more work is needed to understand what role board selection has in the gender gap between different sized businesses.

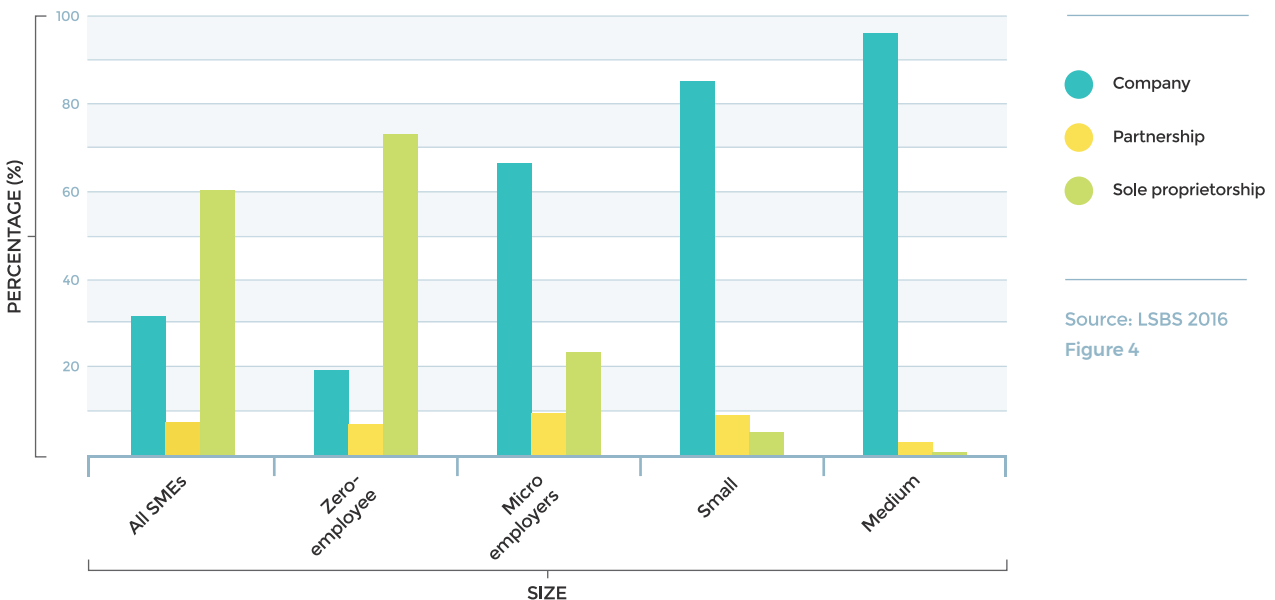
Interestingly, there is also significant variation by region. Wales and the North East are the most gender-equal parts of the UK, at least in terms of having a low share of businesses with no female representation on boards and high rates of having more than one: (See Figure 5.)

#### Women in business

There has been recent focus on the gender imbalance in SME ownership, particularly in key industries like tech. A 2015 report from the Centre for Entrepreneurs found that if women started businesses at the same rate as men, there would be a million more SMEs in the UK<sup>18</sup>. Looking at data on company directors and partners, the gender gap is clear. SMEs have fewer women directors or partners than large businesses. This is in part because more SMEs are founded by men, but with large businesses also outperforming medium SMEs for gender representation,



Business types vary with size



## How many, if any, of your directors and partners are women?

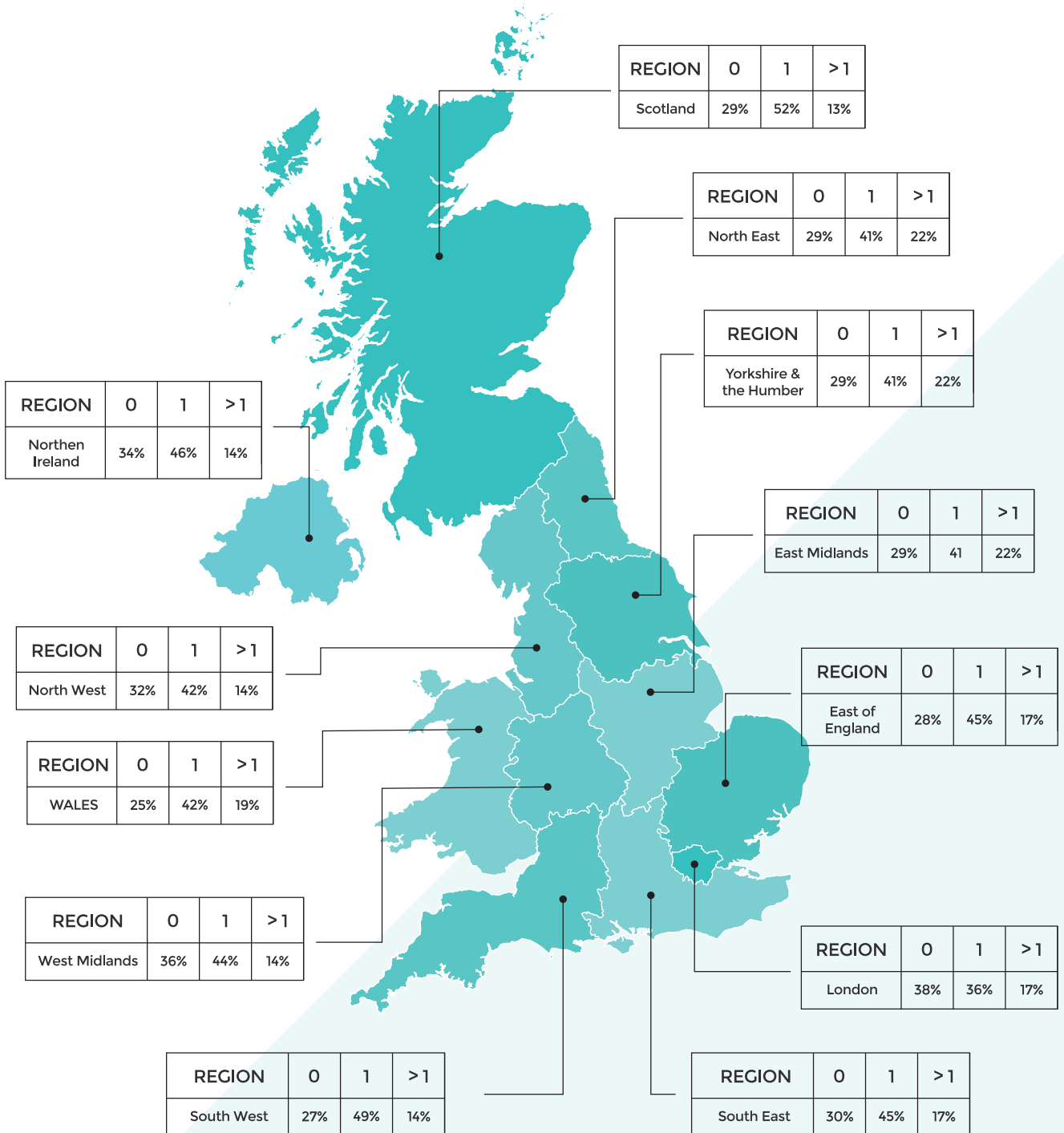


Figure 5: Source: LSBS 2016

### Is more than 50 per cent of the business owned by women?

Figure 6: Source: LSBS 2016

Yes No Don't Know



### Family business

Around two-thirds of the UK's SMEs are family-owned businesses. Even in London, with the lowest share of family-owned SMEs of any region, the figure is still 59 per cent. Northern Ireland has the highest share at 77 per

cent. As businesses grow, however, they are less likely to stay in the family: while 73 per cent of micro-businesses are family owned, just 42 per cent of medium SMEs are. (See Figure 7.)

### Percentage of business under family ownership

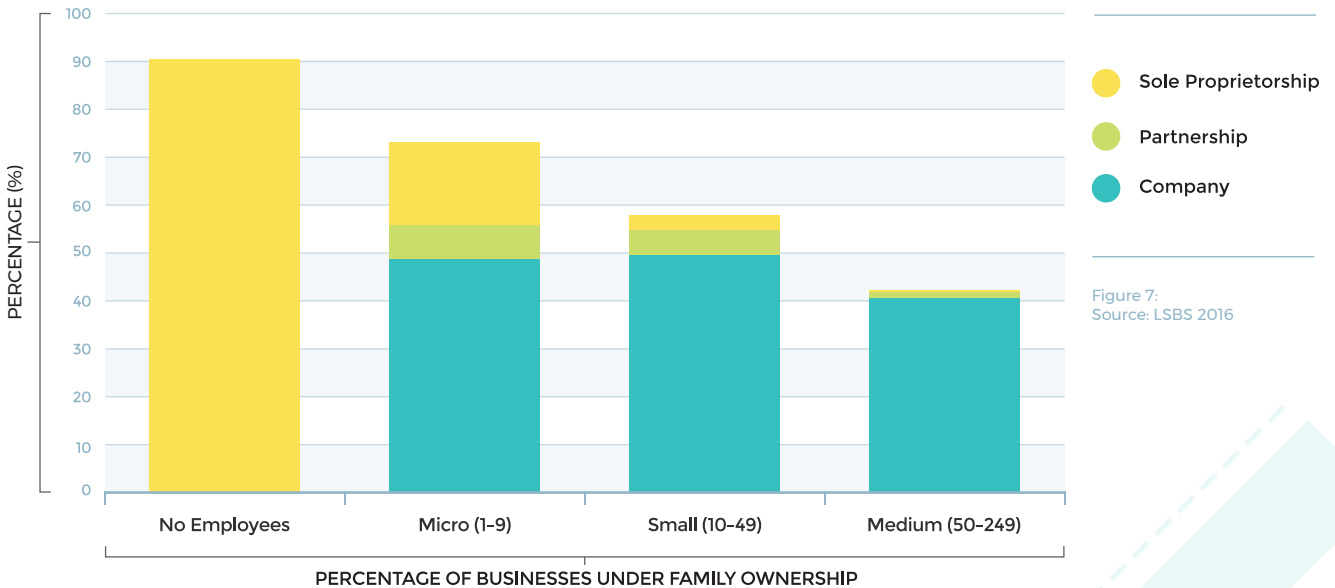


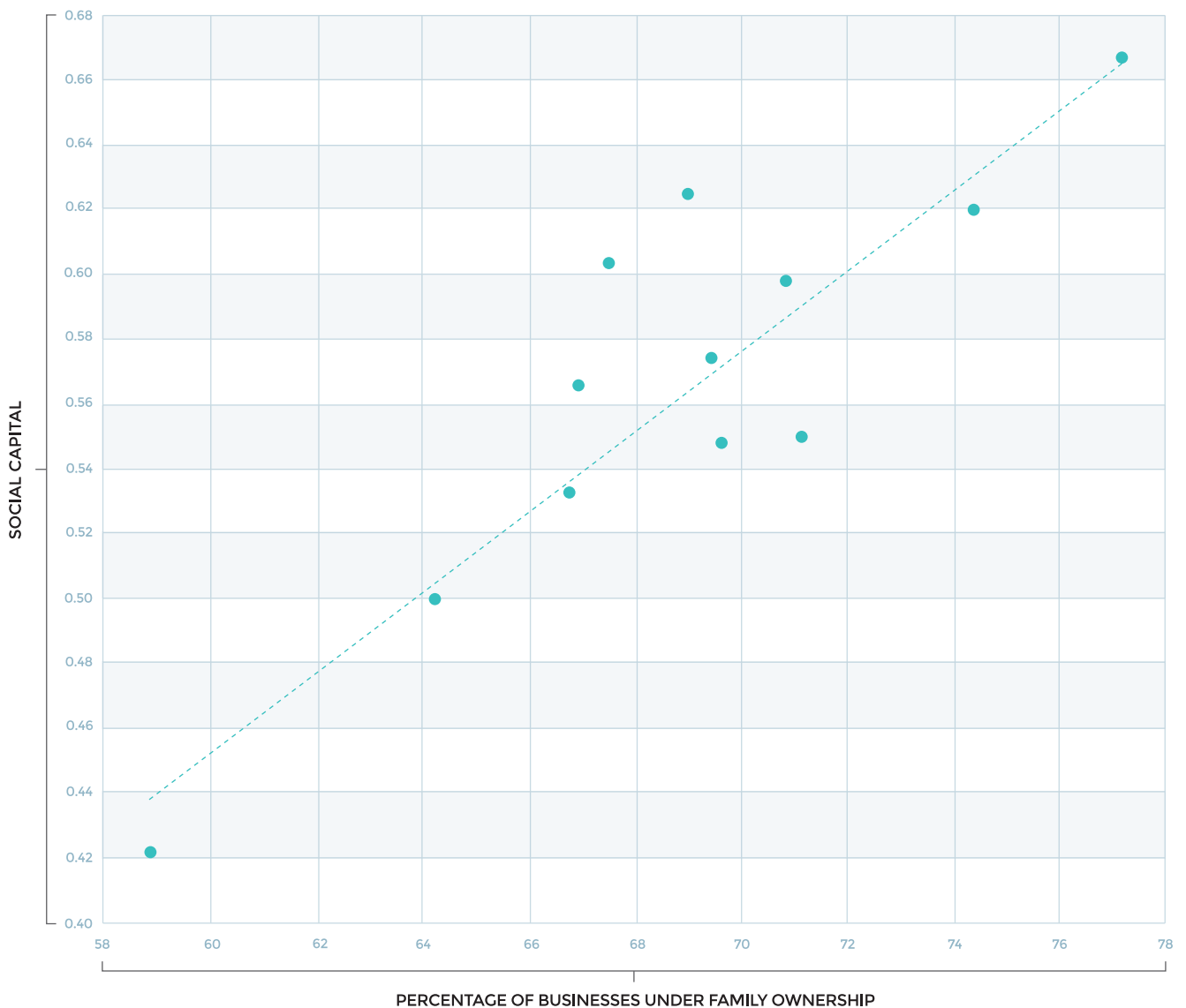
Figure 7: Source: LSBS 2016

This report finds a strong correlation at a regional level between family ownership of firms and social capital - a measure of the strength of society, including family, community, and civic bonds - as measured by the Legatum Institute's Prosperity Index.<sup>19</sup> This suggests that the impact of SMEs is not purely economic; the contribution of SMEs to the wider community can be about a lot more than jobs and wealth. Similarly, it is more than the mere economic environment that can affect the decisions and success of small businesses. (See Figure 8.)

Much of this report concentrates on the role of small businesses in generating wealth and employment, hence a focus on growth and productivity. However, it is important to recognise that they have a role which extends beyond this, but is much harder to quantify. Many interviewees pointed to three functions of SMEs in particular: innovation, the economic resilience resulting from sector diversification, and community cohesion.

### Percentage of business under family ownership

Figure 8: Sources: ONS IDBR 2016 and Legatum Institute





## Mellie Green

**Area of business:** Baby clothing retail

**Date of founding:** 2015

**Turnover:** >£30,000

**Employees:** 1

**Local authority:** Northumberland

### About Mellie Green

Mellie Green is an online retail business specialising in organic baby clothing and toys. Founder Jo Lennon set up the business when she was on maternity leave, as she wanted to have more control of her time. She works with a clothing designer to come up with new ideas, and also has a part-time job, which she does alongside the business.

### Drivers of growth

As an early-stage micro-business, Mellie Green has lots of potential for growth. “We’ve got huge plans for the next few years,” Jo says, “it’s just having the time and resources to put in.” Jo is currently financing the business herself, but more money would help progress faster “in terms of product development, bringing products to market, research, planning, prototyping and product testing, these things all take large investment. Organic clothing is something we’re catching up with in the UK, but there are already large markets in other countries so the opportunity for export is there.”

### Barriers

Jo works with designers, an accountant and a design and web agency: “The quicker you realise you can’t do

everything yourself, the quicker you will grow.” She would like Mellie Green to directly employ more members of staff. However, “there is so much red tape, especially when you’re a startup business... employing people and giving them stability when you’re just starting out is something that keeps me awake at night.”

### Sources of support

Mellie Green has a wide network of support. “I try to go to as many networking events as I can but attending events and working part-time can be difficult to balance” Jo says. She is also part of a huge online group of Mums. “They’re great for bouncing ideas off, trying new products on and they’re a huge encouragement; keeping close to your target audience is also essential if your business is going to grow.” Jo has found government support agencies “a bit of a minefield to negotiate. There just isn’t one place you can go”. Also “most finance options available are as loans, and they have to be paid back so it’s a bit risky to take on board when you’re developing new products.”

### What the firm would like from policymakers

Jo would like Government sources of support to be easier to find and navigate, less open to change, and listed in one place, “whether that’s an online website or portal. There seems to be so much out there and it’s hard to find what’s relevant to you, a lot of the time is almost as if you have to be ‘in the know’. There also seems to be a lot of focus on high-tech businesses and high-growth industries. I think those ‘bedroom businesses’, micro-startups, or ‘mumpreneurs’ looking to do something different struggle to get similar recognition and support.”



## Saturn Bioponics

**Area of business:** Crop production systems and hydroponics

**Date of founding:** 2011

**Turnover:** Projecting a turnover of £2-3 million over the next 12 months.

**Employees:** Five core staff members.

**Local authority:** Birmingham

### About Saturn Bioponics

Saturn Bioponics is primarily a provider of hydroponic systems for growing crops. Alex Fisher founded the business in 2011 in Birmingham, after he recognised that new technology was required to significantly increase yields of greenhouse produce. It now offers a variety of products and expertise to farmers and other partners.

### Drivers of growth

Alex explains how the company has grown: “We were originally focussed on Saturn grow technology development. However, we also developed a lot of know-how during that period around improved shelf life, flavour, colour...[This] has enabled us to take on [new] contracts. [We] are even engaging in applying hydroponic science to the production of non-food crops.” Alex identifies money and markets as key factors: “Everything is influenced by customers... they influence the direction we take.” However, he believes the sector could grow faster. “International markets and money in the domestic market are two major things [that would help].”

### Barriers

Alex has found staffing a particular challenge. “The amount of skilled labour in plant science in the UK is extremely limited,” he says. “It’s hard to find people who have the technical capacity and intellectual capacity to learn about [the business], and to be able to promote and sell it”. He also says that the domestic market for his technology is “very conservative and risk adverse because of tight margins”.

### Sources of support

Saturn Bioponics relationship with Innovate UK proved important for research and development. “We did a lot of projects with them, for domestic stuff,” Alex explains. However, he thinks the UKTI (now DIT) could do more. “You have to sort your own market out in terms of agricultural technology,” he says. “International shows will focus on how brilliant the UK is, [rather than] be about the actual technology we’re selling.”

### What the firm would like from policymakers

Alex would like to see financial incentives for adopting the kind of new technology Saturn Bioponics offers. “What [the Government] needs to do is financially help facilitate farmers and get demonstration sites up and running. That’s what this industry is about: trials that people can come and see and touch and feel. If you want to compete, you’ve got to have support getting technology into farms. Once they’ve got it, they’ll be much more effective and profitable.”

## 4.0 SMEs and growth

Growth comes in two forms: growth in the number of firms, and growth in the size of existing firms (typically measured in terms of increase in turnover and/or employment). In this Section, we examine both cases.

Not all businesses want to grow. However, on a macro-level, an economy needs to grow in order to create the jobs necessary for a growing population (and the taxes to pay for expanded public services for that population). In addition, since larger firms are typically more productive than smaller ones, the ability of SMEs to scale-up may also help drive productivity gains over time.

Although the picture of SME growth has many positive features, of broad concern is the tendency towards slower SME growth since 2007 and, again, the significant variation with geography.

“**SMEs are the bedrock of economic growth.**”

Charlotte Keenan, Goldman Sachs  
10,000 Small Businesses Programme

### 4.1 SME population growth

The UK as a whole has seen sustained growth in business numbers since the start of Business Population Estimates in 2000, with numbers rising every year despite the Great Recession. There are 23 per cent more SMEs trading in 2016 than in 2010 and 29 per cent more than at the 2007 pre-crisis peak. This growth has come from SMEs of all sizes over the past decade. There has been a 37 per cent rise in the number of zero-employee businesses, a 6 per cent increase in micro employers, an 18 per cent rise in small businesses, and a 14 per cent increase in medium businesses across the UK since 2007.

The employment effects of this business growth have been impressive: of the 2,824,000 private sector jobs created since 2010, 2,063,000 have been created by SMEs. At 73 per cent, this is far above SMEs' level of employment share. The largest share of the 2.8 million jobs came from non-employers (953,000 or 34 per cent), but together SME employers have created more. Between small businesses (538,000 jobs), medium businesses (390,000 jobs), and micro employers (182,000 jobs), SME employers have generated 40 per cent of all new private sector jobs. Large businesses accounted for 27 per cent.

#### A long run trend towards self-employment...

There is, however, a clear trend in the SME landscape towards zero-employee enterprises. The strongest business count growth has come among zero-employee businesses, particularly unregistered ones (up 43 per cent since 2007). This trend is not a new one, visible in the Business Population Estimates since 2000. In 2000, 72 per cent of micro businesses had zero employees rising steadily to reach 79 per cent in 2016. A similar trend is seen in SME employment, with the share of micro employment attributable to zero-employee businesses rising from 48.6 per cent in 2010 to 53.3 per cent in 2016.<sup>20</sup> In terms of employment growth, micro employers have averaged 0.8 per cent annually since 2010, well below the 1.8 per cent SME employer average. Employment in zero-employee businesses has grown at 4 per cent.

#### ...driven by opportunity, not necessity

The self-employment trend is visible in broader economic data. In 2000, around 12 per cent of all people in employment were self-employed, but by 2016 that had risen to 15 per cent. This data also offers evidence on whether this trend is positive or not.

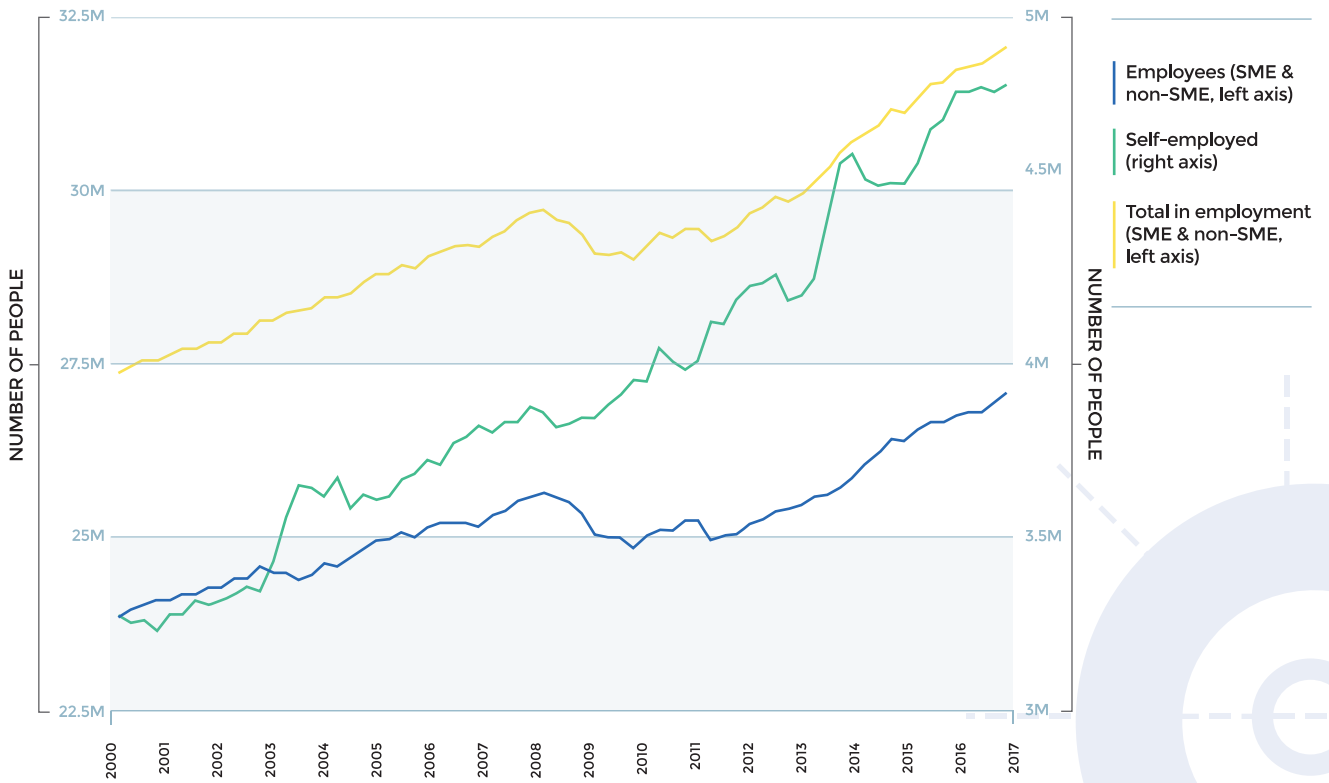
If the rise were attributable to necessity entrepreneurship (driven by job losses in the wider economy), one would expect self-employment to rise sharply during the Great Recession when the economy contracted and employment rates fell. However, this is not the trend that is seen. Employee numbers fell sharply 2008-2010 (see graph), but this is met with a corresponding fall in total employment. Self-employment rose, but only in line with trend growth since 2004. Indeed, the biggest spike in self-employment came in 2013-2014, when employment too was on the rise. It seems that the recession drove people out of the labour market rather than into necessity self-employment. This suggests that the rise in self-employment is the result of people choosing to become self-employed, rather than having no other options available.

This is supported by survey data showing that the majority of those in self-employment considered it a positive choice compared with being an employee. The benefits reported most often were flexibility, independence, and job satisfaction. Eighty-four per cent thought their life overall was better in self-employment compared with being an employee and over half believe they are better off financially.<sup>21</sup> (While a third believe they are financially worse off, most of these people still appear to have made a conscious choice to prioritise other factors, with 74 per cent of them saying their life was better overall.)



### The Great Recession: necessity or opportunity entrepreneurship

Figure 9: Source: ONS, NOMIS



### Change in SME count by Home Nations and SME classification/Size band 2010-2016

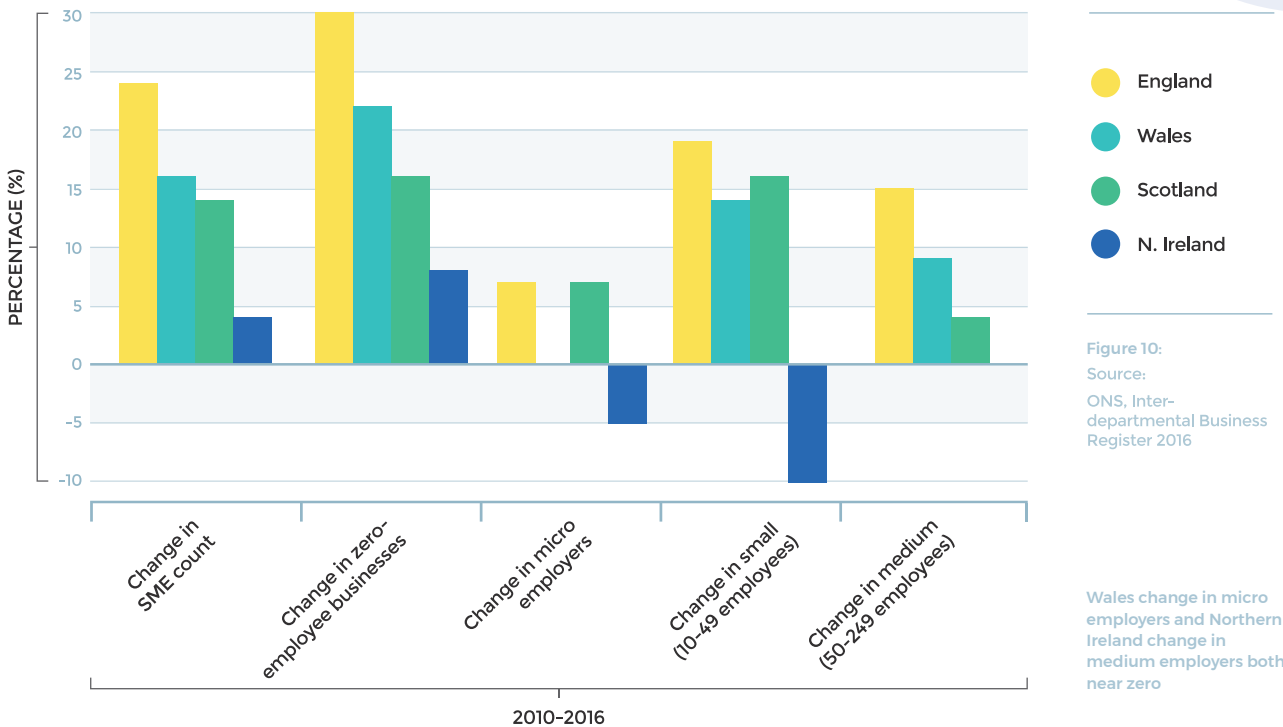


Figure 10: Source: ONS, Inter-departmental Business Register 2016

Wales change in micro employers and Northern Ireland change in medium employers both near zero

## Growth in business count - the problem of Northern Ireland

While the number of SMEs across the UK has increased every year since 2000, this increase has not been felt evenly. There may be 23 per cent more SMEs trading in 2016 than in 2010, but the growth in business count has been just 4 per cent in Northern Ireland, 14 per cent in Scotland, and 16 per cent in Wales. England leads the way at 24 per cent, though that includes significant regional variation in itself, from a growth rate of 16 per cent in the West Midlands to 41 per cent in London.

The Northern Ireland challenge is actually more complex than the low average 4 per cent growth would suggest (see Figure 10). While the nation has seen 8 per cent growth in the number of zero-employee businesses, the picture among employers is less positive, with 10 per cent fewer small businesses trading in 2016 than in 2010, and 5 per cent fewer micro employers. However, numbers do appear to be recovering - and, as discussed in Section 5.2 below, there is a positive story regarding Northern Ireland's productivity growth. We have perhaps seen the exit of low-productivity businesses and the gradual entry of new, higher-productivity SMEs.

## 4.2 SME turnover growth

### There is a tendency towards slower SME turnover growth

Turning to growth in turnover, the majority of UK SMEs are growing at less than 5 per cent per year: in the year to 2016, 71 per cent saw turnover growth of less than 5 per cent, 12 per cent between 5 per cent and 20 per cent, and 17 per cent over 20 per cent.

In the past nine years, there has been a shift towards slower rates of growth. While mid rates of growth have been relatively stable, recording only a slight decline, the share of low-growth firms has increased and the share of high-growth firms has decreased. (See Table 4.)

It is perhaps worth noting that low growth in a firm is not necessarily the result of poor business practices. There are a number of reasons why an SME may not grow particularly fast. This may be the result of a lack of desire to grow, with a business owner being content with the size of their business as it is. It may also be the result of the distortive effects of the tax system: some SMEs choose to keep turnover below the VAT threshold, particularly in industries where the addition of VAT to their product or service would price them out of the market.

Growth is often discontinuous, with rapid expansion followed by flatter periods. Growth 'spurts' can be the result of many factors, such as a decision to export, a change of management, or securing a large contract.

It is worth bearing in mind this discontinuous nature of growth when looking at turnover growth at a local authority level, where there is significant variance. Here, growth data may be affected by a sudden increase in the turnover of some firms or a change in the business-population (e.g. a high-turnover business moving in or out of an area). However, even excluding the extreme values, the variance is significant. (See Figure 11.)

It is interesting to note that only 28 local authorities saw turnover fall over this period, though these do include significant economic areas like Manchester and the City of London.

### 'Breakthrough' growth is found across the country

In recent years there has been a particular policy focus on high-growth firms, or scale-ups, achieving 'breakthrough' growth. These are of interest since they contribute disproportionately to net new job creation.

The commonly-used OECD definition of a high-growth firm (HGF) is an enterprise with average annualised growth over a three-year period greater than 20 per cent per year in employees or turnover, with at least ten employees at the beginning of the growth period.

Across the UK, around 1 per cent of (registered) firms are high-growth firms. Interestingly, in contrast to other elements of this report, there is a striking lack of regional variation, with little evidence of the North-South divide seen in other SME statistics. London achieves the highest rate of HGFs (1.4 per cent) and Wales the lowest (0.83 per cent), but broadly, high growth is well-spread across the UK. The North East, with an HGF rate of 1.2 per cent, outperforms the South East at 1 per cent, and Northern Ireland (0.93 per cent) is ahead of the South West (0.91 per cent).

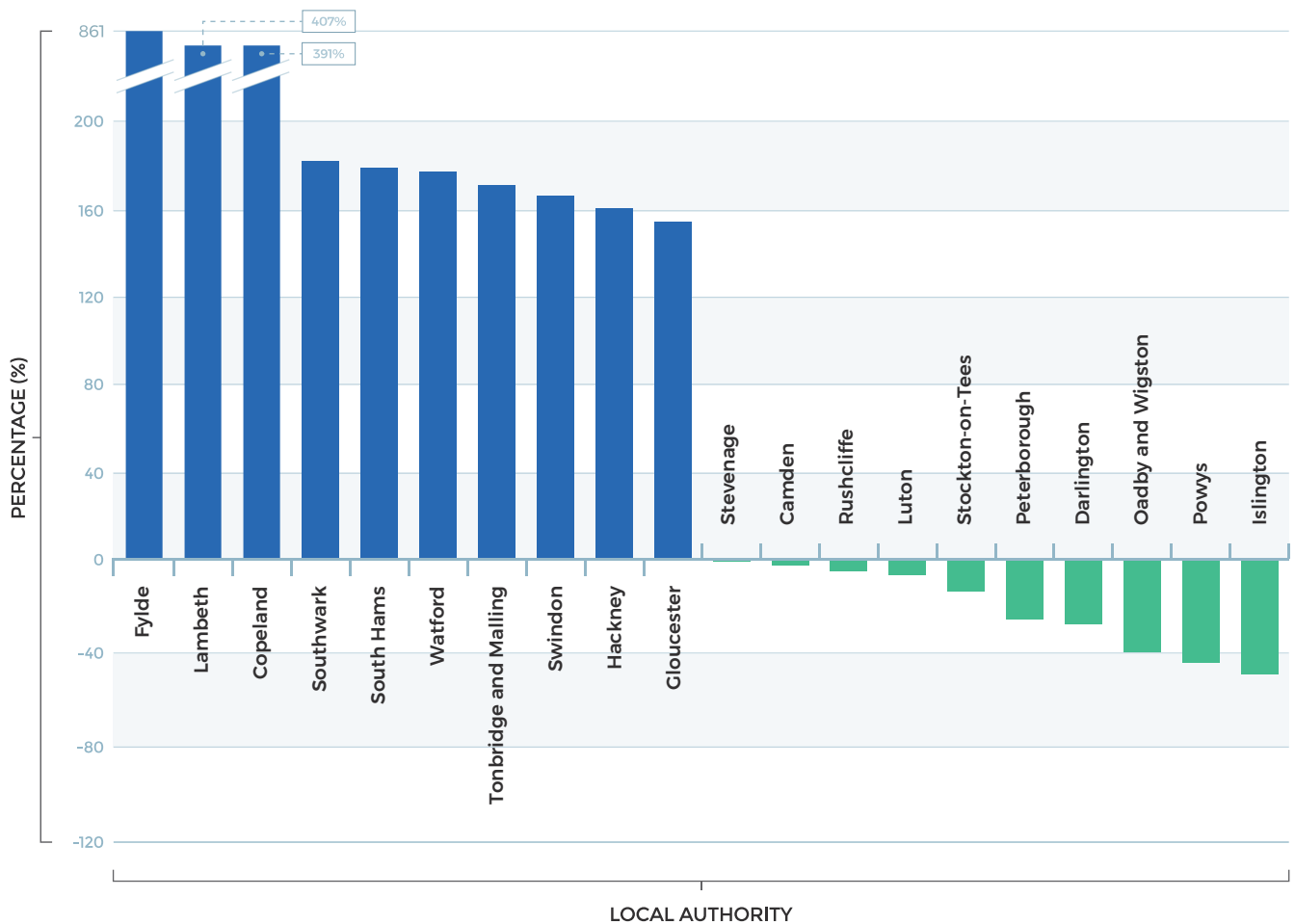
Broken down by local authority, it is clear that high-growth SMEs are not just confined to London and the South East, but located across the country. The top ten areas include London boroughs like Westminster, but also Aberdeen and parts of Merseyside and Tyneside.

Year	2007	2010	2013	2016
% of firms growing at <5%	66%	65%	67%	71%
% of firms growing at 5-20%	14%	14%	13%	12%
% of firms growing at >20%	21%	21%	20%	17%

Table 4: Source: ONS, IDBR.

### SME turnover growth 2007-2016 by local authority Top and bottom performers

Figure 11: Source: ONS, Inter-departmental Business Register 2017



Data for Fylde appears anomalous. We have been unable to determine a reason for this increase. The decrease in turnover for Islington is due primarily to a substantial shift in the financial services sector, possibly due to relocation of firms or a change in treatment of holding companies.

## 4.3 SME growth by sector

### Tech on top: the UK's stand out SME growth sector

Growth industries differ by business size. Since 2010, 32 per cent of the growth in the number of micro-businesses was in the professional and technical services sector, and 14 per cent in ICT. For small businesses, accommodation and food services were responsible for 41 per cent of business count growth, with health adding 14 per cent and retail 13 per cent. Medium firm count growth came predominantly from the health sector (33 per cent) and the education sector (32 per cent) which in itself more than doubled in size.

However, the stand out sector for SME count growth overall has been the information and communication sector. Overall, the sector count has grown by 43 per cent since 2010, higher than the broad average of 21 per cent across all sectors. The result is its sector share has risen from 6.9 per cent in 2010 to 8.2 per cent in 2016. ICT alone has been responsible for 14 per cent of all new SMEs since 2010. Whilst part of the story may be an increase in independent ICT contractors, there has been strong count growth across all business sizes, indicating that the sector has performed well not only in supporting new business creation, but in helping businesses scale-up too. The medium firm count grew at one of the strongest rates among all sectors, at 34 per cent.

SME turnover growth by sector also exhibited striking differences in performance. The education sector stood out above the rest, growing by 65 per cent since 2010. Business administration and information and communication also fared well, growing at 47.5 per cent and 35.8 per cent respectively. On the other end of the spectrum, although all sectors grew regarding turnover, the areas of lowest turnover growth were production (7 per cent), wholesale (8.1 per cent), and construction (8.25 per cent).

“

Local conditions are far more important for business growth than people credit.”

Tracey Johnson, Enterprising Barnsley

“Late payment is a massive, massive burden for SMEs. This stops them from investing in their business.”

Simon Hanson, Federation of Small Businesses

“One of the critical things when you're starting up a new business is speed. Working with partners that can actually move at your speed is really important. Government is not in a great position to help small businesses, not because the money isn't there, but because they are unable to operate with any kind of speed.”

Peter Ashall, Zone V

”





## Cocofina

**Area of business:** Coconut-based food and drink products

**Date of founding:** 2005

**Turnover:** Several million

**Employees:** Ten staff members in Head Office

**Local authority:** Hillingdon

### About Cocofina

Founded by 'Chief Nut' Jacob Thundil in 2005, Cocofina produces coconut-based food and drink products. The office is based in Eastcote, near to where Jacob lives, with warehousing and production outsourced.

### Drivers of growth

Jacob identifies 'money and talent' as what the business needs to grow. One of the company's policies is to hire locally as "it's a dream job if you can give people a five-minute commute." Cocofina's relationship with the DIT is also very important: "We keep our trade advisor close to us because she has been instrumental in our achievements."

### Barriers

The main challenges Cocofina faces are being able to offer customers credit, and attracting staff members who are the right cultural fit. "We've got some really innovative products that we want to launch," says Jacob. "But we [have to] tread carefully, as we don't want to overstretch ourselves." Forty-five per cent of the company's business is

exports and Jacob worries about the effect Brexit might have on this: "The UK is the place I connect with, but if the Government makes free movement of goods difficult with Brexit, I would have to open a European operation for our European business, because I have to preserve our exports to the EU."

### Sources of support

"The DIT is doing a great job," says Jacob, although he is concerned that a shift of focus to online services may lead to a decrease in direct support. "In order for you to keep a relationship going, any relationship, you have to have frequency of communication."

"In the Government, I think the only people small businesses can really interface with is the DIT...I came across them when I went to the Intellectual Property Office," Jacob explains. This led to a trip to a trade show in France, where he met his business partner. "I [also] went to Turkey with them, and I'm doing really well there."

### What the firm would like from policymakers

"You need to have people advising the Government who have actually run small businesses," Jacob says. "The Government should have different advisers for the various sectors of the industry." Cocofina are currently being forced to move offices, as theirs are being converted into flats. Jacob would like to see moves to protect business accommodation: "The council may say it's better to have houses rather than offices. However, you will be paying dole to people because we won't be here to employ them."



## Blue Eyed Sun

**Area of business:** Handmade greetings cards

**Date of founding:** 2000

**Turnover:** £1 million+ p.a.

**Employees:** Ten staff

**Local authority:** Mid Sussex

### About Blue Eyed Sun

Blue Eyed Sun is a Queen's Award-winning greetings card company, based in Burgess Hill near Brighton, that makes and sells handmade cards. Designer Jo Corner and managing director Jeremy Corner founded the company in 2000. Jeremy's background in coaching helped them to decide to make greetings cards their focus.

### Drivers of growth

"We find most of our international business through trade shows", says Jeremy. "We grew from zero countries to 20 countries in the space of five years." The opportunities that DIT (formerly the UKTI) offers proved particularly valuable, he says.

### Barriers

"There are a lot of things that affect the retail sector that have a knock-on effect for us," says Jeremy. "Things like parking, business rates and fewer people going to the post office... Companies like Amazon are coming to the UK and not only are they sucking all that sales revenue out of the high street, but they're not paying

their fair share of the tax either." Blue Eyed Sun was also recently forced to move from Brighton to Burgess Hill due to a lack of available industrial units. "A lot of business properties have been converted into residential [properties] because of a change in the law," he says. Jeremy says that he would like to export more, but "one of the biggest issues when you trade internationally is finding good distributors to work with."

### Sources of support

Jeremy has found that trade organisations play a vital part in supporting the greetings card industry. "They are very proactive... A representative from the DIT spoke at one of the Greeting Card Association events. It's a great way for the DIT to get in front of the businesses they are looking to serve." Blue Eyed Sun has struggled with recruiting the right people in the past. Jeremy says, "If there is one thing that the Government could help with, it would be to support and facilitate [new businesses] learning how to hire effectively."

### What the firm would like from policymakers

"I'd like to see the business rates scheme completely revised," says Jeremy. "I just don't think the playing field is level with Amazon and other internet-based companies". A business-friendly, joined-up approach to issues such as parking and accessibility is something Jeremy also highlights. "These sound like silly little things, but it's these minor details that make all the difference."

## 5.0 SMEs and productivity

The UK economy, and the SMEs that underpin it, have demonstrated many strengths since the financial crisis. As discussed in Section 4, whether it be growth in turnover or employment, SMEs have generally performed well, adding wealth and jobs to the economy.

However, despite steady growth, the total value of output produced per head was still only 1.7 per cent above its 2007 peak in 2016.<sup>22</sup> Growth has also failed to lift wages faster than inflation. The cumulative effect of inflation has pushed up prices by 33 per cent since 2007 but wages have only risen by 15 per cent. This is because productivity is not rising fast enough to help deliver real wage increases.

Discussions of productivity often become very complex. However, at their root is a simple notion – the additional value produced per worker. Better productivity is good for businesses because it means increased efficiency which results in greater competitiveness. On a national level it is hugely significant: to use the oft-quoted words of Paul Krugman, the Nobel Prize winning economist:

**“Productivity isn’t everything, but, in the long run, it is almost everything. A country’s ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker.”**

SME turnover may have grown by 17 per cent since 2010, but SME employment grew by 18 per cent (see chart below). This means that although the total value of goods and services produced by SMEs is on the rise, the amount created per worker is not.<sup>23</sup> Profit is not being sufficiently invested in securing the productivity gains from innovation that can lift incomes. (See Figure 12.)

Given the centrality of productivity to the UK economy’s ability to turn growth into rising income and living standards, and the importance of SMEs to the economy, the disparities in SME productivity matter. Indeed, productivity is probably the single most important disparity in the UK’s SME landscape. There are significant socioeconomic gains to be made from lifting productivity among our least-productive firms, and doing more to close the geographic gaps. Research suggests that income inequality is linked to wide productivity variation. Lifting productivity therefore among SMEs – particularly in low-productivity, low-wage areas – has the potential to help close the UK’s wage gap.

**“Even marginal improvements to productivity among the long tail of low-productivity companies – or, equivalently, a speeding up of rates of technological diffusion to these companies – could make significant inroads to the productivity puzzle.”<sup>4</sup>**

Andy Haldane, Chief Economist, Bank of England

## 5.1 Productivity by size and sector

Across the UK, productivity varies significantly. Some of this variation is explained by the local SME landscape: how big SMEs are and what industry they are operating in.

The larger the SME, the more productive it typically is. The low productivity of unregistered zero-employee firms is likely the result of a lot of these businesses being part-time, run alongside other forms of employment. The measure of productivity looked at in this report does not reflect hours worked. While this pulls down the productivity of the UK’s micro SME sector, it is the case that among the UK’s ‘long tail’ of firms with very low productivity, the majority of such firms are micro-businesses.<sup>25</sup>

Sector also plays an important role in determining productivity in a local area. It is of no surprise that the City of London, with its high concentration of financial services, is the most productive part of the UK. There is wide variation in SME productivity across sectors, with a tenfold difference in productivity between the average SME in the finance and insurance sector (the most productive at £604,400 turnover per worker) and the average SME in the accommodation and food sector (the least productive at £39,300 turnover per worker). This is in part the result of the concentration of different sizes of business in different sectors. (See Figure 14.)

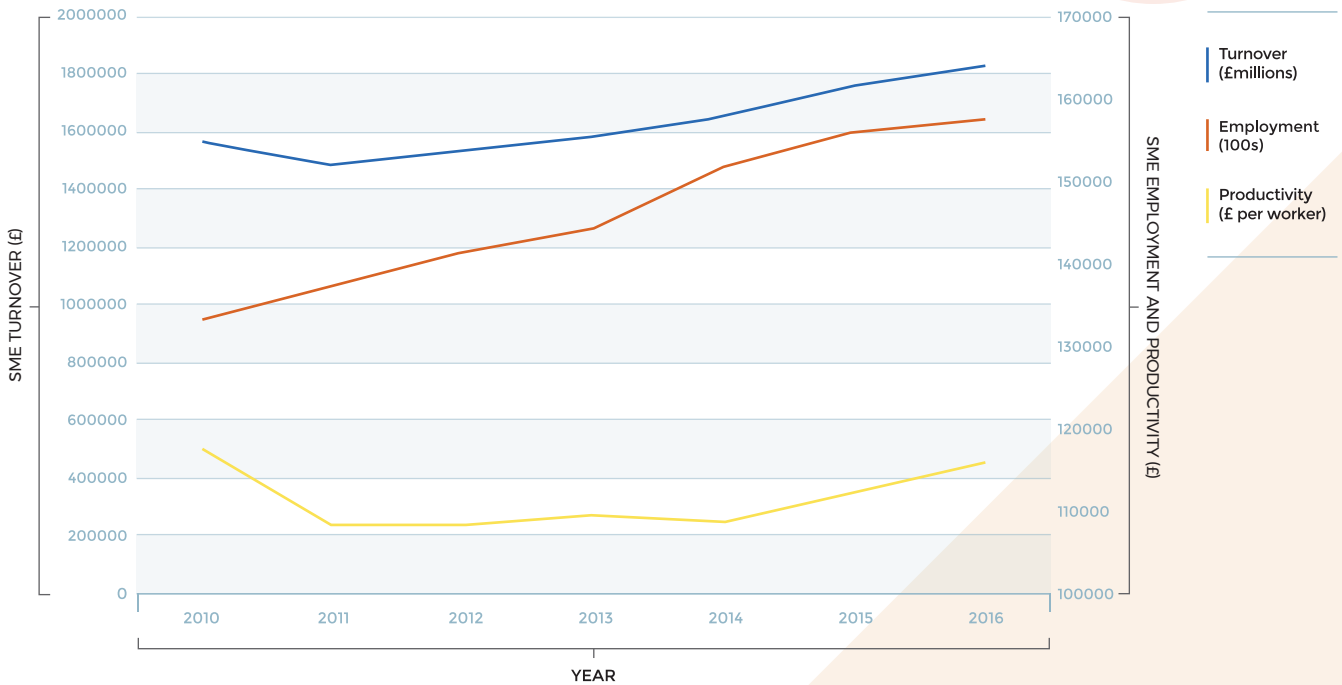
Accommodation and food services is an interesting sector: we noted in 4.3 that this sector was responsible for 41 per cent of small firm count growth since 2010. Over the same period, the number of individuals employed within the sector has increased by 30 per cent, whilst turnover per employee has dropped by 9.4 per cent, resulting in it being the least productive sector. This could be because the sector as a whole may have taken advantage of



relatively cheap labour rather than investing in innovation and other improvements; either way, whilst the sector growth is to be welcomed, the low productivity of the sector may need to be addressed.

**Growth has not lifted productivity**

Figure 12: Sources: ONS, IDBR



**How much turnover do SMEs produce per worker?**

**£84,328**

**Micro**

**£31,626**

**Unregistered zero employees**

**£121,944**

**Registered zero employees**

**£116,496**

**Micro employers**

**£141,221**

**Small**

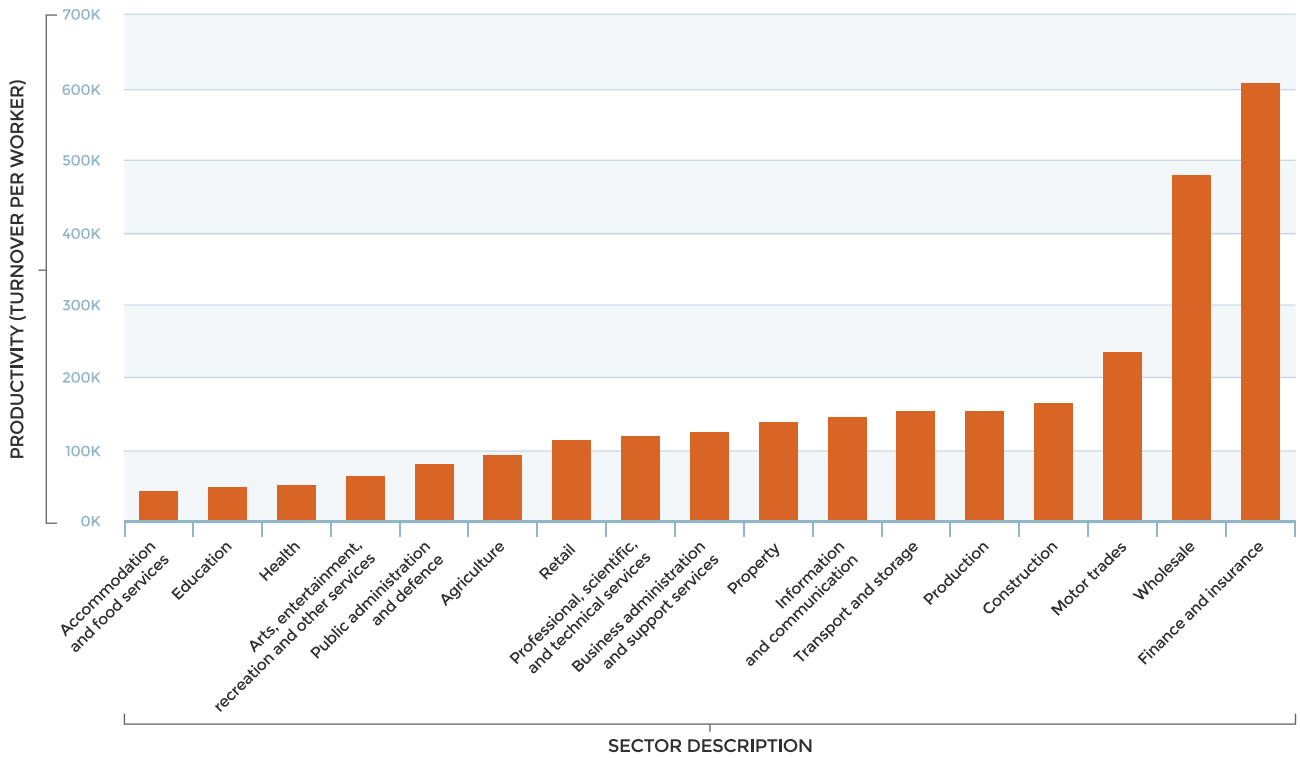
**£167,983**

**Medium**

Figure 13

Productivity (turnover per worker) vs Sector description

Figure 14: Source: ONS 2016



Regional SME turnover per employee (indexed) and change since 2007

- 2007 productivity (UK=100)
- 2016 productivity (2007 UK=100)

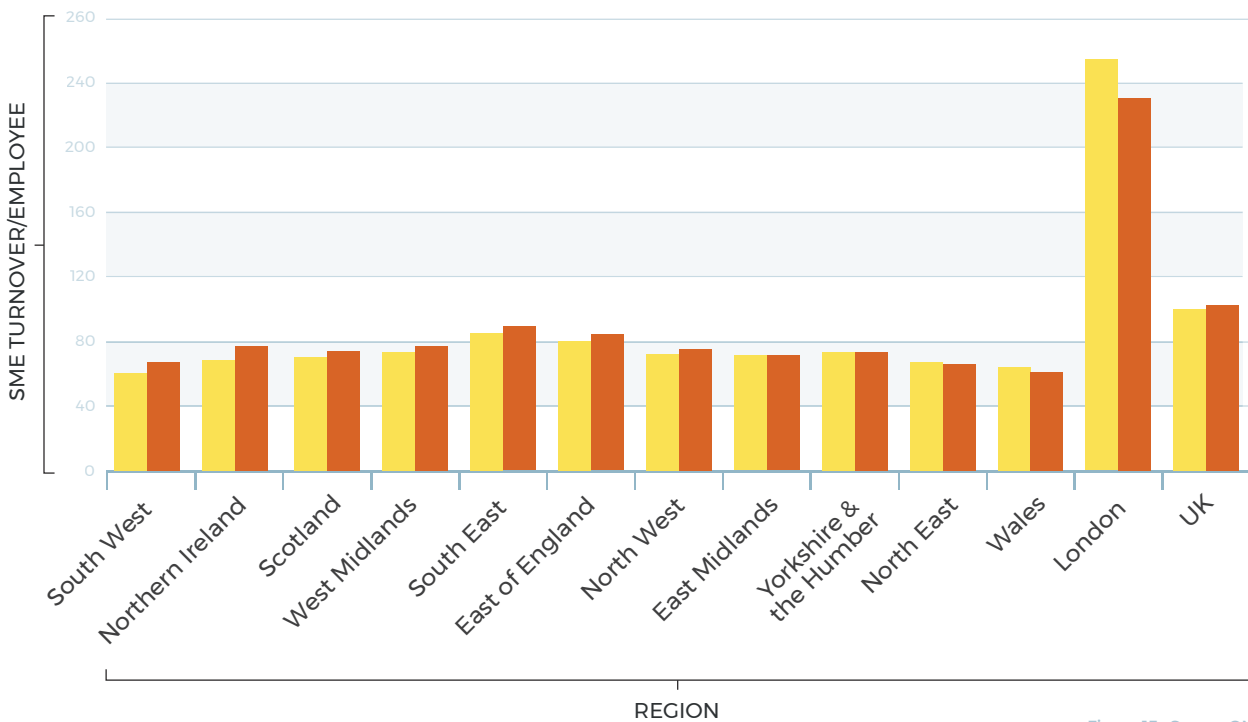


Figure 15: Source ONS, IDBR

## 5.2 Productivity by region

The UK economy has a long-running productivity gap between London and other regions that successive governments have unsuccessfully tried to close. Studies have pointed to travel time to London, local skills, and economic mass as being significant in explaining this gap.<sup>6,26</sup>

We also find significant regional variation in SME productivity – although the gap between top and bottom has closed over the past nine years. This is not all good news, however: one of the key drivers in reducing variation has been declining productivity at the top, rather than an increase at the bottom. SME productivity in London has fallen by over 9 per cent, the result of productivity losses in the wholesale and financial services sectors.<sup>27</sup> (See Figure 15.)

While our regional findings broadly mirror previous research<sup>28</sup>, regional productivity variation only says so much about the level of productivity and barriers to growth in productivity for local firms. We find that within regions, there is significant variation in SME productivity at a local authority level. (See Table 5.)

Across the country, the variation is enormous. Firms in the most productive part of the UK are producing 26 times the turnover per worker of the least productive. Even if London is excluded, the greatest productivity is still over ten times the least. In short, the capacity of SMEs to deliver rising wages in their local economy varies significantly by area. Here sector is likely to play a role in determining local productivity, particularly in areas like the City of London that is dominated by financial services that have a high ratio of turnover to employment. However, as detailed below and in Section 6, it is not just sector that can drive productivity. Issues like skills availability and connectivity also matter. (See Table 6.)

## 5.3 Productivity by local authority

Region	Most productive local authority (SMEs) per region	Least productive local authority (SMEs) per region
North East	Sunderland (£139,000)	Hartlepool (£75,000)
North West	Fylde (£603,000)	Barrow-in-Furness (£71,800)
Yorkshire & the Humber	Barnsley (£146,000)	Scarborough (£67,300)
East Midlands	South Derbyshire (£354,000)	Lincoln (£80,500)
West Midlands	Warwick (£181,000)	Herefordshire (£75,200)
East of England	Watford (£349,000)	North Norfolk (£83,700)
London	City of London (£1.45 million)	Lewisham (£80,000)
South East	Slough (£293,000)	Isle of Wight (£63,200)
South West	Gloucester (£263,000)	West Somerset (£56,500)
Wales	Newport (£146,000)	Conwy (£67,200)
Scotland	Aberdeen City (£189,000)	Argyll and Bute (£68,200)
Northern Ireland	Mid Ulster (£143,000)	Ards & North Down (£85,100)

Table 5: Source Based on ONS date, 2016

Data for Fylde appears anomalous. We have been unable to determine a reason for this increase.

Local authorities with highest SME productivity	
1	City of London (£1.45 million)
2	Lambeth (£1.06 million)
3	Westminster (£684,000)
4	Fylde (£603,000)
5	South Derbyshire (£354,000)
6	Watford (£349,000)
7	Slough (£293,000)
8	Tonbridge and Malling (£288,000)
9	Southwark (£280,000)
10	Woking (£274,000)

Local productivity has also proved volatile over the past nine years. Even within regions, some areas have seen great productivity gains, and others great losses. Lambeth has seen the second largest productivity gain in the UK (153 per cent) while nearby Islington has seen the largest loss (-71 per cent). This volatility may in part be the result of structural changes in local economies from the recession. It may also be more short term. Productivity data at a

Local authorities with lowest SME productivity	
1	West Somerset (£56,500)
2	Weymouth and Portland (£58,700)
3	Torbay (£62,400)
4	Isle of Wight (£63,200)
5	Conwy (£67,200)
6	Scarborough (£67,300)
7	Argyll and Bute (£68,200)
8	Purbeck (£68,700)
9	Isles of Scilly (£69,600)
10	Orkney Islands (£69,600)

Table 6: Source: Calculations based on ONS IDBR (2016) data

local authority level is highly sensitive to the gain or loss of outlier firms: large, highly-productive SMEs. The data is also potentially sensitive to the registration and use of shell companies to manage business revenue; these often have large turnover but zero or few employees, distorting local productivity figures.

“**Councils play a crucial role in providing support for entrepreneurs to start and grow, which can generate local opportunities as well as creating the potential for securing investment in high-quality skills and jobs. SMEs must be engaged in the shaping of this provision; ensuring they have a stronger voice in influencing local and national policy through clear consultation mechanisms and collaboration.**”

Councillor Roger Ramsey, Leader of Havering Council

## 5.4 Understanding the productivity gap

The regional and local productivity gaps evident in the SME landscape are a significant obstacle to addressing existing socioeconomic inequalities. Median income in the North East is £21,366. In the UK as a whole it is £23,099, and in London it is £28,927. With productivity linked to wages, the UK's SME landscape today reinforces wage inequality, rather than fulfilling its potential as an agent of economic and social change. SMEs have been critical in achieving record levels of employment in the UK, including creating the opportunities for thousands to move from welfare dependency into work. The focus must now shift from pure SME creation to also lifting productivity in existing SMEs, particularly among low-productivity firms in low-productivity areas.

So then, given the significance of the differences in SME productivity across UK local authorities and regions, how far can we explain this variation, and how might the gap be closed?

### Size and sector

As discussed above, productivity varies by business size. Larger firms tend to be more productive, so scaling SMEs may help push up productivity over time. It is also clear that there are significant variations between sectors; while some of this will undoubtedly be quite structural (the financial sector may always generate more value per worker than the accommodation and food sector), there are nonetheless undoubtedly lessons that can be learned between sectors about the benefits of automation and innovation.

### Business churn

In 2015, 383,075 new businesses were registered and 252,040 were closed.<sup>29</sup> This churn of business births and deaths, including SMEs, is an important part of the creative destruction that drives wealth creation and productivity. Our model finds that population-adjusted business starts are a significant predictor of SME productivity at a local level.

As discussed in Section 3.4, there is significant regional variation in churn, that reinforces the disparities in productivity. If low productivity is to be tackled across the UK, improving business churn is key. Part of that is about supporting startups, but it is also about making the process of closing a business easier, be it access to advice, or streamlining the insolvency process.

### Business survival: reassessing success

Tied up in the birth and death of businesses is the question of survival. For the individual firm, survival is undeniably good. However, from a whole economy perspective, high rates of business survival do not necessarily make for a strong economy.

As discussed in Section 3.4, our analysis finds that business survival is negatively related to productivity. High business survival rates are more common to areas of low SME productivity. Areas where survival is lower and there are high numbers of business births tend to be more productive as creative destruction allows for the reallocation of capital towards higher productivity firms.

As Watford demonstrates, low survival rates can be, and often are, accompanied by high rates of SME productivity (Watford is ranked sixth in the UK for low survival, while Hull - also featuring in the list of lowest-survival areas - was recently voted 'most Enterprising Place in Britain' by the Enterprising Britain Awards<sup>30</sup>), indicating that low business survival is not necessarily bad. Watford is also within the top quintile in terms of the rate of high-growth firms, demonstrating that low survival can not only allow for higher productivity, but higher rates of rapid growth too. Meanwhile, on the Isles of Scilly, business survival may be 100 per cent (of the five SMEs started in 2010), but the Isles are in the bottom ten local authorities for SME productivity. When looking at the strength of any local business environment, it is important to remember that business death is not always bad.

### Other factors

Our analysis has focussed on identifying the correlates of SME productivity at a local authority level. For reasons of data availability at this geographic level, there are some things we could not include. Others did not prove significant. However, there are many studies that identify factors that explain the productivity gap at a regional level.<sup>6</sup> These include infrastructure, travel time to London, and skills. We discuss these in our plan for growth and productivity in Section 6.



## Educ8

**Area of business: Education and training**

**Date of founding: 2005**

**Turnover: £5 million**

**Employees: 125 staff**

**Local authority: Caerphilly**

### About Educ8

Educ8 is an education, training and recruitment business that primarily offers apprenticeships and bespoke leadership and management programmes across a variety of sectors including business administration, customer service, engineering, and health and social care. It also has a contract with the Welsh Government. Managing Director Grant Santos joined the business ten years ago. Educ8 is based in Ystrad Mynach, in Wales, near to where he lives, with offices in Port Talbot.

### Drivers of growth

Educ8 has grown by 30 per cent over the past couple of years. "We're very ambitious," says Grant, "We are constantly investing in the business." He goes on: "We realised that to grow we had to invest in the recruitment and training of additional staff, in readiness for the next phase of growth... As we become a larger organisation, we're becoming more successful in terms of securing new contracts and delivering a good quality service."

### Barriers

Since Educ8's contract with the Welsh Government regularly goes through a tender process, Grant is



**We're pleased to see the investment in skills... [but] I'd like to see support for existing businesses and small businesses to invest in technology."**

Grant Santos  
Educ8 Managing Director

constantly looking at new ways to create value for money. "I think talent is critical; making sure you've got the right people... If we can continue to bring high-calibre people on board, we can deliver more programmes and apprenticeships."

As unemployment levels have fallen, staffing has become more challenging: "As a business, we have to continually improve our environment, culture and offer to make sure we're attracting the best people."

### Sources of support

Industry networks and networking events are also important for Educ8. "They helps us to understand the sectors that we work in," Grant explains. "We can [then] tailor the qualifications and training that we offer them." Alongside this, relationships with universities and government organisations are also important: "[These] help us to understand changes in the future so that we can adapt - not just operationally, but strategically as well."

### What the firm would like from policymakers

Following Brexit, Grant would like to see some "stability and vision in terms of where we're going." He continues: "We're pleased to see the investment in skills... [but] I'd like to see support for existing businesses and small businesses to invest in technology."

"In the education sector, there's still a lot of innovation that we can improve on... I'd like to see the Government provide support mechanisms that can open our eyes in terms of what's possible."



## Thinking Digital

**Area of business:** Conference production

**Established:** 2012

**Turnover:** £369k (in 2016)

**Employees:** Four

**Local authority:** Gateshead

### About Thinking Digital

Thinking Digital produces conferences, primarily for the technology industry. Founder Herb Kim set up business in Gateshead, in 2012. Personally and professionally passionate about the organisation, he also wanted to help the economy of the North East and the wider North of England to develop.

### Drivers of growth

Over each of the past four years Thinking Digital has grown by around 20 per cent. The business's relationship with universities has played an important part in this. "Sometimes they will directly support what we do; sometimes they'll contract us to produce events," Herb explains. Innovative ideas have also helped increase the company's audience: "We've been putting our videos out, but they typically get a lot less traffic [than TED Talks] because we're not as big a brand. We've been using online video to amplify our brand. We used Facebook Live for this year's conference and had 65,000 join us online."

### Barriers

"Financing would be something that would help us progress," says Herb. "[However] if I went out and tried to build new markets and find new conferences to establish, our existing conferences and events would suffer. So that's a big constraint for us right now."

Exchange rates have also had an effect: "Every time the pound weakens, it becomes more expensive for us to do what we do, because we regularly fly foreign speakers over to the UK."

### Sources of support

Thinking Digital benefits from a strong network of external service providers. "They have an impact beyond what we pay them to do," Herb says. For example, "our accountant prepares our tax return and things like that, but also helps advise us on the business itself. We also employ a freelance researcher who helps us to identify people to speak at our conferences."

### What the firm would like from policymakers

Herb wants the Government to ensure that, post-Brexit, he can still "recruit the best talent in order to compete in this globalised world". However, it is also important, in his view, to bring the Brexit negotiations to a close as quickly as possible. "Uncertainty is a massive killer of confidence and hence investment," he says. "No matter what the end solution is going to be, the sooner we get there, the sooner businesses can adjust and plan for the future."

## 6.0 Levers for growth and productivity

The previous chapters outlined some of the economic challenges facing the UK. As we have described, growth in the total size of the economy matters, but unless the proceeds of growth are invested in innovation and other mechanisms to lift productivity, wealth creation will not lead to rising wages and greater competitiveness. The UK needs to lift productivity, particularly in the 'long tail' of low-productivity firms and local areas, or else the wage gap – and the income inequality it drives – is likely to endure.

The Government's forthcoming Industrial Strategy White Paper is expected to lay out a national plan for boosting growth and productivity across the UK, including UK-wide proposals for improving skills, infrastructure, investment, innovation, competition, and exporting. However, it is important for policymakers to remember that local conditions matter, too.

This Section therefore explores some of the key drivers of productivity from a local perspective and with an SME focus. It focuses on three main areas of skills, infrastructure and exports, before concluding with a brief mention of other factors that arose in interviews or were considered in our model.

### 6.1 Skills

Our analysis shows that the **prevalence of low skills in a local authority area is correlated negatively with SME productivity growth** (and, conversely, productivity is positively correlated to the share of the local population with NVQ4+ level qualifications).

This will not surprise many SMEs and policymakers. It is clear that skills shortages have been reported by businesses for some time; the Coalition Government's focus on STEM skills and the mass expansion of apprenticeships was, in part, a response to rising concern about the UK's skills gap. Although some researchers have pointed to potential issues with the reliability of employer survey data, as well as pointing to problems in labour market fluidity rather than underlying skills,<sup>31</sup> the LSBS shows that 30 per cent of SME employers cite skills as a key obstacle affecting the success of their business (albeit behind issues like taxation and competition); if one excludes micro-businesses then this figure rises to 44 per cent among small businesses and 51 per cent among medium, second only to competition as an inhibitor for both.<sup>32</sup>

As shown in the table 7, SMEs report recruitment and the shortage of skills in the external labour market as the

two key issues. Separately, research by the Recruitment and Employment Confederation found that almost half of businesses expect to face a shortfall of qualified candidates for permanent roles in 2017.<sup>33</sup>

“**Skills are foremost in our mind. The UK currently has a tight labour market which is likely, post Brexit, to get even tighter. We need to focus on upskilling our labour force particularly in relation to technical skills. And for small businesses – improved management and leadership training is essential**”.

Sonali Parekh, Head of Policy, Federation of Small Businesses

The gap is particularly pronounced in terms of digital skills, such as certain coding languages and data analytics. The Science and Technology Select Committee warned in 2016 that the UK was facing a “digital skills crisis” and that SMEs and startups disproportionately lost out. The problem affects SMEs more than large firms partly because large companies have easier access to national and global labour markets, whereas the costs of advertising roles nationally or internationally, coupled with immigration compliance costs for hiring non-EU citizens, may be prohibitive for many small firms.<sup>34</sup>

“**One of our biggest barriers to growth is recruitment for our technical jobs. Talent is really the main thing; the market opportunities are out there for us. But the particular software skills we are looking for are in very high demand and very short supply in Northern Ireland.**”

Adam Ewart, Send My Bag

The gap is, in part, the result of falling investment in skills. Research by the IPPR shows that employers in England are spending £5.1 billion less on training in real terms than a decade ago, and £6 billion less than the EU average, and that while there has been an 11 per cent rise in the share of the workforce with both basic and degree level education, this has not delivered the expected productivity gain at a national level.<sup>35</sup> Regrettably, it is also the case that the competitiveness of the UK's base skills has been slipping: in PISA, the OECD's comparative measure of international



education outcomes, the UK ranked 27th for maths, 15th for science, and 22nd for reading in 2015. This is a real and relative decline since 2000, where the UK was in the top ten in all three categories.<sup>36</sup>

In interviews, the changing nature of skills was mentioned more explicitly by bodies such as LEPs and local authorities than by SMEs themselves, presumably because the latter were more concerned with immediate recruitment

needs. SMEs were, however, more likely to recognise and highlight the importance of softer skills such as time management, social awareness, and negotiation, which recent research suggests will continue to be important – and potentially even more so than at present.<sup>31</sup>

## Which of these are obstacles that affect your business? (Percentage saying yes)

UK Regions (2016)	Recruiting staff?	Shortage of managerial skills / expertise?	Shortage of skills within the external labour market?	Shortage of skills within the existing workplace?
East Midlands	78.6%	30.4%	77.1%	47.3%
East of England	85.9%	29.9%	70.2%	43.9%
London	80.3%	39.4%	65.5%	49.9%
North East	77.9%	26.5%	70.6%	36.8%
North West	79.8%	28.2%	75.6%	45%
South East	80.9%	29.8%	67.3%	40.1%
South West	85%	27.1%	74%	42.4%
West Midlands	76.9%	34.8%	74.2%	45.7%
Yorkshire & the Humber	78.7%	29.7%	69.3%	41.7%
Scotland	79.9%	30%	72.5%	47%
Wales	82.4%	33%	75.8%	47.3%
Northern Ireland	78.5%	38.7%	71.8%	53.4%

Table 7: Source: LSBS 2016

## 6.2 Infrastructure

### Digital infrastructure

This present study **finds little evidence that faster digital infrastructure, in itself, will generate substantial economic impact.** Looking at local authorities, our model was unable to detect a significant impact on growth or productivity.

Clearly, we are not arguing that digital infrastructure is irrelevant. On the contrary, access to affordable, fast, and reliable broadband is essential for most SMEs to trade and grow: 83 per cent of SMEs say that communications services are fundamental to their business.<sup>37</sup> The FSB refers to broadband as the “fourth utility” and research by Lloyds suggests that highly-digitised SMEs tend to grow at a faster rate than less-digitised SMEs.<sup>38</sup> Indeed, past case studies have found that superfast broadband coverage can improve firm-level SME productivity within a limited intervention area.<sup>39</sup>

Rather, we think that this reinforces other work which suggests that digital infrastructure is necessary but not sufficient; it needs to be paired with digital skills and tools.<sup>40</sup> Previous research from Nesta shows that greater use (by one standard deviation) of online data is associated with an 8 per cent higher level of productivity (TFP) and that firms in the top quartile of online data use are, all else being equal, 13 per cent more productive than those in the bottom quartile.<sup>8</sup> This is supported by subsequent studies showing that ‘tech-savvy’ firms are more likely to experience high growth.<sup>41</sup>

One challenge for SMEs is that broadband access is not equal: while 89 per cent of premises (including residential) had a superfast broadband connection in 2016, only 80 per cent of SMEs did, and just 67 per cent of those on business parks. Rural areas, and the devolved nations, are particularly affected.<sup>42</sup> There are an estimated 480,000 SMEs without superfast access, and 192,000 without speeds of at least 10Mbit/s.<sup>42</sup>

As has been discussed in Section 6.1 above, there remains a significant digital skills deficit. While small businesses are seeing their digital maturity improve, 38 per cent of UK small businesses still lack basic digital skills<sup>43</sup> and many are failing to take advantage of basic digital tools. Digital exclusion among SMEs is estimated to cost £18.8 billion annually in foregone turnover.<sup>11</sup> Digital capability within SMEs also matters if businesses are to take advantage of digital infrastructure in growing their customer base, accessing international markets, working with other businesses, and improving their productivity.

### Physical infrastructure

The role of physical transport infrastructure in driving economic growth has been extensively researched, with mixed conclusions. The evidence is highly varied but typically concludes that improved physical infrastructure boosts productivity, especially in the primary sectors, manufacturing, and construction.<sup>12,13</sup> Our own model finds that physical connectivity correlates positively with firm performance, but, as with other research, finds that this relationship is too weak to draw very strong conclusions, since it is difficult to disentangle from other regional effects.

Nevertheless, it is clear that most SMEs do not operate entirely online, and rely on physical connectivity to attract talent and access markets. Other research suggests that regional productivity variation is linked to factors like the travel time to London.<sup>6</sup> Given that is the case, it is to be hoped that the Government’s infrastructure strategy – including the Great Western Mainline Electrification, cutting journey times along the M4 corridor into London, and projects like the A14 upgrade, improving access between Cambridge and Huntingdon – will have a positive effect on firms. (It should also be noted that port and airport infrastructure is important for SMEs’ access to international markets: for instance, Scotland’s network of small airports have proved important in the ability of Scottish producers to expand into Asian markets with products like fresh salmon being air freighted from Scotland through Heathrow.<sup>44</sup>)

Part of the challenge is that transport infrastructure affects firms (and areas) unequally. Areas like Blaenau Gwent or Corby have a much higher percentage of SMEs in transport-intense sectors than Islington or Brighton and Hove.<sup>45</sup> For local authorities, this highlights the importance in understanding the current (and likely future) sector mix of an area, and being able to take these needs into consideration.



**I believe it will become increasingly important that as more and more powers are devolved to local authorities, particularly in relation to the retention of business rates, that local policymakers continue to advocate for lower taxes and decrease obstacles to setting up businesses. Investing in local infrastructure will also be a huge support to SMEs.”**

Alan Mak MP, Co-Chairman of the All-Party Parliamentary Group on Entrepreneurship

## 6.3 Exporting

One route to growth, and productivity growth, is through exporting. Other research has reviewed the evidence for this link, finding a strong link.<sup>46</sup> **We also find a moderately-strong positive correlation at regional level between SME productivity and export intensity.**<sup>47</sup>

Currently, according to the Longitudinal Small Business Survey, only 18 per cent of SME employers export, and 10 per cent of zero-employee businesses. (If one includes unregistered businesses, this falls to around 9 per cent.)<sup>48</sup> Not all SMEs export with equal intensity, however: only a much smaller fraction, ca. 5-6 per cent, depend on exports for the majority of their turnover.<sup>49</sup>

Exporting becomes more common among SME employers as firm size grows. Seventeen per cent of micro employers export, rising to 25 per cent of small businesses and 35 per cent of medium. Government policy has placed great emphasis on exporting through schemes like the GREAT campaign, and more recently the partnership between major lenders and UK Export Finance to increase SME lending to drive up exports post-Brexit. However, SME exporting has been on the decline over the past decade, for all size groups, as the table below illustrates. (See Table 8.)

### Regional disparities in exporting

One challenge, again, is that there are significant regional disparities in the share of businesses that export, meaning that the economic opportunities and benefits of exporting are not felt equally by the UK's regions. The North East and Yorkshire and the Humber have the lowest exporting rates, at almost half of those seen in London and the South East. However, Northern Irish SMEs are by far the UK's biggest exporters: 29 per cent of SMEs here export, reflecting the importance of the highly porous land border with the Republic of Ireland to SME trade and growth. (See Table 9.)

### Exporting, Northern Ireland, and the Brexit challenge

This has particular ramifications for SME trade in post-Brexit Northern Ireland. Not only are Northern Irish SMEs more dependent on exporting than those in other regions of the UK, they are significantly more dependent on trade with the EU: across the UK, 27 per cent of SME exporters export exclusively to the EU, but in Northern Ireland this figure rises to 53 per cent. Conversely, 68 per cent of UK SME exporters export to the rest of the world, but only 32 per cent of Northern Irish SMEs do.

The question of the trading relationship across the land

border is thus a very significant one for Northern Ireland's SMEs, and there is a need to support the region's exporters in expanding their trading markets outside the EU. There is certainly appetite: 21 per cent of exporters in Northern Ireland reported wanting to increase their levels of exports, compared to 10 per cent in the rest of the UK. Interestingly, Scotland's SMEs are perhaps most insulated from possible Brexit-related disruption, with only 19 per cent of exporters exporting exclusively to the EU, and 74 per cent selling to the rest of the world. (See Table 10.)

## 6.4 Other levers

### Business networks and advice

In 2016, 26 per cent of SME employers and 14 per cent of non-employers accessed external business advice. The larger the business, the more likely they were to have made use of such advice. Twenty four per cent of micro employers, 34 per cent of small businesses, and 45 per cent of medium accessed some form of business advice. However, these figures are on the decline. In 2010, 49 per cent of SME employers, 46 per cent of micro employers, 59 per cent of small, and 68 per cent of medium businesses sought advice or support.<sup>50</sup> This could either be the result of declining need, falling provision, or economic uncertainty causing SMEs to cut back on investment in business development.

“

**SMEs respond to successful entrepreneurs, so we need promote our home-grown heroes, and encourage peer-to-peer networks. Showing other entrepreneurs the pathways and precedents gives them confidence, and encourages them to take the next step.”**

Charlotte Keenan, Goldman Sachs  
10,000 Small Businesses Programme

The most popular sources of advice, according to the LSBS, are accountants then external consultants, followed by business networks. From the perspective of local authorities, business networks are particularly interesting, since they can be established and maintained with relatively little financial commitment. Business networks are an important source of resource and advice for SMEs. Network theory points to how networks can provide an SME with cost-effective access to external resources – and many of those interviewed for this report (both SMEs and

local authorities) highlighted the practical benefits of sharing knowledge and experiences with peers. In effect, cooperation through business networks give small firms economies of scale without diseconomies of size.<sup>51</sup> These benefits are backed by a number of empirical studies. Access to business network support among SMEs has been found to have a positive relationship with business growth<sup>52</sup> and can support SME innovation (and therefore, productivity gains).<sup>53</sup>

“**In a small business everything is a learning curve, so it's important to work with other people that have been involved in similar projects in the past; to reach out and network with as many people as possible; to understand the sort of environment that you're operating in and share ideas for best practice.**”

Carla Crook, The Etches Collection Museum of Jurassic Marine Life

## Universities

There is a large body of research that points to external collaboration as having a significant positive impact on the innovation of a firm, which is known to be a key driver of productivity.<sup>54,55,56</sup> There have been significant efforts in recent years to improve university-business interaction in general, and university-SME collaboration in particular.<sup>57-60</sup>

A recent study by the Enterprise Research Centre found that a firm's collaboration with both regional and national universities has a significant effect on its likelihood of innovation (increasing the probability of the firm introducing a new-to-the-market innovation by 5 - 8 per cent).<sup>54</sup>

However, while there is significant evidence for the economic impact of collaboration between SMEs and universities at a firm level, analysis based on our model shows no clear evidence of any 'university effect' on SME productivity or growth in the local authority. This is not that surprising. While the impact may be clear at a firm level, local SMEs will not always collaborate with their nearest university. As the ERC paper cited above points out, there is often a trade-off between proximity and relevance. The innovation-supporting knowledge that a university may be able to provide to SMEs may not be relevant to local firms. Its impact may instead be dispersed across a wider geographic area, meaning that there is no clear relationship between the presence of a university

within a local authority boundary, and the productivity or growth of its SMEs.

One possible caveat which requires further research is when a university itself offers such expertise that it becomes a 'hub' for SMEs who locate there in order to escape the utility-proximity trade off, particularly when they have incubators or accelerators attached (see below). There is a suggestion of a hub effect in the data on high-growth firm rates by local authority, where the top ranks are dominated by London and key university sites like Oxford and Cambridge, as well as universities like Aberdeen.

“**Universities have a very important role to play. But we need to make sure they are connected into the local and regional entrepreneurial and finance ecosystems.**”

Jenny Tooth, CEO, UK Business Angels Association

## Finance and venture capital

Productive finance that drives investment for growth is a core part of the government's national productivity strategy.<sup>61</sup> Productivity growth in firms is dependent on investment, be it in innovation, skills, automation, or other tools. In this investment, access to capital matters. Capital has been found to be a critical enabler of innovation and internationalisation which in turn drives productivity growth.<sup>62</sup> However, the SME Finance Monitor shows the share of SMEs willing to borrow to help their business grow is falling, from 42-45 per cent in previous years to 33 per cent at the start of 2017.<sup>63</sup> This reflects the uncertainty and concern we heard from interviewees about the future of funding sources like the European Investment Fund, and the importance of the British Business Bank filling the gap.

There are also a number of regional inequalities in SME access to finance. While lending by banks broadly follows the regional concentration of SMEs, equity investment is heavily concentrated in London and the South East, together accounting for 58 per cent of all equity deals in 2015-2016.<sup>64</sup> The type of equity investment also varies by region. Private equity, including venture capital, accounted for over half of all deals in London, while in the North East, government was involved in 55 per cent of deals. Venture capital lending is also subject to a university skew: over 60 per cent of all VC investment is directed to firms in the London, Oxfordshire, and Cambridge LEAs. (In absolute terms, London firms receive the most, but if one looks at the ratio of venture capital received to SME turnover within a local authority, then Cambridge and Oxford receive much more than other authorities.)

Year	Percentage of firms that are exporters			
	All SME employers	Micro (1-9)	Small (10-49)	Medium (50-249)
2007/8 (ASBS)	24%	22%	33%	43%
2010 (SBS)	23%	21%	29%	40%
2012 (SBS)	19%	17%	26%	40%
2014 (SBS)	19%	17%	26%	36%
2015 (LSBS)	19%	17%	25%	34%
2016 (LSBS)	18%	17%	25%	35%

Table 8: Sources as per table

Region	% SME employers who export goods and/or services
North East	12%
North West	17%
Yorkshire and the Humber	15%
East Midlands	17%
West Midlands	18%
East	20%
London	24%
South East	22%
South West	14%
Wales	14%
Scotland	16%
Northern Ireland	29%
UK total	18%

Table 9: Source: LSBS 2016

	Export to the EU	Export to rest of world	Only export to the EU
All SME employer exporters	79%	68%	27%
Micro exporters	76%	66%	28%
Small exporters	87%	72%	24%
Medium exporters	90%	76%	23%
England exporters	79%	69%	27%
Scotland exporters	76%	74%	19%
NI exporters	77%	32%	53%

Table 10: Source: LSBS 2016



Top ten local authorities for inwards VC investment	
1	City of London
2	Westminster
3	Camden
4	Islington
5	Cambridge
6	Hackney
7	Kensington and Chelsea
8	Tower Hamlets
9	Oxford
10	Southwark

Table 11: Source: Beauhurst

While there is no data on lending at a local authority level, the broader picture shows that finance is one area where government can have an impact on productivity growth in SMEs. Some local authorities are already supporting local SMEs through peer-to-peer platforms like Funding Circle. Angus Council has set up two match funding schemes with Crowdfunder, pushing over £1.5 million to local SMEs. This public-private co-investment is also seen in London, with the £25 million London Co-Investment Fund aimed at magnifying the capital-raising power of high-growth science, digital, and tech SMEs.

“ We took an initial round of seed investment. We never actually spent the money that we raised - but just working with our investors has been a good experience for us. They brought something to the table which we didn't have in terms of experience. It also gave us a support network and the confidence to really go for it!”

Adam Ewart, Send My Bag

### Accelerators and incubators

One approach to business growth which has received increased attention in recent years is the use of accelerators, incubators and, to a lesser extent, flexible co-working spaces.

Such spaces not only reduce the barriers to entry and exit posed by inflexible medium-long-term leases on business

premises, but may also offer additional services, including mentoring, investment, and access to legal services. In theory this should boost SME growth (and potentially also productivity, by encouraging new, innovative entrants).

Nesta research previously identified 205 incubators and 163 accelerators in the UK supporting an estimated 3,450 and 3,600 new businesses a year.<sup>66</sup> The research showed that over 40 per cent of incubators and accelerators have received public or university funding, much of this sourced from Local Economic Partnerships, Innovate UK, central government, and the European Regional Development Fund.

Broken down by region, half of all accelerators (81) were located in London, with West Midlands (11), Scotland (10), South East (10), and North West (10) following, albeit a long way behind. The South East had the highest number of incubators (32) followed closely by London (29), and Scotland (23).

At the regional level there appears to be only a weak and negative correlation ( $r = -0.41$ ) between the number of accelerators and the productivity in these regions. However, there is a moderately positive ( $r = 0.53$ ) correlation between the number of incubators and productivity. Whether this relationship is causative - i.e. whether incubators really do help drive up productivity - is not clear from this analysis alone and requires further examination. Certainly, it cannot yet be said with any confidence that accelerators and incubators will guarantee growth or productivity increases within an area.

### Taxes and regulation

The UK compares favourably internationally on business taxation: in the World Bank 'Ease of Doing Business' rankings, Britain sits 10th for tax, its third most competitive area. However, competitive corporate tax rates and relatively easy mechanisms of payment do not fully reflect the complexity of the UK tax system for SMEs, nor its distortive effects.

The challenge broadly centres around the fluidity of the taxation of the individual and the taxation of the business, and of capital and labour, and the distortive impact that each form of SME taxation has on the private sector and the wider economy. Studies suggest that corporate profit taxes depresses productivity and wages, and payroll taxes like National Insurance exert a downward pressure on wages and an upward pressure on unemployment.<sup>67</sup>

The result is that the taxation system faced by SMEs remains relatively opaque and complex. The costs of compliance are disproportionately borne by SMEs and a number of comprehensive tax reviews, such as the

Mirrlees Review, have called for a clearer and more harmonised tax system, with fewer disparities between the taxation of labour and capital, and personal and corporate taxes.<sup>68</sup>

Given the complexity, it is unsurprising that taxation and regulation are the second and third most important issues raised by SMEs in terms of obstacles to business success: 42 per cent cited regulations and 36 per cent taxation. In particular, SMEs struggle with sector specific regulation (16 per cent, rising to 25 per cent of medium businesses), tax rules (16 per cent), health and safety (15 per cent), and employment rules (14 per cent). Beyond simply the tax rules, the main complaint is the level of taxation, though this is more acute among micro employers (66 per cent) and small businesses (69 per cent) than medium businesses (59 per cent). Compliance disproportionately troubles micro businesses (59 per cent) compared to medium SMEs (49 per cent).<sup>32</sup> In interviews, VATMOSS – the set of EU rules governing sales of digital goods across Europe – was cited by several SMEs as a particular example of poor tax legislation.

“

**If I could make one change to the UK business environment over the next few years, it would be to address the high upfront cost of doing business here. Business rates in the UK are now three times the OECD average. Rising input taxes are pernicious because they raise the minimum level of revenue needed to survive, undermine investment and are a barrier to getting started in the first place. The UK needs a better balance between input taxes – among the developed world’s least competitive – and output taxes like corporation tax – which are very low for a country of the UK’s size.”**

Mike Spicer, Director of Policy Economics,  
British Chambers of Commerce

Aside from tax on business income, many SMEs also pay business rates. In England, this is currently calculated based broadly on property value and a nationally set multiplier (the devolved nations have their own formulae). National relief schemes apply and local authorities have the power to implement their own reliefs, though budget pressures mean that few make use of this power. The Local Government Finance Bill did plan to devolve business rates revenue and the freedom to set the multiplier to local authorities, but the future of these plans is currently unclear.

We find a positive relationship between rateable value and productivity, a reflection purely of economic wealth lifting commercial property values. However, the burden of business rates does differ between local authorities. When one looks at total rates payable within an area as a share of local economic output, it ranges from over 3 per cent in areas like Westminster and Thurrock, to 0.76 per cent in Ribbles Valley and 0.8 per cent in the Forest of Dean.<sup>69</sup> The relative burden of rates on local business is important for local authorities to bear in mind once they have full control over rates and reliefs. This is particularly relevant given concerns that budgetary pressures on local authorities, combined with the statutory cap and electoral limitations on council tax rises, may lead local authorities to increase business rates to close budget deficits, placing an additional burden on the capacity of SMEs to invest in jobs, growth, and productivity.

“

**The Office of Tax Simplification are making small dents in things, but each government that comes in seems to add more legislation. I do accept the need to pay tax; it’s just that they keep changing things which means that planning for smaller businesses and individuals is more difficult.”**

Sid Moore, Moore Accountancy

## 7. Conclusions and recommendations for policymakers

SMEs are the backbone of our economy. Many are deeply embedded within their local economy. Without them, our towns and villages would look radically different.

There are, however, vast differences between SMEs – not just in terms of size and sector, but also in terms of ambitions, growth, productivity, and needs. There are also vast differences between the barriers to SME growth and productivity across local authority areas.

The forthcoming Industrial Strategy will set out a national plan for growth and productivity across the UK economy. This report supports that work, in providing an additional level of detail about the growth and productivity of SMEs at a local authority level. Ensuring that policy interventions acknowledge the diversity of the SME landscape across the UK is a major challenge for policymakers at all levels. Without it, action to support SMEs is likely to be limited in both its direct and wider socioeconomic impact.

The ‘devolution revolution’ – the plans announced by government in 2015 to allow local government to retain all local tax income, including the £26 billion of revenue from business rates with control over the multiplier – was framed as an opportunity to devolve powers from Whitehall to local areas to promote growth and prosperity.

Following the election, the future of this revolution is in question. Nevertheless, the positive side of rates devolution, if this does indeed happen, may be that local government can better tailor support to the specific needs of the local SME population. Conversely, our concern is that there is no statutory obligation for local authorities to support local businesses and – with obvious financial pressures from other areas – some local governments may see SMEs as cash cows to be milked, rather than an area for investment. This is a particular concern given the statutory cap and electoral pressures on council tax rises. Local authorities already have discretionary business rates

support powers, but there is little evidence that they have been directed back into supporting small businesses. Already, business support – and, perhaps even more significantly, wider engagement with local businesses – varies significantly between authorities. Our research uncovered both authorities who were extremely active in gathering data about their local SMEs and also supporting them and others who seemed to offer no support whatsoever. Instead of variation in how local policymakers view the importance of SMEs, we need variation in the policies they adopt to help their small businesses thrive. Any new proposals need to ensure that business rate retention is a positive force for SMEs.

The strength of the UK economy long term is in the hands of its SMEs. If we are to see wages rise and income inequality fall, then targeted local intervention to build a landscape of thriving, productive SMEs, should be the main priority of every layer of government.



# Our recommendations for local decision-makers

## 1. Know your local business landscape

As this report has shown, the UK's small and medium business landscape is nothing if not varied. To avoid a one-size-fits-all approach, use this data to build a detailed picture of your local SME landscape (see [stateofsmallbiz.com](http://stateofsmallbiz.com)). We'd also urge you to share your data more widely – analysis done by others could throw up invaluable insights for policymaking.

## 2. Create a local, data-based strategy<sup>70</sup>

Now that you're armed with data, agree with other local decision-makers what needs to change. Do you need to focus on micro-businesses, or medium-sized enterprises? Is your most pressing challenge increasing business births, or raising productivity? Ensure that interventions are not duplicating existing schemes.

## 3. Respond to your sector mix

Different sectors have their own strengths and challenges, so be sure to know your sector mix and tailor your support to their needs. Your local area might have a wealth of small restaurants, or a growing scene of healthcare businesses. Build your links with sector trade associations to agree the conditions that these groups need to thrive.

## 4. Involve local businesses in policy decisions

Find creative ways to engage with the businesses themselves, and give them a seat at the table. Doing so will make sure that interventions are giving priority to local challenges, not mirroring a one-size-fits-all national scheme. This applies to wider local issues, too, not just ones about small business – see businesses as a key audience or player in policy decisions around anything from housing to education.

## 5. Focus on digital skills, not just infrastructure

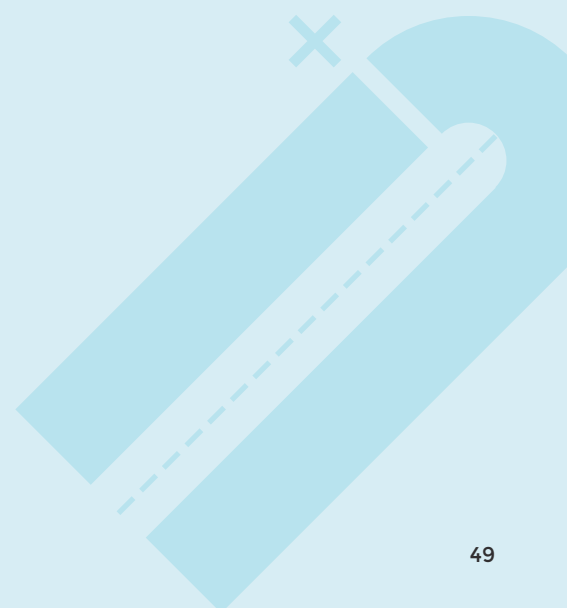
The lack of correlation between digital infrastructure and productivity shows that infrastructure isn't helpful without also building digital skills. Thirty-eight per cent of small businesses still lack digital skills – this must be a focus. Make sure local workshops are available in your area, and signpost small businesses to national digital skills initiatives like the Digital Business Academy, or private schemes like Google Digital Garage.

## 6. Make accessing business support as simple as possible

SMEs are often both time- and cash-poor. Empower them to access schemes, consultations and funding by making these schemes easy to find and comply with. Draw on the evidence of what works<sup>71</sup> and consider experimenting with new ideas.<sup>72</sup> Remember that inexpensive interventions can add huge value – like holding networking events or signposting businesses to regional or national support schemes. Create and distribute a regular update to constituents on new resources, grants and incubators that are available in your area for SMEs – whether public or privately funded.

## 7. Make more of your SME suppliers

Procurement is a powerful way to support small businesses. Improve the openness and simplicity of the tendering process to ensure that local SMEs can compete for contracts, and/or find ways to make small businesses aware of local procurement opportunities.



# Our recommendations for national policymakers

## 1. Know that the productivity puzzle must be solved at a local level

While productivity continues to be at the top of the agenda, this data shows that each local authority faces very different challenges when trying to raise productivity.

## 2. Devolve capacity, not just powers

We must continue to empower local authorities through the devolution agenda, and must make sure to transfer capacity – whether financial or resource-based – as well as powers. For example – local authorities have not made use of their business rates support discretion due to revenue pressures. Push for a deal on business rate retention that incentivises its use to help SMEs improve growth and productivity.

## 3. Hold local authorities and devolved areas to account

Lobby for the use of devolved powers to create a competitive local business environment that can drive job creation, productivity gains, and rising wages. There is concern that after any further devolution of rates, electoral pressures on council tax may push local authorities to increase business rates – this needs to be considered.

## 4. Simplify business taxes

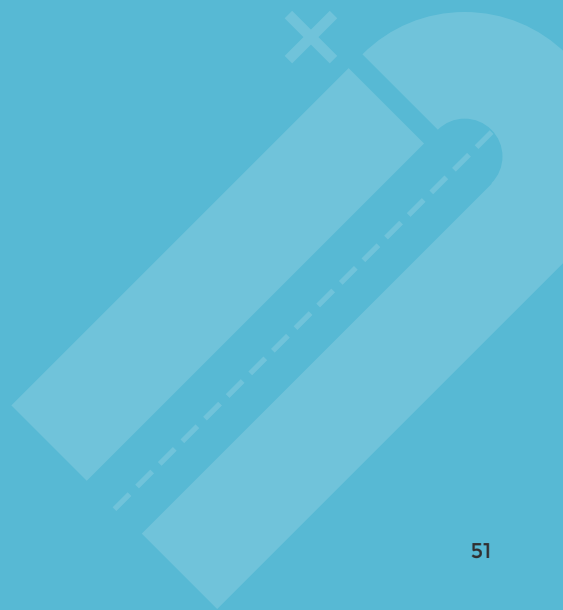
It is not just a case of keeping business taxation low and competitive, but of reducing the admin burden on small businesses caused by complying with tax systems. Reducing the compliance burden of VAT MOSS, for example, and tackling growth barriers like the threshold effect of VAT, would help reduce the economic cost of taxation.

## 5. Support the development of basic digital skills

Alongside local policymakers, national government can also support action to tackle this key obstacle to small business productivity. Push for immediate efforts to help the 38 per cent of SMEs who lack basic digital skills, and see a proven productivity pay-off.

## 6. Create better access to data

To tackle the productivity puzzle, better access to data on local SMEs is urgently needed. This data is hard to find, subject to a high degree of lag, and doesn't necessarily correspond with other datasets. Work towards better availability and harmonisation of data held by multiple departments (e.g. HMRC, BEIS, ONS) so that policymakers, businesses, and researchers can better understand their local business environment.



## Appendix 1: Useful resources for SMEs

<b>Be the Business</b>	Practical business-developed tools and products, case study examples, articles, reports, videos and podcasts.	<a href="http://www.bethebusiness.com/">www.bethebusiness.com/</a> articles, reports, videos and podcasts.
<b>Better Business Finance</b>	Provides impartial information and support to businesses and entrepreneurs.	<a href="http://www.betterbusinessfinance.co.uk">www.betterbusinessfinance.co.uk</a>
<b>British Business Bank</b>	Aims to make finance markets work better for small businesses in the UK.	<a href="http://www.british-business-bank.co.uk">www.british-business-bank.co.uk</a>
<b>Business Banking Insight (BBI)</b>	Looks at how well the UK's small and medium-sized businesses are being served by banks.	<a href="http://www.businessbankinginsight.co.uk">www.businessbankinginsight.co.uk</a>
<b>Business Finance Guide</b>	To help businesses decide what kind of finance is right for them.	<a href="http://www.thebusinessfinanceguide.co.uk">www.thebusinessfinanceguide.co.uk</a>
<b>Business Gateway (Scotland)</b>	Publicly-funded business support services in Scotland.	<a href="http://www.bgateway.com/co.uk">www.bgateway.com/co.uk</a>
<b>Business Growth Fund</b>	An independent company, backed by main UK banks, which makes long-term equity investments.	<a href="http://www.businessgrowthfund.co.uk">www.businessgrowthfund.co.uk</a>
<b>Business is Great</b>	Publicly-funded business support services in UK.	<a href="http://www.greatbusiness.gov.uk">www.greatbusiness.gov.uk</a>
<b>Business Wales (Wales)</b>	Publicly-funded business support services in Wales.	<a href="http://www.businesswales.gov.wales">www.businesswales.gov.wales</a>
<b>CBI</b>	Not for profit, non-political Royal Charter company, providing insight, influence and access.	<a href="http://www.cbi.org.uk">www.cbi.org.uk</a>
<b>Chambers of Commerce</b>	Provide a voice to the business communities they represent, amplifying their priorities and concern (52 accredited Chambers in the UK.)	<a href="http://www.britishchambers.org.uk/">www.britishchambers.org.uk/</a>
<b>Directory of Accelerators &amp; Incubators</b>	New study and database of business incubators and accelerators in the UK.	<a href="http://www.nesta.org.uk/blog/incubators-and-accelerators-updated-directory-uk">www.nesta.org.uk/blog/incubators-and-accelerators-updated-directory-uk</a>
<b>Directory of Makerspaces</b>	Open dataset of UK makerspaces.	<a href="http://www.nesta.org.uk/publications/open-dataset-uk-makerspaces-users-guide">www.nesta.org.uk/publications/open-dataset-uk-makerspaces-users-guide</a>
<b>Enterprise Finance Guarantee Scheme</b>	Guarantee scheme to facilitate lending to viable businesses that have been turned down for a loan or other form of debt finance due to inadequate security.	<a href="http://www.british-business-bank.co.uk/ourpartners/supporting-business-loans-enterprise-finance-guarantee/understanding-enterprise-finance-guarantee/">www.british-business-bank.co.uk/ourpartners/supporting-business-loans-enterprise-finance-guarantee/understanding-enterprise-finance-guarantee/</a>
<b>Enterprise Zones</b>	Official government website about the 24 Enterprise Zones in England.	<a href="http://www.enterprisezones.communities.gov.uk">www.enterprisezones.communities.gov.uk</a>

<b>Exporting is Great</b>	Official government website for promoting UK exporting.	<a href="http://www.great.gov.uk">www.great.gov.uk</a>
<b>Federation of Small Businesses</b>	Not for profit small business advice, financial expertise, support and a powerful voice in UK government.	<a href="http://www.fsb.org.uk/">www.fsb.org.uk/</a>
<b>Finance Finder</b>	Government directory of local and regional support.	<a href="http://www.gov.uk/business-finance-support">www.gov.uk/business-finance-support</a>
<b>Future 50</b>	Network of 50 of the UK's fastest growing, late-stage tech companies.	<a href="http://www.futurefifty.com">www.futurefifty.com</a>
<b>Goldman Sachs 10,000 Small Businesses</b>	Provides small business owners with practical skills to grow their business.	<a href="http://www.goldmansachs.com/citizenship/10000-small-businesses/UK/">http://www.goldmansachs.com/citizenship/10000-small-businesses/UK/</a>
<b>Growth Hubs</b>	Local public/private sector partnerships led by the Local Enterprise Partnerships (LEPs.)	<a href="http://www.lepnetwork.net/growth-hubs/">www.lepnetwork.net/growth-hubs/</a>
<b>Innovate UK resources</b>	Executive non-departmental public body, sponsored by the Department for Business, Energy and Industrial Strategy.	<a href="http://www.gov.uk/government/organisations/innovate-uk">www.gov.uk/government/organisations/innovate-uk</a>
<b>Innovation Vouchers</b>	Provides funding to small and medium-sized businesses to work with an expert Knowledge Provider.	<a href="http://www.gov.uk/government/news/innovation-vouchers-for-all">www.gov.uk/government/news/innovation-vouchers-for-all</a>
<b>Invest NI (Northern Ireland)</b>	Publicly-funded business support services in Northern Ireland.	<a href="https://www.investni.com">https://www.investni.com</a>
<b>IoD</b>	Business organisation for company directors, senior business leaders and entrepreneurs.	<a href="http://www.iod.com/">www.iod.com/</a>
<b>LEPs</b>	Voluntary partnerships between local authorities and businesses.	<a href="http://www.lepnetwork.net/about-leps/">www.lepnetwork.net/about-leps/</a>
<b>R&amp;D Tax Credits</b>	Tax incentive designed to encourage companies to invest in R&D.	<a href="http://www.gov.uk/guidance/corporation-tax-research-and-development-tax-relief-for-small-and-medium-sized-enterprises">www.gov.uk/guidance/corporation-tax-research-and-development-tax-relief-for-small-and-medium-sized-enterprises</a>
<b>Scale-Up Taskforce</b>	Launched as part of the Industrial Strategy, it aims to increase the number of businesses expanding their operations.	<a href="http://www.gov.uk/government/news/margot-james-launches-scale-up-taskforce-to-identify-barriers-to-small-business-growth">www.gov.uk/government/news/margot-james-launches-scale-up-taskforce-to-identify-barriers-to-small-business-growth</a>
<b>StartUp Britain</b>	National campaign by entrepreneurs for entrepreneurs.	<a href="http://www.startupbritain.org">www.startupbritain.org</a>
<b>Startup Loans</b>	Government-backed loan of between £500 to £25,000 to start or grow your business.	<a href="http://www.gov.uk/apply-start-up-loan">www.gov.uk/apply-start-up-loan</a>
<b>UK Business Angels Association</b>	National trade association representing angel and early-stage investment.	<a href="http://www.ukbaa.org.uk">www.ukbaa.org.uk</a>

## Appendix 2: Glossary and definitions

<b>Accelerator</b>	A fixed duration startup-support programme, typically growth-based (payment via equity) and focused on services over physical space.
<b>Borough</b>	Administrative division of London. There are 33 in total. Some non-London local authorities are also formally referred to as Boroughs.
<b>Churn</b>	The employer enterprise churn rate is compiled as the sum of the employer enterprise birth rates and employer enterprise death rates.
<b>GEM</b>	Global Entrepreneurship Monitor; provides high quality information, reports and data to understand the entrepreneurship phenomenon.
<b>HEBCI</b>	The Higher Education Business Education and Community Interaction Survey is the main vehicle for for measuring the volume and direction of interactions between UK HE providers and businesses and the wider community.
<b>HESA</b>	The Higher Education Statistics Agency collect, process, and publish data about Higher Education in the UK.
<b>IDBR</b>	The Inter-Departmental Business Register is a list of UK businesses used by government for statistical purposes. It is primarily compiled from VAT and PAYE registration databases.
<b>Incubator</b>	Incubators are typically physical spaces, available on relatively flexible terms, which provides additional incubation services. Incubation is a unique and highly flexible combination of business development processes, infrastructure and people, designed to nurture and grow new and small businesses by supporting them through the early stages of development and change.
<b>Local authority</b>	Administrative division of local government in the United Kingdom.
<b>LSBS</b>	The Longitudinal Small Business Survey is an annual survey intended to enhance our knowledge on what drives and constrains small business performance.
<b>Micro-business</b>	An enterprise employing 0-9 employees.
<b>Necessity entrepreneurship</b>	When an individual starts a business based on necessity as they have no other means of finding employment.
<b>ONS</b>	The Office of National Statistics is the official institute for statistics in the UK concerning the economy, population and society.
<b>Opportunity entrepreneurship</b>	When an individual starts a business because they spot an opportunity in the market to pursue.
<b>PAYE</b>	Pay As You Earn is a method of paying income tax and national insurance contributions.

---

<b>Productivity</b>	The rate at which goods or services are produced, usually in terms of output per unit of labour. Throughout this report, we have used the measure of turnover per employee. Some economists prefer a slightly different measure, gross value added (GVA), but this data is much more difficult to obtain at a local authority level.
<b>Scaleup</b>	A 'scaleup' is an enterprise with average annualised growth greater than 20 per cent per annum in employment and/or turnover over a three year period, and with at least ten employees at the beginning of the period.
<b>Self-employed</b>	A person is self-employed if they run their business for themselves and are personally responsible for any losses it makes. Self-employed workers are not paid through PAYE and do not have the employment rights and responsibilities of employees. Two or more self-employed people can set up in business together as a partnership.
<b>SME</b>	Small and Medium Sized Enterprise, encompasses micro firms (0-9 employees), small firms (10-49 employees) and medium firms (50-249 employees). Official EU definitions add ceilings for turnover and balance-sheet totals, as well as headcount.
<b>Sole trader (or sole proprietor)</b>	A sole trader is someone who runs their own business as an individual and is self-employed. Although a sole trader is in business by themselves, they can still employ others.
<b>Unitary authority</b>	A division of local government administered by a single tier, providing all local services.
<b>Unregistered company</b>	In this report, this means an entity that is not registered for either VAT or PAYE.
<b>VAT</b>	Value Added Tax is a consumption tax assessed on the value added to goods and services. Standard UK rate is 20 per cent, with reduced rates applying for some goods.

## Appendix 3: Methodology

### Data availability

The data in this report has been gathered from a variety of sources, including the Office of National Statistics' Inter-Departmental Business Register (IDBR); the Longitudinal Small Business Survey (LSBS); the Global Entrepreneurship Monitor (GEM); the Higher Education Statistics Agency's Business and Community Interaction survey (HEBCI); Census data; commercial data from Banksearch, Beauhurst and Instant Office, and Nesta's own research on the UK's innovation ecosystem.

One challenge is that, despite these sources, it is surprisingly difficult to work out exactly how many businesses there are in the UK. Although the Inter-Departmental Business Register (IDBR) is intended to be a comprehensive list of UK businesses used by government for statistical purposes, it has several major gaps: it omits many sole-proprietorships and partnerships which are not registered for VAT or PAYE ('unregistered businesses'). These make up approximately half of the UK's private sector businesses by number, although are usually estimated to be relatively insignificant in terms of turnover. (All firms employing staff are legally required to register for PAYE; firms with turnover above £82k per year are required to register for VAT.) On the other hand, the IDBR does include some registered companies without active business operations or significant assets (sometimes called holding companies or 'shell companies').

Further challenges are posed by changes to the Standard Industry Classification (SIC codes) over time. There were substantial changes between SIC (2003) and SIC (2007) systems, with not all of the old industry codes being easily mapped to the new ones. This makes tracking sectoral changes difficult prior to ca. 2010.<sup>73</sup>

Local Authority boundaries have also changed frequently over time.<sup>74</sup> In this report we have attempted to identify where a boundary change has occurred between time periods (which might lead, for instance, to an inaccurate picture of growth). However, we have not attempted to reclassify historical data in line with present boundaries.

In this report, we have used IDBR data for SME counts and growth, except where stated. Regrettably this means that sole traders - who typically will not have to register for VAT, PAYE or with Companies House - are largely absent from the picture.<sup>75</sup> Due to data protection restrictions, the ONS is also unable to release data which could be traced to a specific firm; in practice, this means that some

data (e.g. low counts of firms within a specific industry within a specific local authority) may be rounded or reported as zero.

### Regression analysis

To investigate how outcomes are linked to the characteristics of Local Authorities, we ran a series of regression models to try to determine the most significant factors. The results of the models should be treated with caution as they depend on assumptions made and on model specification. For example, the inclusion or exclusion of specific Local Authorities with extreme values can make significant difference while there is also correlation between some of the explanatory variables, so it is not always clear what is driving any apparently significant relations. There was also a small amount of missing data in some variables.

By building up the models in stages, we have been able to see which variables improve the fit of the models and which variables tend to be significant more consistently and this has guided the interpretation in the main report. We built four models looking at the following outcome measures:

1. Turnover per employee (as proxy for productivity).
2. Whether or not turnover/employment grew between 2010 and 2016.
3. The rate of high-growth businesses between 2010 and 2013.
4. The number of starts per working age population.

For some variables of interest, data was only available for England and not the rest of the UK. Therefore, in order to explore these variables, in each model, we ran two versions one for the whole UK and one for just England. We also tried removing some extreme values, particularly for the first of the above models. The explanatory variables used in the models were as follows:

UK model (though some not available in Northern Ireland): proportions of SMEs by sector, the proportion of SMEs that are micro (employment of 0-9), the proportion of businesses that are medium (50-249), regions (as dummy variables), the number of starts per working age population, the five-year survival rate of businesses, average broadband download speed, percentage of premises unable to get 2Mbits/second, a physical infrastructure measure, economic activity rates, educational attainment, median earnings.



England only model, in addition to the above: number of apprentices per working age population, Indices of Multiple Deprivation (average ranking per LA), rateable value, percentage rural.

### Turnover divided by employment

The dependent variable was produced by dividing turnover by employment for each LA. Turnover and employment data was derived from the ONS Inter Departmental Business Register and looked at turnover and employment in all SMEs for every local authority. Data is taken from the 2016 extract of the data and this mostly represents data from 2015. This is an imperfect measure of productivity with a number of difficulties inherent in the data, but is often used as a proxy and when aggregated up for all SMEs across LAs, it should be reasonably indicative of productivity.

In both the UK and England models, the proportion of SMEs that are medium sized is positively correlated with the dependent variable (DV), reflecting higher average GVA in medium businesses. Skills data appears significant at earlier stages in the model, but drops out as other variables are added in. The number of business starts per working age population is correlated and the survival rate is negatively correlated – suggesting that churn is good for productivity. In the England model, rateable value is also highly correlated, and indeed this appears highly significant when added at any stage of the models, improving the fit of the model. There are also some sectors that appear to be significantly correlated and these match quite well to published data on GVA by sector. In these, sector BDE (non-manufacturing production) has high GVA and sector P (Education) has low GVA. The England version also has some regions coming out as significant, though again, the interpretation isn't obvious. Other variables appear to be significant in earlier stages of the model – particularly economic activity rates and infrastructure and this could have some relevance despite these not being significant in the later models.

#### UK model – significant correlations

Proportion of mediums (+ve at 99 per cent significance)  
Proportion of starts per working age (+ve, 95 per cent)  
Survival rate (-ve, 95 per cent)  
Sector P (-ve, 95 per cent)

#### England model – significant correlations

Proportion of mediums (+ve at 95 per cent significance)  
Proportion of starts per working age (+ve, 99 per cent +)  
Survival rate (-ve, 95 per cent)

Rateable value (+ve, 99 per cent +)  
Sector BDE (-+ve, 95 per cent)  
London (-ve, 95 per cent)  
South West (-ve, 95 per cent)

### Whether turnover/employment grew between 2010 and 2016

This model looks at the binary variable of whether the productivity proxy grew or not. Given the timing of data, this is looking at change in data from approximately 2009-2015 and so captures the period coming out of recession. There is no adjustment in real terms although we also note that employment composition is not known. As employment held up well through the recession, there may be more part-time employees in later data and this pattern may vary across the UK.

This outcome variable is quite a blunt instrument, but it is not generally advisable to look at turnover/employment over time due to issues with the data and we felt this was the best variable available. It also avoids some problems with outliers that can make a big difference. However, there is only one significant variable emerging and only in the England version of the model. The percentage rural is negatively correlated with the likelihood of turnover/employment having grown. There is also a weakly significant negative London effect, reflecting London's relatively poor productivity data since the recession. This makes the rural percentage more striking as London would be acting against this finding.

#### UK model – significant correlations

None

#### England model – significant correlations

Rural percentage (-ve, 95 per cent)

### Rate of high-growth businesses

This takes the accepted OECD definition of high-growth businesses and relates to the starting population of SMEs with ten or more employees (ie. those who could go on to become high growth by this definition). The data is old, from IDBR data covering 2010-2013, and this complicates the development of a good model. Ideally, the model would use all of the same data as the other models, but with data relating to 2010 (or, given the lag in IDBR data, 2009). However, not everything is readily available for all years, so a reduced version of the models has been applied using only data relating to 2010, to best model the factors affecting high growth over 2010-2013.

The one consistent result between the UK and England models is that the proportion of businesses in sector J (Information and Communication) is correlated with the likelihood of having more high-growth businesses. From the UK model, Scotland appears to have disproportionately few high-growth businesses, while in the England model, this is true of the South East. In England, rateable value is highly correlated with having more high-growth businesses.

UK model – significant correlations

Sector J (+ve, 99 per cent)  
 Scotland (-ve, 95 per cent)

England model – significant correlations

Sector J (+ve, 95 per cent)  
 Rateable value (+ve, 99 per cent +)  
 South East (-ve, 95 per cent)

**Starts per working age population**

The data for this outcome is from Banksearch – the number of new business bank accounts opened. This has the advantage of capturing those businesses that are not registered for VAT/PAYE as well as those that are and is regarded as a good barometer for business startups. The main complication in interpretation comes from the denominator – working age population in an area because in some areas, lots of people commute into a different LA.I. While this is not ideal, here we assume that this is not a major problem, but it should be borne in mind.

The models here are quite good fits to the data with a relatively high R squared and mostly this comes from the regions and sectors. There are several regions with strong correlations in both the UK and the England models. In particular, there appears to be a North-South split as can be seen below. Rateable value is again highly correlated with the DV in the England model and there are several sectors that correlate well. This seems reasonable as some industries will have more starts than others, so areas where those are concentrated are likely to see higher startup rates. Wholesale for example is highly significant in both the UK and England models. Not surprisingly, the survival rate is negatively correlated and significant, though only in the England model. Skills data are interesting in that NVQ4 attainment appears to be significant if added in on its own, but not if added alongside the measure for zero attainment. This could be down to correlation between the variables or to the fact that the latter measure is missing for some local authorities and the model used omits these. So, NVQ4 could be considered to have significance as well as those below.

UK model – significant correlations

London (+ve, 99 per cent+)  
 South West (+ve, 99 per cent+)  
 East of England (+ve, 99 per cent)  
 South East (+ve, 99 per cent)  
 Yorkshire & Humber (-ve, 99 per cent)  
 Sector L – Property (+ve, 99 per cent)  
 Sector G – Wholesale (+ve, 95 per cent)  
 Sector P – Education (-ve, 99 per cent)  
 Sector G – Motor Trades (-ve, 95 per cent)

England model – significant correlations

London (+ve, 99 per cent +)  
 South West (+ve, 99 per cent)  
 East of England (+ve, 95 per cent)  
 South East (+ve, 95 per cent)  
 Scotland (-ve, 99 per cent +)  
 Yorkshire & Humber (-ve, 99 per cent)  
 Sector L – Property (+ve, 99 per cent +)  
 Sector G – Wholesale (+ve, 99 per cent +)  
 Sector H – Transport and Storage (+ve, 99 per cent +)  
 Sector G – Retail (+ve, 95 per cent)  
 Sector M – Professional, Scientific, Technical (+ve, 95 per cent)  
 Sector P – Education (-ve, 99 per cent)  
 Sector G – Motor Trades (-ve, 95 per cent)  
 Rateable value (+ve, 99 per cent +)  
 Survival rate (-ve, 95 per cent)

# Acknowledgements

This report was written by Nesta with support from Sage. The principal authors and researchers were Harriet Maltby, Christopher Haley, Andrew Ledger and Jonathan Bone, with support from Alexander Reynolds, Siddharth Bannerjee, James Phipps, Carmen Margarit-Stoica, Juan Mateos-Garcia, Natasha Thomas and Katie-Rose Comery. Design credits are due to Ellie Mayes, Peter Larkin and Katee Hui at Nice and Serious.

The authors would particularly like to thank the following for their input, advice, data and insight: Myrto Miltiadou and Steve Hibbs at the Office of National Statistics; Prof. Mark Hart and Dr Karen Bonner of the Enterprise Research Centre; Irene Graham at The Scaleup Institute; Members of Scaleup Taskforce; Henry Whorwood at Beauhurst; Simon Anderson at Banksearch Information Consultancy, and Gareth Rumsey at Experian.

In addition, we are grateful to the various individuals who agreed to be interviewed for this report: Rob Carroll, Director of Catapult Ventures Group, Vice Chair of Lord Young's Small Business Charter, and Professor at Nottingham University Business School; Warren Ralls, Director of the LEP Network; Mike Spicer, Director of Research and Economics, British Chambers of Commerce;

Emma Jones, Founder of Enterprise Nation, and the co-founder of StartUp Britain, Small Business Crown Representative; Jenny Tooth, CEO, UK Business Angels Association; Charlotte Keenan, Executive Director, Goldman Sachs 10,000 Small Businesses; Alan Mak MP, co-chairman of the APPG on Entrepreneurship; Tracey Johnson, Project Director at Digital Media Centre (DMC), Enterprising Barnsley; Sarah Moss, Business Development Officer, London Borough of Havering; Michelle Ovens, Director of Do It Digital and also Director of Small Business Saturday in the UK; Sonali Parekh, Head of Policy, Federation of Small Businesses; Simon Hanson, North East Development Manager, Federation of Small Businesses (FSB); Amanda Alexander, Founder of Coaching Mums; Sid Moore, Founder of Moore Accountancy; Peter Ashall, CEO, Zone V; Jacob Thundil, Founder of Cocofina; Jeremy Corner, Managing Director at Blue Eyed Sun; Gill Hutchinson, Director at Aardvaark Marketing Consultants; Jo Lennon, Founder of Mellie Green; Alex Fisher, Founder and CEO of Saturn Bioponics; Adam Ewart, Founder and CEO of Send My Bag (NI); Ann Attridge, Founding Director at Klik2Learn; Herb Kim, Founder and CEO of Thinking Digital; Grant Santos, Managing Director at Educ8; Carla Crook, Registrar, PR & Marketing at The Etches Collection Museum of Jurassic Marine Life.

## Notes and References

1. IPPR Commission on Economic Justice. *Time for Change: A New Vision for the British Economy*. (IPPR, 2017).
2. Data from BEIS Business Population Estimates 2016, UK Employment Time Series 2010-2016. Figures do not sum to 100 per cent due to rounding. Note that Companies with only one PAYE employee on the IDBR are counted in the 'with no employees' category, rather than the '1 employee' category, as the employee is treated as being equivalent to a 'working proprietor'. This is done to ensure that incorporations by individuals operating alone do not distort the overall numbers of businesses with employees. In businesses run as sole proprietorships or ordinary partnerships, working owners pay income tax through self-assessment not PAYE, whereas in companies they will usually draw a salary through PAYE.
3. HM Government. *Building our Industrial Strategy: green paper*. (HM Government, 2017).
4. Haldane, A. G. Productivity Puzzles (speech given at London School of Economics, 20th March 2017).
5. Berlingieri, G., Blanchenay, P. and Criscuolo, C. *The Great Divergence(s): CEP Discussion Paper No 1488*. (Centre for Economic Performance, 2017).
6. Boddy, M., Hudson, J., Plumridge, A. and Webber, D. *Regional Productivity Differentials: Explaining the Gap. Working Papers* (2005).
7. House of Commons, Science and Technology Committee. *Digital skills crisis. Second Report of Session 2016-17*. (House of Commons, 2016).
8. Bakhsh, i H, Bravo-Biosca, A, Mateos-Garcia, J. The analytical firm: estimating the effect of data and online analytics on firm performance. (2014). Available at: <http://www.nesta.org.uk/publications/analytical-firm-estimating-effect-data-and-online-analytics-firm-performance>. (Accessed: 12th September 2017)

9. Eurostat. Digital economy and society statistics - enterprises. *Eurostat Statistics Explained* (2017). Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Digital\\_economy\\_and\\_society\\_statistics\\_-\\_enterprises](http://ec.europa.eu/eurostat/statistics-explained/index.php/Digital_economy_and_society_statistics_-_enterprises).
10. European Commission. Digital Economy and Society Index 2017. *European Commission* (2017). Available at: <https://ec.europa.eu/digital-single-market/en/scoreboard/united-kingdom>.
11. Koss, V., Azad, S., Gurm, A. and Rosenthal, E. This Is for Everyone: The Case for Universal Digitisation. (Booz & Co., 2012).
12. Melo, P. C., Graham, D. J. and Brage-Ardao, R. The productivity of transport infrastructure investment: A meta-analysis of empirical evidence. *Reg. Sci. Urban Econ.* **43**, 695-706 (2013).
13. Banister, D. and Berechman, Y. Transport investment and the promotion of economic growth. *J. Transp. Geogr.* **9**, 209-218 (2001).
14. Enterprise Research Centre. *UK Local Growth Dashboard*. (Enterprise Research Centre, 2017).
15. Anyadike-Danes, M. and Hart, M. All grown up? The fate after 15 years of a quarter of a million UK firms born in 1998. (*Unpublished*) (2016). doi:10.13140/RG.2.1.1264.2967
16. Companies can take a range of legal forms, including Public Limited Companies, Private Limited Companies, Limited Liability Partnerships, and others.
17. Data from BEIS, Business Population Estimates 2016.
18. Fink, S. *Shattering stereotypes: women in entrepreneurship*. (The Centre for Entrepreneurs, 2015).
19. Legatum Institute. The UK Prosperity Index. *Legatum Institute* (2016). Available at: <http://uk.prosperity.com/>.
20. Data available from 2010-2016.
21. Department for Business, Innovation and Skills. *Understanding self-employment (BIS Enterprise Analysis research report)*. (Department for Business, Innovation and Skills, 2016).
22. Measured in terms of GDP per capita PPP (2011 international \$).
23. IPPR. Economic growth no longer leading to rising earnings, finds IPPR Commission on Economic Justice. *IPPR* (2017). Available at: <https://www.ippr.org/news-and-media/press-releases/economic-growth-no-longer-leading-to-rising-earnings-finds-ippr-commission-on-economic-justice>.
24. Data from ONS and BEIS Business Population Estimates 2010-2016. For an analysis based on GVA, rather than turnover per worker, see figure 15 at <https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/articles/economicreview/january2016>, as well as supplementary data at: <https://www.ons.gov.uk/businessindustryandtrade/internationaltrade/adhocs/005325additionalanalysisofthedistributionofproductivitybyfirmssizeandindustry> (accessed October 2017).
25. Ardanaz-Badia, A., Awano, G. and Wales, P. *Understanding firms in the bottom 10% of the labour productivity distribution in Great Britain: 'the laggards', 2003 to 2015*. (ONS, 2017).
26. Rice, P. and Venables, A. J. *Spatial Determinants of Productivity: Analysis for the Regions of Great Britain*. (Centre for Economic Performance, LSE, 2004).
27. The financial services data is heavily suppressed to ensure firm anonymity which makes it hard to estimate accurately the scale of the productivity loss in this sector.
28. The ONS recently produced NUTS2 productivity estimates that show London's productivity rising. Their measure is, however, for the whole economy and for GVA per hour worked. It is not inconsistent for SME productivity to fall while whole economy productivity rises given that SMEs account for less than 50 per cent of private sector turnover. It is also possible for output per worker to fall while output per hour worked to rise.
29. Office for National Statistics. Business Demography UK, 2015. *Office for National Statistics* Available at: <https://www.ons.gov.uk/businessindustryandtrade/changestobusiness/businessbirthsdeathsandsurvivalrates>.
30. GOV.UK. Hull named most enterprising place in Britain. *GOV.UK* (2017). Available at: <https://www.gov.uk/government/news/hull-named-most-enterprising-place-in-britain>.
31. Bakhshi, H., Downing, J. M., Osborne, M. A. and Schneider, P. *The Future of Skills: Employment in 2030*. (Pearson, 2017).

32. LSBS 2016 - Longitudinal Small Business Survey.
33. REC. UK employers face growing candidate shortages in 2017. *REC* (2016). Available at: <https://www.rec.uk.com/news-and-policy/press-releases/uk-employers-face-growing-candidate-shortages-in-2017>. (Accessed: 11th September 2017.)
34. CaSE. Immigration: Keeping the UK at the heart of global science and engineering. *CaSE* Available at: <http://www.sciencecampaign.org.uk/resource/caseimmigrationreport2016.html>. (Accessed: 11th September 2017.)
35. IPPR. Skills gap threat to post-Brexit economy – UK employers spend £6bn less on skills than Euro average. *IPPR* (2017). Available at: <https://www.ippr.org/news-and-media/press-releases/skills-gap-threat-to-post-brexit-economy-uk-employers-spend-6bn-less-on-skills-than-euro-average>. (Accessed: 12th September 2017.)
36. Part of the rank fall is the result of additional countries being added to the study since 2000. However, the raw score for the UK in each category has also fallen. Performance has been stable since 2006 at around the OECD average.
37. Ofcom. SMEs and communications services. *Ofcom* (2014). Available at: <https://www.ofcom.org.uk/research-and-data/multi-sector-research/general-communications/consumer-experience/sme-research>. (Accessed: 12th September 2017)
38. Lloyds Banking Group. Lloyds Bank Digital Business Index 2015. (2015). Available at: <https://resources.lloydsbank.com/insight/uk-business-digital-index-2015-report.pdf>Paperpile.
39. A study of 27 Cornwall SMEs found that labour productivity increased by an average of 9.5 per cent following connection via the Superfast Cornwall project, see Broadband services for SMEs: assessment and action plan, Ofcom (2015).
40. Kenny, R. *Exploring the costs and benefits of FTTH in the UK*. (Nesta, 2015).
41. van Vonno, J., Stratis, A. and Budd, N. *Tech-Savvy Businesses Do It Better*. (IDC & Sage UK Ltd, 2017).
42. Ofcom. Connected Nations 2016. *Ofcom* (2016). Available at: <https://www.ofcom.org.uk/research-and-data/multi-sector-research/infrastructure-research/connected-nations-2016>. (Accessed: 12th September 2017)
43. Lloyds Banking Group. Lloyds Bank Digital Index. (2016). Available at: <http://resources.lloydsbank.com/insight/uk-business-digital-index/>. (Accessed: 12th September 2017.)
44. Fresh salmon was Heathrow's biggest freight export by weight in 2014.
45. Transport-intense sectors are defined as production, manufacturing and construction, as per SIC2007 industry classifications (ONS 2016).
46. Love, J. H. and Roper, S. SME innovation, exporting and growth: A review of existing evidence. *Int. Small Bus. J.* **33**, 28–48 (2015).
47. Percentage of SMEs that export (from LSBS survey, 2016) is moderately strongly correlated ( $R=0.52$ ) with the SME productivity, as defined in section 5.2 (ONS/IDBR data, 2016). Pearson's correlation was used rather than incorporating this into our regression model since SME export data is only available at the regional level.
48. Department for Business, Innovation and Skills. *Estimate of the Proportion of UK SMEs in the Supply Chain of Exporters*. (Department for Business, Innovation and Skills, 2016).
49. Love, J. and Roper, S. *ERC Insights: Growing Global - Moving Up The Exporting Ladder*. (ERC, 2014).
50. 2016 data from LSBS 2016, 2010 data from SBS 2010. Data is lagged.
51. Watson, J. Modeling the Relationship between Networking and Firm Performance. *J. Bus. Venturing* **22**, 852–874 (2007).
52. Schoonjans, B., Van Cauwenberge, P. and Bauwhede, H. V. Formal business networking and SME growth. *Small Bus. Econ.* **41**, 169–181 (2013).
53. Konsti-Laakso, S., Pihkala, T. and Kraus, S. Facilitating SME Innovation Capability through Business Networking. *Creativity and Innovation Management* **21**, 93–105 (2012).
54. Hewitt-Dundas et al. Accessibility, utility and learning effects in university-business collaboration. Research Paper No 57. - Enterprise Research Centre. *Enterprise Research Centre* (2017). Available at: <https://www.enterpriseresearch.ac.uk/publications/accessibility-utility-learning-effects-university-business-collaboration-research-paper-no-57/>.

55. Brunswicker, S. and Vanhaverbeke, W. Open Innovation in Small and Medium-Sized Enterprises (SMEs): External Knowledge Sourcing Strategies and Internal Organizational Facilitators. *SSRN Electronic Journal* (2015). doi:10.2139/ssrn.2351047
56. Spithoven, A., Vanhaverbeke, W. and Roijackers, N. Open innovation practices in SMEs and large enterprises. *Small Bus. Econ.* **41**, 537–562 (2013).
57. Wilson, T. *A Review of Business-University Collaboration*. (BIS, 2012).
58. Witty, A. *Encouraging a British Invention Revolution: Sir Andrew Witty's Review of Universities and Growth* (Final Report & Recommendations). (BIS).
59. Lambert, R. *Lambert Review of Business-University Collaboration (Final Report)*. (HM Treasury, 2003).
60. Dowling, A. *The Dowling Review of Business-University Research Collaborations*. (BIS, 2015).
61. *Fixing the foundations: Creating a more prosperous nation*. (HM Treasury, 2015).
62. Goldman Sachs, British Business Bank & Enterprise Research Centre. *Unlocking UK Productivity: Internationalisation and Innovation in SMEs*. (2015).
63. Davies, S. *SME Finance Monitor Q2 2017*. (BDRC Continental, 2017).
64. *Small Business Finance Markets 2016/17*. (British Business Bank plc, 2017).
65. Data from Beauhurst. Total venture capital and private equity raised by SMEs within their Local Authorities in 2016. LEP figures are calculated by the total investment raised within their composite Local Authorities.
66. Bone, J., Allen, O. and Haley, C. *Business incubators and accelerators: the national picture (BEIS Research Paper No. 7)*. (Nesta/BEIS, 2017).
67. The TaxPayers' Alliance and Institute of Directors. *The Single Income Tax | Final report of the 2020 Tax Commission*. (2012). Available at: <http://www.2020tax.org/>. (Accessed: 12th September 2017)
68. IFS. *Mirrlees Review - Institute For Fiscal Studies - IFS*, See Chapter 19. (2011). Available at: <https://www.ifs.org.uk/publications/mirrleesreview/>.
69. GVA figures from ONS, 2015 and National Non-Domestic Rates from the DCLG 2015.
70. See further discussion on getting the most out of your data [http://www.nesta.org.uk/sites/default/files/local\\_datavores\\_discussion\\_paper-july-2016.pdf](http://www.nesta.org.uk/sites/default/files/local_datavores_discussion_paper-july-2016.pdf).
71. See the 'What Works' Centre: <http://www.what-works-growth.org/>.
72. [http://www.innovationgrowthlab.org/sites/default/files/styles/experimental\\_innovation\\_and\\_growth\\_policy\\_why\\_do\\_we\\_need\\_it.pdf](http://www.innovationgrowthlab.org/sites/default/files/styles/experimental_innovation_and_growth_policy_why_do_we_need_it.pdf).
73. ONS. UK SIC 2007 - Office for National Statistics. Available at: <https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007>.
74. ONS. Our changing geography - Office for National Statistics. Available at: <https://www.ons.gov.uk/methodology/geography/ukgeographies/administrativegeography/ourchanginggeography>.
75. ONS. Guide to the business population and demographics statistics publications. Available at: <http://webarchive.nationalarchives.gov.uk/20160106202859/http://www.ons.gov.uk/ons/guide-method/method-quality/specific/business-and-energy/business-population/index.html>.

This work contains statistical data from ONS which is Crown copyright and reproduced with the permission. The use of the ONS statistical data in this work does not imply endorsement by the ONS of the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics.

**Photo credits for case studies:** Aspect Photography (p. 12); Innovate UK (p. 23); Sage Plc (pp. 29, 31); Cocofina (p. 30); Educ8 (p. 38); Erika Tanith (p. 39).





58 Victoria Embankment  
London EC4Y 0DS  
+44 (0)20 7438 2500  
[information@nesta.org.uk](mailto:information@nesta.org.uk)

 [@nesta\\_uk](https://twitter.com/nesta_uk)

 [www.facebook.com/nesta.uk](https://www.facebook.com/nesta.uk)  
[www.nesta.org.uk](http://www.nesta.org.uk)

ISBN: 978-1-84875-161-3

Nesta is a registered charity in England and Wales with company number 7706036 and charity number 1144091. Registered as a charity in Scotland number SCO42833. Registered office: 58 Victoria Embankment, London, EC4Y 0DS